



City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97128
(503) 434-7311

www.mcminnvilleoregon.gov

Planning Commission
ZOOM Online Meeting:
May 20, 2021

*Please Note that this meeting will be conducted via
ZOOM meeting software due to the COVID-19 event.*

6:30 PM Regular Meeting

ZOOM Meeting: You may join online via the following link:

<https://mcminnvilleoregon.zoom.us/j/96025769049?pwd=cnVXQnJuR3dmbW9yVkRzVHFDYWk0UT09>

Zoom ID: 960 2576 9049

Zoom Password: 747182

Or you can call in and listen via zoom: 1 699 900 9128
ID: 960 2576 9049

Public Participation:

Citizen Comments: If you wish to address the Planning Commission on any item not on the agenda, you may respond as the Planning Commission Chair calls for "Citizen Comments."

Public Hearing: To participate in the public hearings, please choose one of the following.

- 1) *Email in advance of the meeting – Email at any time up to 12 p.m. the day of the meeting to Sarah.Sullivan@mcminnvilleoregon.gov, that email will be provided to the planning commissioners, lead planning staff and entered into the record at the meeting.*
- 2) *By ZOOM at the meeting - Join the zoom meeting and send a chat directly to Planning Director, Heather Richards, to request to speak indicating which public hearing, and/or use the raise hand feature in zoom to request to speak once called upon by the Planning Commission chairperson. Once your turn is up, we will announce your name and unmute your mic.*
- 3) *By telephone at the meeting – If appearing via telephone only please sign up prior to the meeting by emailing the Planning Director, Heather.Richards@mcminnvilleoregon.gov as the chat function is not available when calling in zoom.*

----- MEETING AGENDA ON NEXT PAGE -----

The meeting site is accessible to handicapped individuals. Assistance with communications (visual, hearing) must be requested 24 hours in advance by contacting the City Manager (503) 434-7405 – 1-800-735-1232 for voice, or TDY 1-800-735-2900.

*Please note that these documents are also on the City's website, www.mcminnvilleoregon.gov. You may also request a copy from the Planning Department.

Commission Members	Agenda Items
<p>Roger Hall, Chair</p> <p>Lori Schanche, Vice-Chair</p> <p>Robert Banagay</p> <p>Ethan Downs</p> <p>Gary Langenwalter</p> <p>Sylla McClellan</p> <p>Brian Randall</p> <p>Beth Rankin</p> <p>Dan Tucholsky</p> <p>Sidonie Winfield</p>	<p>6:30 PM – REGULAR MEETING</p> <ol style="list-style-type: none"> 1. Call to Order 2. Approval of Minutes <ul style="list-style-type: none"> • April 15, 2021 (<i>Exhibit 1</i>) 3. Citizen Comments 4. Public Hearing: <ol style="list-style-type: none"> A. <u>Quasi-Judicial Hearing: Comprehensive Plan Map Amendment (CPA 2-20) and Zone Change, including Planned Development Overlay Designation (ZC 3-20)</u> – (<i>Exhibit 2</i>) <p>Request: Approval to amend the Comprehensive Plan Map from Industrial to Commercial, and an amendment to the Zoning Map from M-2 (General Industrial) to C-3 PD (General Commercial with a Planned Development Overlay), for approximately 37.7 acres of a 90.4-acre property.</p> <p>The 37.7 acres includes 4.25 acres intended for right-of-way dedication for a future frontage road. The application also shows a portion of the area subject to the map amendment intended for a north-south extension of Cumulus Avenue and future east-west street connectivity.</p> <p>The request is submitted per the Planned Development provisions in Section 17.51.010(B) of the Zoning Ordinance, which allows for a planned development overlay designation to be applied to property without a development plan; however, if approved, no development of any kind can occur on the portion of the property subject to the C-3 PD overlay until a final development plan has been submitted and approved in accordance with the Planned Development provisions of the Zoning Ordinance. This requires the application for the final development plan to be subject to the public hearing requirements again at such time as the final development plans are submitted.</p> <p>Location: The subject site is located at 3310 SE Three Mile Lane, more specifically described at Tax Lot 700, Section 26, T.4S., R 4 W., W.M.</p> <p>Application: Kimco McMinville LLC, c/o Michael Strahs</p> B. <u>Legislative Hearing: Proposed Amendments to the Comprehensive Plan to adopt: A New Housing Needs Analysis (G 1-20); A New Housing Strategy (G 2-20); and A New Economic Opportunities Analysis (G 3-20)</u> – (<i>Exhibit 3</i>)

The meeting site is accessible to handicapped individuals. Assistance with communications (visual, hearing) must be requested 24 hours in advance by contacting the City Manager (503) 434-7405 – 1-800-735-1232 for voice, or TDY 1-800-735-2900.

*Please note that these documents are also on the City’s website, www.mcminvilleoregon.gov. You may also request a copy from the Planning Department.

Requests: G 1-20 - This is a legislative amendment, initiated by the City of McMinnville, to the Comprehensive Plan to adopt a new Housing Needs Analysis, including a residential buildable land inventory. **Note:** Staff will be requesting a continuance until May 18, 2023. This will provide additional time to amend the analysis to address new provisions of state law, evaluate efficiency measures and update the buildable land inventory to reflect the land added to the Urban Growth Boundary in December 2020.

G 2-20 - This is a legislative amendment, initiated by the City of McMinnville, to the Comprehensive Plan to adopt a new Housing Strategy. **Note:** Staff will be requesting a continuance until May 18, 2023. This will provide additional time to address new provisions of state law.

G 3-20 - This is a legislative amendment, initiated by the City of McMinnville, to the Comprehensive Plan to adopt a new Economic Opportunities Analysis, including a buildable land inventory for employment and other non-residential land use. **Note:** Staff will be requesting a continuance until May 18, 2023. This will provide additional time to update the buildable land inventory to reflect the land added to the Urban Growth Boundary in December 2020.

Applicant: City of McMinnville

C. Action Item Zoning Ordinance Text Amendments: Allowing Childcare as an Outright Permitted Use in Commercial and Industrial Zones (G 1-21) – Hearing conducted and closed at April 15, 2021, PC Meeting (Exhibit 4)

Request: This is a legislative amendment initiated by the City of McMinnville to remove regulatory barriers for the development of childcare centers in the city's commercial and industrial zones where development standards can be implemented that would allow for the permitted outright use of childcare centers without negative impact to adjacent properties.

Applicant: City of McMinnville

5. Commissioner/Committee Member Comments

6. Staff Comments

7. Adjournment



City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97128
(503) 434-7311

www.mcminnvilleoregon.gov

EXHIBIT 1 - MINUTES

April 15, 2021
Planning Commission
Regular Meeting

6:30 pm
Zoom Online Meeting
McMinnville, Oregon

Members Present: Roger Hall, Robert Banagay, Gary Landenwalter, Sylla McClellan, Brian Randall, Lori Schanche, Dan Tucholsky, Beth Rankin, and Sidonie Winfield
Members Absent: Ethan Downs – Youth Liaison
Staff Present: Heather Richards – Planning Director

1. Call to Order

Chair Hall called the meeting to order at 6:30 p.m.

2. Approval of Minutes

None

3. Citizen Comments

None

4. Legislative Hearing: Zoning Ordinance Text Amendments: Allowing Childcare as an Outright Permitted Use in Commercial and Industrial Zones (G 1-21)

Request: This is a legislative amendment initiated by the City of McMinnville to remove regulatory barriers for the development of childcare centers in the city’s commercial and industrial zones where development standards can be implemented that would allow for the permitted outright use of childcare centers without negative impact to adjacent properties.

Applicant: City of McMinnville

Opening Statement: Chair Hall read the opening statement and described the application.

Disclosures: Chair Hall opened the public hearing and asked if there was any objection to the jurisdiction of the Commission to hear this matter. There was none. He asked if any Commissioner wished to make a disclosure or abstain from participating or voting on this application. There was none.

Staff Presentation: Planning Director Richards presented the staff report. These were zoning ordinance text amendments removing regulatory barriers for childcare opportunities and becoming

compliant with Oregon Revised Statutes and Oregon Administrative Rules. There was a shortage of childcare in Oregon. Staff had talked to businesses in McMinnville and it was not as much of a crisis in the City. She discussed the percentage of children with access to childcare in metropolitan and nonmetropolitan counties and how there was a childcare desert in Yamhill County. The City's zoning ordinance allowed childcare uses in R1, R2, R3, R4, and OR zones but only twelve or fewer people could be present at any one time at the center. A daycare facility that had 13 or more people present at any one time was a conditional use. Childcare was only allowed as a conditional use in the commercial and industrial zones, C3, ML, M1, and M2. One off street parking space was required per teacher or supervisor. She explained how the definitions of childcare had changed. A registered family child care home was a facility in the provider's own home with up to ten children, including their own. A certified family childcare home was a facility in the provider's own home for up to 16 children, including their own. A childcare center was a facility, usually located in a commercial building, and the number of children was dependent upon the size of the building. Cities and counties could only apply zoning restrictions on registered or certified family child care in an area zoned for residential or commercial use if the conditions were no more restrictive than conditions imposed on other residential buildings in the same zone. That meant that the current regulations requiring conditional use for facilities over 12 children was out of compliance with state regulations. The proposed amendments would update the definitions for registered/certified child care homes and child care centers, registered and certified child care homes would be allowed as outright permitted uses and child care centers would be allowed as conditional uses in residential zones (R1, R2, R3, R4, R5, and OR). Child care centers would be allowed as outright permitted uses in C1, C2, C3, ML, and M1 and as conditional uses in M2. Child care centers would need to provide a designated pick-up and drop-off zone for two vehicles. Notices were sent to the News Register, Chamber of Commerce, MEDP, and partner agencies. Comments received were from DLCD requesting to keep the record open until April 30 for further review.

Commission Questions: Commissioner Langenwalter asked why a church was a conditional use instead of permitted use. Planning Director Richards said that was not a change. Churches were conditional uses in all the City's zones due to the size and impact to the neighborhood.

Commissioner Langenwalter said there had to be a parking space for every employee, even if they were part time and not currently on site. He suggested changing the wording to one space per contemporaneously working employee. Planning Director Richards said they had to have a number of employees relative to the number of children they were applying to have a license for. They might be able to use that as the parking requirement, but she would have to think more about it. Historically they had used the word daycare facility for child care facility and there were adult daycare facilities. As they brought in definitions for the state child care facility for up to age 18, they also changed the definition of daycare facility to an adult daycare but still with the same uses in the code.

Chair Hall noted that even with part time employees there might be times when all of the employees would be at the facility. Planning Director Richards said DLCD already asked to keep the record open and this would come back to the Commission for a final action in May. She would work with DLCD to see if they had recommended language for that.

Commissioner Randall thought it could be one spot per on-site employee. He asked if neighbors were notified when someone wanted to open a family daycare center. Planning Director Richards said if it was a conditional use, there would be a neighborhood meeting. If it was a permitted outright use, there was no neighborhood meeting required.

Commissioner Randall asked if they could require notification, not a meeting. Planning Director Richards would have to ask legal counsel.

Commissioner Tucholsky asked if the child care facilities would be allowed in the R-5 zone. Planning Director Richards said that was a new zone that was only multi-family. Based on the provisions in the law, they had to allow child care homes in multi-family. The number of children allowed would depend on the size of the residential unit.

Commissioner Tucholsky was concerned about the quality of care if there was a home that had 16 children next to another home with 16 children. There would be a significant amount of children in a zone for which it might not be appropriate. Planning Director Richards said the state might have spacing standards and she could find out before the next meeting.

Commissioner Banagay asked for clarification on the pick up and drop off zone, particularly for a multi-family zone. Planning Director Richards said they could not require it for child care homes. It was only a requirement for child care centers which were not in residences. Where it would be in a multi-family complex was in ground floor commercial where it was rented out as a child care center. They would have to have the parking for employees and a drop off and pick up zone that could accommodate two vehicles. In a residential area those would be conditional uses and would be reviewed for impact on the neighborhood.

Commissioner Winfield asked if CC&Rs or other restrictions could prevent child care facilities in some neighborhoods. Planning Director Richards would find out.

Commissioner Langenwaller asked if Planning Director Richards could find out how many children were allowed per square foot in a residential home.

Public Testimony:

Proponents: None

Opponents: None

Chair Hall asked if the Commission wished to continue or close the hearing.

There was consensus to close the hearing. Chair Hall closed the public hearing but the record would remain open for additional written testimony until April 30, 2021.

5. Presentation: Three Mile Lane Area Plan Update

Planning Director Richards gave the project update. She discussed the grant funding to do the area plan, study area, project goals, Comprehensive Plan designations, zoning for the area, major property owners, land use opportunities, existing conditions for transportation, intersection traffic operations, vehicle safety evaluation, economic analysis, public outreach, redevelopment case study, process, and reference documents. The foundational elements were: the boundaries would remain the same with the UGB in the same location and the developable land was roughly 400 acres, the airport was expected to develop per the 2004 Airport Plan, and the local roadway designs were adaptable to any land use concept. They were committed to having frontage roads on Highway 18 and to have complete streets with bicycle and pedestrian amenities. The Three Mile Lane Bridge would be improved for bicycle and pedestrian safety. She showed the final designs for the major collector and local residential streets. She explained the urban design to ensure new development reflected the regional agricultural and historic forms and supported this area's function as a gateway to McMinnville. There would be trail connections to neighborhoods and business campuses as well as recreational access to the Yamhill River.

She described the preferred land use alternative for the area. Some of the key features were a walkable commercial center, innovation campus, and mixed use neighborhoods. Regarding transportation, she explained the OR 18 options which included interchanges and roundabouts. The preferred design had jug handles, traffic signals, and roundabouts. She discussed the evaluation and implementation of the preferred design, Comprehensive Plan changes, improved vehicle, pedestrian, and bicycle performance, concept phasing and costs, Transportation System Plan update, design standard exceptions, applying Great Neighborhood Principles, and regulatory framework. She then reviewed the next steps.

Commissioner Tucholsky asked if there was a timeframe for the improvements to be made. Planning Director Richards said there was not a timeframe yet. Some of it would be required from private developers and some would be a City and ODOT project. The roundabout was still being discussed. The improvements would be adopted as an addendum to the Transportation System Plan and the capital improvements would be folded into the TSP update next fiscal year.

Commissioner Banagay said there were a lot of opportunities for the Innovation Center which would help with business growth and continued investment in McMinnville.

Commissioner Rankin asked how downtown Bend reacted after the Old Mill District was up and running. Planning Director Richards said downtown felt threatened by the new district, but today she thought they would say they were complimentary to each other because they had different niches that they were filling.

Kathleen??, McMinnville resident, participated in the public open houses and charrettes. There were a lot of people living in this area and the improvements would increase livability for residents. However, the airport was expanding and hosting the Air Show every year which was in conflict with improving the area.

Planning Director Richards said they could add a goal specific to residential livability.

Commissioner Rankin wanted to make sure they added a pedestrian overpass to the McDonald's. Planning Director Richards said that was included in the study. They found that it was an extremely wide area for an overpass and would knock out a lot of the built environment on either side. They were now looking at safe crossings with the signalized intersections.

Commissioner Winfield said there were a lot of roads in disrepair in this area as well as very narrow roads. Were they planning to be improved as well? Planning Director Richards said this plan was only about land uses and transportation relative to classifications and where they would be built. The road conditions and widening issues would be addressed in the TSP update.

6. Commissioner Comments

None

7. Staff Comments

Planning Director Richards reminded the Commission of their joint meetings with City Council on April 27 and May 11 to discuss the Highway 99W bike and pedestrian plan and Three Mile Lane Plan.

8. Adjournment

Chair Hall adjourned the meeting at 8:14 p.m.

Heather Richards
Secretary



City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97128
(503) 434-7311
www.mcminnvilleoregon.gov

EXHIBIT 2 - STAFF REPORT

DATE: May 20, 2021
TO: Planning Commission Members
FROM: Tom Schauer, Senior Planner
SUBJECT: Public Hearing - CPA 2-20/ZC 3-20, Comprehensive Plan Map Amendment and Zone Change with Planned Development (PD) Overlay

STRATEGIC PRIORITY & GOAL:



GROWTH & DEVELOPMENT CHARACTER

Guide growth & development strategically, responsively & responsibly to enhance our unique character.

OBJECTIVE/S: Strategically plan for short and long-term growth and development that will create enduring value for the community

Report in Brief:

This proceeding is a quasi-judicial public hearing of the Planning Commission to consider a Comprehensive Plan Map amendment (CPA 2-20) and Zone Change (ZC 3-20) with a Planned Development (PD) overlay. The proposed amendment applies to approximately the northerly 33.5 acres of a 90.45 acres parcel, plus 4.25 acres along the Highway OR-18 frontage intended for right-of-way dedication. **See Vicinity Map (Figure 1), Comprehensive Plan Map (Figure 2), Zoning Map (Figure 3), and Applicant's Proposed Map Amendment (Figure 4).**

Please note Figures 3 and 4 don't yet reflect the land added to the UGB north of Three Mile Lane between the highway and the Evergreen Museum.

The proposed amendment would change the Comprehensive Plan designation from Industrial to Commercial and would change the zoning from M-2 (General Industrial) to C-3 PD (General Commercial with a Planned Development (PD) Overlay). The applicant is proposing the option of the PD overlay which allows the development plan to be deferred to a future review with a future public hearing process. By applying a planned development overlay to the property at this time, design and development standards can be established for the site, and it provides for a future opportunity to review the final development plan through a public hearing process.

Staff is recommending that, following the staff report, applicant's presentation, and public testimony, at the May 20 hearing, ***that the hearing be continued to a date certain to be announced at the May 20 hearing***, for additional time for the applicant to prepare and submit additional requested information regarding the transportation mitigation for ODOT review and approval, to be coordinated with the City.

Figure 1. Vicinity Map
 (See Figure 4 for portion proposed for map amendment).



Figure 2. Comprehensive Plan Map
 (See Figure 4 for portion proposed for map amendment)

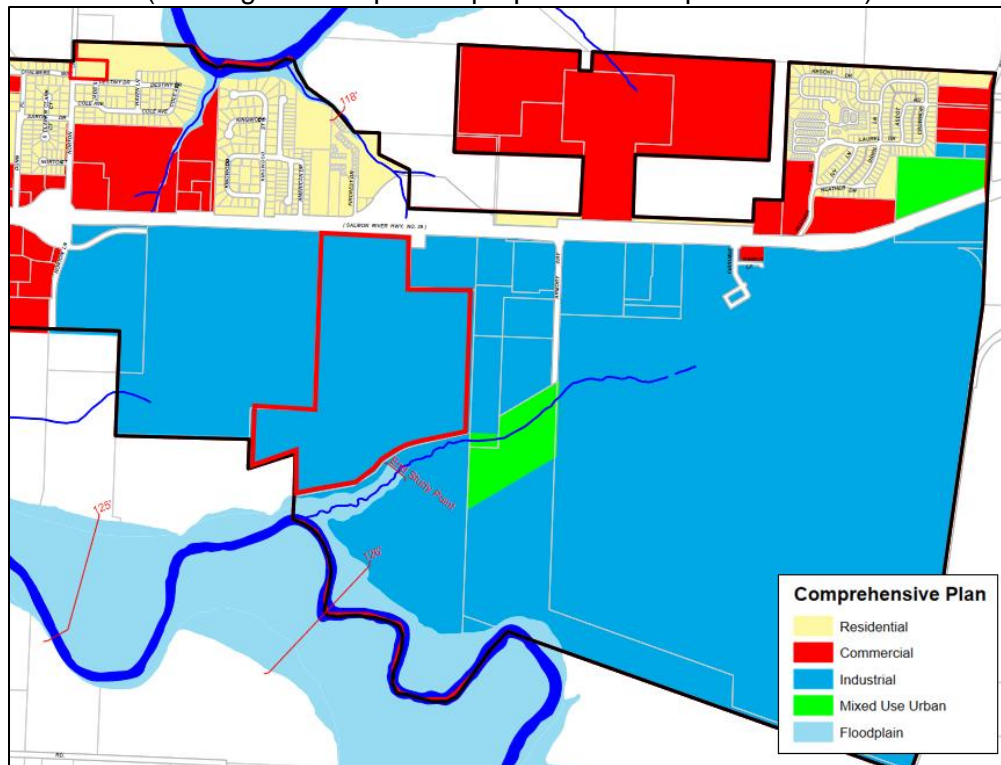


Figure 3. Zoning Map
 (See Figure 4 for portion proposed for map amendment)

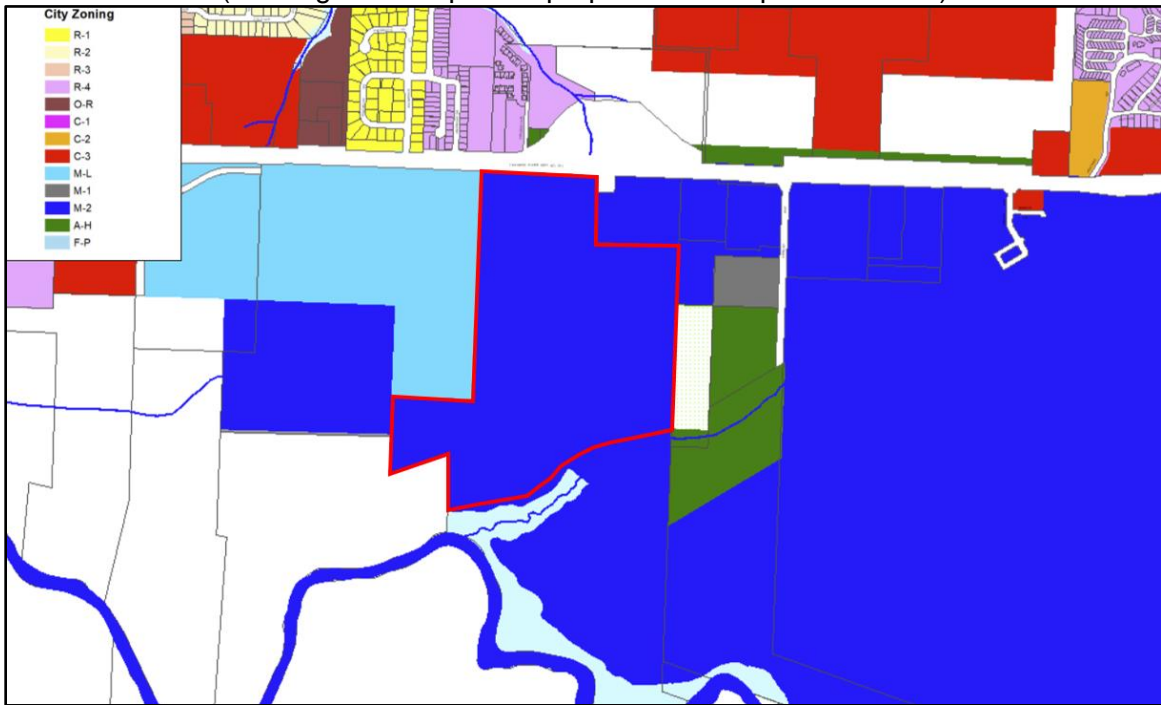
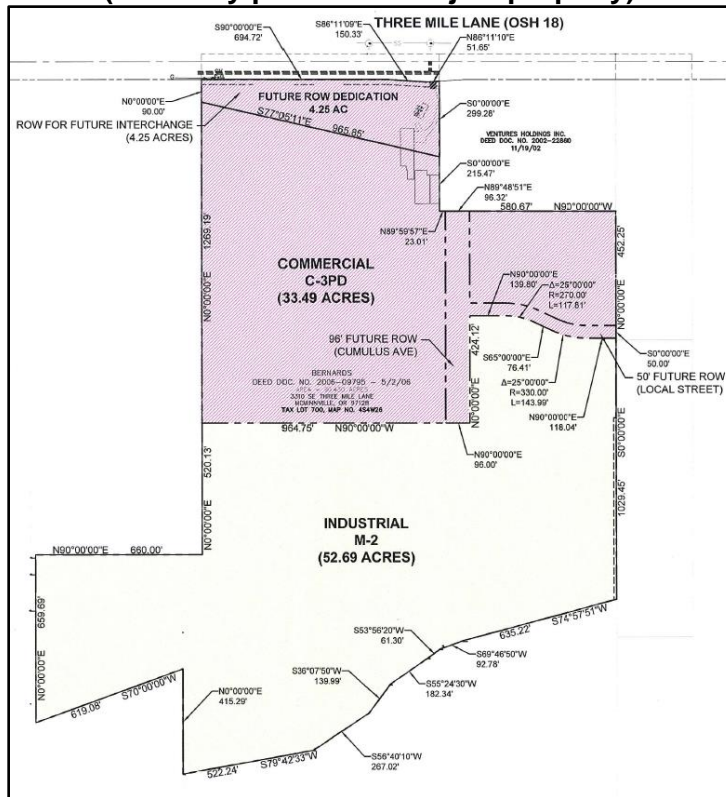


Figure 4. Applicant's Proposed Map Amendment
 (Northerly portion of subject property).



Background:

The City adopted an updated 2013 Economic Opportunities Analysis (EOA) in 2014, which was subsequently acknowledged (Ordinance 4976). The EOA identifies a deficit of 35.8 acres of commercial land and a surplus of industrial land. The proposed amendment would address about 33.5 acres of the commercial deficit, while still retaining an industrial surplus. The EOA found that in addition to commercial land associated with growth, there was also substantial “retail leakage” with residents of McMinnville and its market area spending money outside of McMinnville due to lack of available retail in key categories within McMinnville. The proposed amendment is intended to address most of McMinnville’s identified commercial land deficit and capture some of the retail leakage. Amendments to the Comprehensive Plan adopted in December 2020 also include a “Proposal” to rezone property at this location from industrial to commercial (Proposal 48.70).

The proposal meets the policies and criteria of the McMinnville Comprehensive Plan and Zoning Ordinance. However, there are two predominant issues with the application: (1) timing of the submittal relative to the Three Mile Lane Area Planning process which has identified the need for design and development standards in this area to support McMinnville’s unique qualities as a community with small town charm and agrarian roots and how to incorporate those standards into this land-use decision prior to the adoption of the Three Mile Lane Area Plan; and (2) the need for mitigation to address “significant effects” of the proposed map amendment on transportation facilities.

The applicant has agreed to the concept of a planned development overlay for this site to incorporate the Three Mile Lane Area Plan design and development standards, and the applicant hired a transportation consultant to evaluate and address the transportation impact of the proposed Comprehensive Plan Map and Zoning Map amendment on Highway 18 and the local transportation infrastructure. ODOT and the City have reviewed the mitigation measures proposed by the applicant for the transportation impact, and both agencies have requested additional information from the applicant to continue to evaluate those mitigation measures. The applicant has agreed to meet with ODOT and the City to discuss and prepare any additional information needed. This meeting will occur after the initial public hearing on May 20, 2021, so the City is requesting that the Planning Commission continue the public hearing to a date specific (date will be provided at the public hearing) to accommodate these additional discussions and to allow for additional public testimony as needed to evaluate the outcomes of the transportation mitigation discussions.

Discussion:

With the proposed Comprehensive Plan Map Amendment and Zone Change, the applicant must address the applicable criteria identified in the decision document. The applicant must also demonstrate compliance with applicable state law, including the Transportation Planning Rule (OAR 660 Division 12). OAR 660-012-0060 specifically addresses Plan and Land Use Regulation Amendments. One key provision specifies that if an amendment would “significantly affect an existing or planned transportation facility,” then a local government must put in place certain measures, unless the amendment is allowed under certain provisions of the rule. See OAR 660-012-0060(1).

As part of the map amendment request, the applicant has also requested a Planned Development (PD) overlay. The applicant has requested to use the option that allows the PD overlay designation without concurrent approval of a development plan. This requires the applicant to later submit the development plan through the same public hearing and review process. No development of any kind shall occur on land subject to the PD overlay until the final development plan has been submitted, reviewed, and approved.

There are separate criteria for approval of a PD overlay. In addition, to use the option for the deferred approval of the development plan, the property must have “unique characteristics (e.g., geological,

ecological location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole.” In addition, the Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.”

The City is in the midst of a comprehensive area-wide land and transportation planning process for the Three Mile Lane area, referred to as the Three Mile Lane Area Plan (3MLAP). This planning process will result in updates to the adopted and acknowledged land use plan, development standards, and transportation plan for the planning area.

The Planning Commission and City Council must find that the location of the subject property in the middle of this planning area presents “unique characteristics” that authorize the use of the PD process with the deferred development plan.

With this process, the Planning Commission and City Council must set forth the reasons of approval and areas of concern that must be addressed when the final development plan is submitted.

There are two principal “areas of concern” that must be addressed, both associated with the “unique characteristics” of the location of the subject property in the midst 3MLAP work underway, and the timing of this application (without a contemporaneous development plan) relative to the work on the 3MLAP:

1. **Consistency with Three Mile Lane Area Plan.** Development of the property must be consistent with the 3MLAP principles, land use, development and circulation plan and development standards.

This is to be addressed through a condition of approval of the PD overlay designation, requiring development to be consistent with the design and development principles and standards attached as an exhibit to the decision document and ordinance.

2. **Transportation Mitigation.** The Transportation Planning Rule requires that all comprehensive plan map amendments evaluate whether or not the proposed new use would require traffic mitigation on any adjacent state facilities. The applicant conducted a traffic impact study that does show impact on the state and local facilities and has presented plans for mitigating that impact. Both the City and ODOT have concerns about the mitigation plans presented and have requested more time and more information to evaluate them. ODOT has provided comments noting that they require some additional information for their analysis and must approve mitigation to OR-18. ***Therefore, the City can't adopt the applicant's proposed mitigation to OR-18 unless ODOT approves the mitigation.***

For example, the OR-18 Corridor Plan calls for phased improvements at the intersection of N/W Cumulus Avenue and OR-18. The first phase was partially completed, with an at-grade signalized intersection. It also called for a collector street system to serve properties to the east on the south side of the highway, which is now partially provided by private access. The OR-18 Corridor Plan long-term improvement calls for a grade-separated interchange at this location. This improvement would be required when warranted by traffic counts on the highway.

The 3MLAP identified that the long-term improvement of a grade-separated interchange was not warranted in the next twenty years (state and local planning horizon) even with the proposed comprehensive plan map amendment and zone map amendment. In fact, the 3MLAP identified an interim improvement of a jug-handled signalized intersection when warranted prior to the need to invest in a grade-separated interchange. These would be designed to change

intersection movements to eliminate left-turns off of the highway onto side streets, while allowing left-turns onto the highway.

The mitigation proposed by the applicant at this location would add an east-bound right-turn lane and a north-bound left turn lane, and update the traffic signal equipment accordingly and prioritize through movements. The applicant also noted that beyond the planning horizon, it would be possible to add a second north-bound left-turn lane. In addition, the applicant has agreed to dedicate the necessary right-of-way needed to accommodate a future jug-handled signalized intersection and grade-separated interchange.

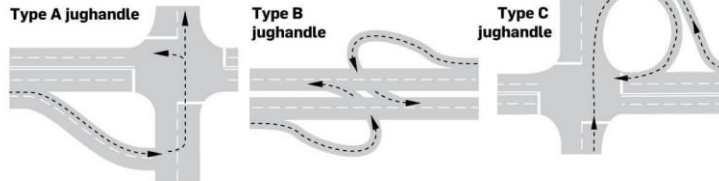
The applicant's proposed mitigation could be considered consistent with first phase of the OR-18 Corridor Plan for the at-grade intersection, providing additional intersection improvements. And their proposed dedication of public right-of-way for a future grade-separated interchange would be inconsistent with the long-term plan for the grade separated interchange.

The applicant's proposed mitigation could be considered consistent with the 3MLAP preferred alternative to retain the at-grade intersection, with the mitigation making intersection improvements needed to meet mobility standards.

The Kimco TIA and 3MLAP transportation analysis also both note that beyond the planning horizon, additional mitigation may be required. Kimco's TIA notes the possibility of a second north-bound left-turn lane, while the 3MLAP notes the possibility of jug handles. For the latter, that would apparently coincide with the elimination of left-turns from the highway and replacement of the right-turn lane with a "Type A" jug handle on the southeast corner.

JUGHANDLES

New Jersey uses three typical jughandle designs



Source: New Jersey Department of Transportation

THE STAR-LEDGER



Kimco's TIA identifies mitigation at five additional intersections on both OR Highway 18 and on the local street network.

At this time, both ODOT and the City has requested additional information from the applicant to further review certain aspects of the applicant's TIA and to determine if they would approve the applicant's recommended mitigation.

The criteria in the Zoning Ordinance, including the requirement for consistency with the Comprehensive Plan Goals and Policies, are specific, and addressed in the Conclusionary Findings section of this document. However, the main issues to be addressed with an application for a Comprehensive Plan Map Amendment and Zone Change, including a Planned Development Overlay, can be summarized as discussed below.

1. Is there a need for the change?

- Is there an identified need for the proposed zoning?
- What impact does the change have on the needed land supply of the current zoning?

There needs to be information in the Comprehensive Plan that shows a need for the proposed designation. If the need isn't demonstrated in the Comprehensive Plan, then the application needs to include updates to the Comprehensive Plan to show there is a need. The change from the current designation should not create a deficit of land supply in the current designation.

The need is demonstrated in the Comprehensive Plan, which already identifies a deficit of commercially-designated land and a surplus of industrially-designated land.

2. Is the proposal suitable to meet the need?

- If so, does the proposed amendment meet the identified need – both quantitatively (the acreage) and qualitatively (the type of zoning proposed)?
- Is the location suitable to meet the identified need for the proposed zoning?
- Are there any specific site features or characteristics that need to be considered to determine suitability for the proposed zoning?

The proposed amendment is consistent with the amount/acreage of need identified in the Comprehensive Plan for additional commercially designated land, without reducing the industrially-designated acreage below the identified need.

The EOA identifies characteristics of land commercial land need, and the applicant has described the suitability of this site to address the type of commercial need. The Comprehensive Plan, the economic analysis in the adopted and acknowledged Economic Opportunities Analysis (EOA), , as well as subsequent additional economic analysis conducted in conjunction with the Three Mile Lane Area Plan (3MLAP), identify the types of commercial land needed. The economic analysis identifies certain types of commercial uses for which 'retail leakage' is occurring. These are uses for which there is demand in McMinnville based on analysis of its market area – including residents of McMinnville and the surrounding area. The proposed C-3 PD designation is the appropriate designation. The C-3 zone generally allows uses for which there is demand and which are experiencing leakage. In addition, the design and development principles and standards attached to the PD overlay designation as a condition of approval provide greater regulatory control over the development characteristics and certain uses that may otherwise be permitted in the C-3 zone, but which could conflict with the critical issues being undertaken as part of the Three Mile Lane Areas planning process for this key gateway location into McMinnville and the importance of this area in creating first impressions and having the potential to influence the character of McMinnville.

The location and site are evaluated for suitability for the intended types of commercial use and commercial zoning. The site is also evaluated to determine if it has any specific features or attributes which might affect its suitability for intended uses. The location, topography, and general characteristics are suitable for commercial development. There aren't substantial areas of natural features which would preclude the use of the property for intended uses, although the design and development principles and standards attached as a condition of approval provide that special natural features or elements are to be incorporated into the site design.

3. Is the timing appropriate for the proposed amendment?

It is common for cities to have policies regarding urbanization that address timing and phasing of development and extension of services; however, these policies typically address rezoning of unincorporated urbanizable land within a UGB from a rural or urban holding zone to an urban zone.

With that said, when there is an identified deficit of urban commercial land and surplus of urban industrial land, the timing is appropriate to redesignate the land to address the deficit.

In some cases, this can also help ensure the land isn't developed or partially developed before it can be redesignated to the needed commercial designation. It can protect land needed for commercial development from incompatible development and/or parcelization.

The timing of the application prior to adoption of the 3MLAP does pose some unique issues to be addressed with the Planned Development overlay designation. Within the current context of the Three Mile Lane Area Plan, there may be more specific objectives for coordinated planning of the area. The Planned Development Overlay designation is the appropriate designation to allow the redesignation to commercial, but without the generic C-3 zoning that could allow development to occur without approval of a Planned Development master plan that responds to specific objectives of the area. The applicant has proposed the PD process that allows for deferred approval of a master plan, which is subject to the same public hearing provisions of the PD overlay designation. This approach allows for work to progress on the Three Mile Lane Area Plan, identifying specific issues and conditions up-front to be addressed when the master plan is submitted, and/or to be revised to be consistent with the final Three Mile Lane Area Plan and its implementing provisions when that work has been completed.

There is still the potential that the applicant could apply for the development plan through the PD process prior to completion of the 3MLAP work. That would provide a public forum for deciding on action on how and whether a specific development plan meets the applicable criteria and conditions of approval, including consistency with the design and development principles and standards attached to the C-3 PD overlay designation as a condition of approval.

Subject to the conditions of approval, of available options, the current timing and the proposed Commercial plan designation and C-3 PD overlay zone is the best alternative to re-designate the property to commercial, but provide a mechanism to delay timing of the development plan and development timing to further coordinate work with the Three Mile Lane Area planning.

The main options available to the applicant for timing and redesignation were:

- **The current application to redesignate the land to Commercial C-3 PD and apply the PD overlay with the deferred development plan option, which also precludes development until that is approved through the same PD process.** The main downside of this option is it doesn't allow for completion of work on the 3MLAP before finalizing the zone boundary through the public process. However, with deferred approval of the development plan, accompanied by design and development principles and standards as conditions of approval of the PD overlay, this provides an opportunity to incorporate principles from the 3MLAP work to date into the terms of the overlay.
- **Apply the C-3 PD overlay with a concurrent development plan.** This is not preferred – it would have resulted in an application for approval of a specific development plan prior to completion of work on the 3MLAP and the surrounding area planning context.
- **Redesignate the land to Commercial/C-3 without a PD overlay at this time.** This would allow development subject only to the current C-3 standards and other general development standards (such as Large Format Commercial Standards) without an area plan (with land use, transportation, and development standards) or approval of the plan through a separate public hearing process, which could occur in advance of the 3MLAP and could result in development that could conflict with the 3MLAP, and issues such as connectivity and associated development standards.

- **Redesignate the land to a new commercial zone or overlay that doesn't currently exist, tailored to the Three Mile Lane area.** This would still allow development to occur without the public process and oversight of the specific development plan provided by the PD process. It would have required the applicant to propose a new zone, then submit a development plan through the standard review process. This would have been premature rather than having any potential zones or overlays for the Three Mile Lane Area Plan come out of the public process, and without the accompanying level of oversight provided by the PD process.
- **Retain industrial zoning at this time, and wait until completion of the 3MLAP before seeking redesignation.** This would have postponed action to redesignate land necessary to meet needs for the identified commercial land deficit which already exists. However, the could have then been considered relative to, or together with the rest of the 3MLAP.

Now that the application has been submitted, the decision-making body must review the submitted application relative to the applicable criteria. In this case, that is the criteria for the proposed Comprehensive Plan Map Amendment, Zone Change, and Planned Development Overlay designation, including conditions of approval, including design and development principles and standards and specific issues that will need to be addressed with a future development plan.

4. Does the proposal create any impacts that need to be addressed?

- Does the proposed amendment require any updates to other aspects of the Comprehensive Plan, such as various public facility plans? Does the amendment affect required public facilities and services to serve the property or other properties that may be affected by the amendment? Are there any public facility plans that would need to be updated to serve more intensive development that would place additional demand on the facilities?
- The plan was routed to agencies and departments for review, and no issues were identified other than as addressed above for TPR compliance. It is also recognized that adequate public facilities will need to be provided at the time of development to serve the property. The intensity of the specific type of development, regardless of a map amendment, will determine certain development requirements.

5. Are there any special issues that need to be considered and addressed?

- Are there special issues that need to be addressed in conjunction with the amendment? As previously noted, there are several issues identified in Three Mile Lane Area Plan principles and planning documents, relating to commercial use and site development, and coordinated circulation with, and relationships to, development of other properties in the Three Mile Lane area, that will need to be addressed in the final Planned Development (PD) development plan. Therefore, the PD designation is subject to design and development principles and standards as a condition of approval to ensure consistency with the 3MLAP work.

As part of the PD criteria, there are additional requirements that apply beyond the CPA/ZC criteria. The purpose of a PD is articulated in the first paragraph of Section 17.51.010. In reviewing a PD to provide for a superior outcome, the Council and Planning Commission are to set forth reasons for approval and areas of concern that must be addressed when the final PD development plan is submitted.

As a result, the review will analyze issues addressed in the applicant's narrative, which will result in conditions that may be more specific than strictly development through a standard C-3 zone.

Some of the additional critical issues to be reviewed at the time of development plan submittal are:

- (1) How well the proposal will include uses and retail categories to address one of the key issues identified in the EOA: reduction of retail leakage, rather than cannibalization of local sales.

- (2) How the proposed use and development will fit with the objectives of the Three Mile Lane Area planning work underway, so there is not premature commercial development that could potentially impact, conflict with, or preclude accomplishment of the coordinated planning of the broader Three Mile Lane area.
- (3) As part of the above, how the development will complement the uniqueness of McMinnville, not only in design and aesthetic choices, but through how well the uses, spaces, and relationship between buildings and on-site amenities achieves a mix of uses that complement McMinnville's ability to strengthen the local community and economy overall, both to serve residents and to serve as a destination for visitors, in a manner that draws visitors and encourages them to stay longer, draw people in to the community, and support the breadth of local businesses during their stay. This relies on a plan that does more than reduce retail leakage. The concept must be strong enough to showcase the local identity, uniqueness, and authenticity, and to provide an experiential destination, including a mix of uses and development pattern that supports "park and stroll," linger, and explore McMinnville experiences.

Staff recommends a continuance of the public hearing to allow for additional time for this review to occur.

Note: This application includes an amendment to the Comprehensive Plan map and is not subject to the 120-day processing timeline.

Attachments:

1. CPA 2-20/ZC 3-20 Decision Document
2. CPA 2-20/ZC 3-20 Application

Recommendation:

Staff recommends a continuance of the public hearing to allow for additional time for review of the proposed transportation mitigation at impacted intersections to occur for consistency as phased and/or interim improvements, or potentially full mitigation as specified in the OR-18 Corridor Plan and/or 3MLAP.



**CITY OF MCMINNVILLE
PLANNING DEPARTMENT**
231 NE FIFTH STREET
MCMINNVILLE, OR 97128

503-434-7311
www.mcminnvilleoregon.gov

DECISION, CONDITIONS, FINDINGS OF FACT AND CONCLUSIONARY FINDINGS FOR THE APPLICATION FOR A COMPREHENSIVE PLAN MAP AMENDMENT FROM INDUSTRIAL TO COMMERCIAL AND A ZONE CHANGE FROM M-2 (GENERAL INDUSTRIAL) to C-3 PD (GENERAL COMMERCIAL WITH A PLANNED DEVELOPMENT OVERLAY) FOR 37.7 ACRES OF A 90.4-ACRE PROPERTY LOCATED AT 3310 SE THREE MILE LANE, TAX LOT R4426 00700

DOCKET: CPA 2-20 (Comprehensive Plan Map Amendment), ZC 3-20 (Zone Change, including Planned Development Overlay Designation)

REQUEST: An application for an amendment to the Comprehensive Plan Map from Industrial to Commercial, and an amendment to the Zoning Map from M-2 (General Industrial) to C-3 PD (General Commercial with a Planned Development Overlay), for approximately 37.7 acres of a 90.4-acre property.

The 37.7 acres includes 4.25 acres intended for right-of-way dedication for a future public transportation improvement. The application also shows a portion of the area subject to the map amendment intended for a north-south extension of Cumulus Avenue and future east-west street connectivity.

The request is submitted per the Planned Development provisions in Section 17.51.010(B) of the Zoning Ordinance, which allows for a planned development overlay designation to be applied to property without a development plan; however, if approved, no development of any kind can occur on the portion of the property subject to the C-3 PD overlay until a final development plan has been submitted and approved in accordance with the Planned Development provisions of the Zoning Ordinance. This requires the application for the final development plan to be subject to the public hearing requirements again at such time as the final development plans are submitted.

LOCATION: Site Address: Part of 3310 SE Three Mile Lane
Map & Tax Lot: Part of R4426 00700

ZONING: M-2 (General Industrial), Three Mile Lane Overlay, Airport Overlay

APPLICANT: Kimco McMinnville LLC, c/o Michael Strahs

PROPERTY OWNER: Kimco McMinnville LLC

STAFF: Tom Schauer, Senior Planner

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

DATE DEEMED**COMPLETE:** April 8, 2021**HEARINGS BODY
& ACTION:**

The McMinnville Planning Commission makes a recommendation for approval, approval with conditions, or denial of the land use application to the City Council.

PLANNING COMMISSION**HEARING DATE****& LOCATION:**

May 20, 2021 at 6:30 P.M. Public hearing held virtually via Zoom meeting software. Zoom Online Meeting ID: 960 2576 9049

**DECISION-MAKING
BODY**

: The McMinnville City Council approves, approves with conditions, or denies the land use application.

**MEETING DATE
& LOCATION:**

To be determined.

PROCEDURE:

An application for a Comprehensive Plan Map Amendment and Zone Change, including a Planned Development Overlay, is processed in accordance with the procedures in Section 17.72.120 of the McMinnville Municipal Code. The application is reviewed by the Planning Commission in accordance with the quasi-judicial public hearing procedures specified in Section 17.72.130 of the McMinnville Municipal Code.

CRITERIA:

The applicable criteria for a Comprehensive Plan Map Amendment and Zone Change are specified in Section 17.74.020 of the McMinnville Municipal Code. The criteria for a Planned Development Overlay are specified in Chapter 17.51 of the McMinnville Municipal Code. In addition, the goals, policies, and proposals in Volume II of the Comprehensive Plan are to be applied to all land use decisions as criteria for approval, denial, or modification of the proposed request. Goals and policies are mandated; all land use decisions must conform to the applicable goals and policies of Volume II. "Proposals" specified in Volume II are not mandated, but are to be undertaken in relation to all applicable land use requests.

APPEAL:

The Planning Commission makes a recommendation to the City Council, and the City Council makes the final decision. As specified in Section 17.72.190 of the McMinnville Municipal Code, the City Council's decision may be appealed to the Land Use Board of Appeals (LUBA) within 21 (twenty-one) days of the date written notice of decision is mailed.

Note: *The City's final decision is usually subject to a 120-day processing timeline, including resolution of any local appeal. However, per ORS 227.178(7), the 120-day period does not apply to a decision of the city making a change to an acknowledged comprehensive plan or a land use regulation that is submitted to the Director of the Department of Land Conservation and Development under ORS 197.610.*

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

COMMENTS: This matter was referred to the following public agencies for comment: McMinnville Fire Department, Police Department, Engineering Department, Building Department, Parks Department, Public Works Department, Waste Water Services, City Manager, and City Attorney; McMinnville Water and Light; McMinnville School District No. 40; Yamhill County Planning Department; Ziplly Fiber (formerly Frontier Communications); Comcast; Recology; Northwest Natural Gas; Oregon Department of State Lands; and Oregon Department of Transportation. Their comments are provided in this document.

RECOMMENDATION

Based on the findings and conclusionary findings, the Planning Director finds that additional information from the applicant and review by ODOT in coordination with the City is needed regarding the application’s consistency with certain criteria pertaining to transportation facilities and mitigation to make conclusionary findings regarding those issues and criteria. Therefore, following the staff report, applicant’s presentation, and public testimony at the May 20 hearing, the Planning Director **RECOMMENDS A CONTINUANCE TO A DATE CERTAIN** to be specified at the May 20 hearing to address the remaining transportation issues. The Planning Director finds the other criteria are satisfied, or satisfied subject to the conditions in Section II.

////////////////////////////////////
RECOMMENDATION: CONTINUANCE TO A DATE CERTAIN
////////////////////////////////////

Planning Department: 
Heather Richards, Planning Director

Date: May 20, 2021

Attachments:
Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

I. APPLICATION SUMMARY:

Subject Property & Request

An application for an amendment to the Comprehensive Plan Map from Industrial to Commercial, and an amendment to the Zoning Map from M-2 (General Industrial) to C-3 PD (General Commercial with a Planned Development Overlay), for approximately 37.7 acres of a 90.4-acre property. The proposed map amendment includes 4.25 acres intended for right-of-way dedication for future highway transportation improvements. The 37.7 acres less the 4.25 acres is approximately 33.5 acres. The application also shows a portion of the area subject to the map amendment intended for future right-of-way for a north-south extension of Cumulus Avenue and future east-west street connectivity. **See *Vicinity Map (Figure 1), Comprehensive Plan Map (Figure 2), Zoning Map (Figure 3), and Applicant's Proposed Map Amendment (Figure 4).***

Please note Figures 3 and 4 don't yet reflect the land added to the UGB north of Three Mile Lane between the highway and the Evergreen Museum.

The request is submitted per the Planned Development provisions in Section 17.51.010(B) of the Zoning Ordinance, which allows for a planned development designation to be applied without a development plan; however, no development of any kind can occur on the portion of the property subject to the C-3 PD overlay until a final development plan has been submitted and approved in accordance with the Planned Development provisions. This requires the application for the final development plan to be subject to the public hearing requirements again at such time as the final development plans are submitted.

Summary of Criteria & Key Issues

Introduction

The proposal includes a requested comprehensive plan map amendment, zoning map amendment, and planned development (PD) overlay designation, with the deferred development plan option as described above.

Key requirements for the comprehensive plan map amendment and zoning map amendment are consistency with the Comprehensive Plan (including identified need, suitability of the property to meet the need, and whether the proposed zoning designation is appropriate to meet the identified need), and orderliness and timeliness of the amendment, and ability to efficiently provide utilities and services to serve uses permitted in the proposed zoning district.

With the PD overlay designation, when the option to defer the approval of the preliminary development plan is considered (Section 17.51.010(B)), there must be findings that the property has unique characteristics and the development of which may have an impact on the surrounding area or the city as a whole. In addition, the Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.

Some provisions of state law also apply to map amendments. In considering consistency with the Comprehensive Plan, the provisions of state law at OAR 660-012-0060 must also be addressed. This is part of the Transportation Planning Rule relating to Plan and Land Use Regulation Amendments.

As addressed in these findings, the following summarizes the key findings related to the applicable criteria for the map amendment in Chapter 17.74 and the Planned Development Overlay in Chapter 17.51.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- **17.74.020(A) (Consistency with the Comprehensive Plan).** The commercial land need, suitability of the site to meet the need, and the suitability of the C-3 PD commercial designation to meet the need are well documented in the Comprehensive Plan and 2013 Economic Opportunities Analysis (EOA) adopted on February 25, 2014 by Ordinance No. 4976 and referenced in the application submittal.
- **17.74.020(B) (Orderly and Timely) and (C) (Efficient Provision of Utilities and Services).** The agency notification process resulted in responses which indicated no significant issues in the ability to provide service to the property for uses permitted in the proposed zoning district, except for some expressed concerns by ODOT that still need to be addressed prior to approval of the application. Some upgrades to power feeder lines may be required at the time of development, depending on the specific use and development proposed.

Transportation: Regarding transportation facilities and the requirements of Transportation Planning Rule, OAR 660-012-0060(1) specifies:

If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule.

The rule provides detail about the definition of a “significant effect” and how a significant effect may be addressed. In short, the applicant’s Traffic Impact Analysis (TIA) found there would be significant effects associated with the amendment, and proposed mitigations to address those effects associated with the proposed map amendment for the subject property.

ODOT has provided comments that it needs to review additional information associated with the TIA recommendations and to approve any mitigation to OR-18 which is under their jurisdiction.

The City has also requested additional information to evaluate the proposed mitigation improvements.

Staff recommends a continuance of the public hearing to provide additional time to address this issue.

- **17.51.010(B).** Regarding the requirements associated with the approval of the planned development overlay and deferred development plan, there are unique characteristics associated with the property, and there are areas of concern that will need to be addressed at the time the final PD development plan is submitted.

Most notably, the City has been engaged in a three-year public planning process for the Three Mile Lane Area Plan (3MLAP) specifically for this area of the community. This process is nearing completion. In order to incorporate the outcomes of this planning process, the applicant has agreed to a planned development overlay that will incorporate the design and development standards that has been developed by the Three Mile Lane Area planning process.

It should be noted that while the proposal meets the criteria for being orderly and timely, the timing poses some unique issues that need to be identified and addressed as “areas of concern that must be addressed when final plans are submitted” for the PD approval. Those timing issues relate to the fact that a public planning process is underway for the Three Mile Lane Area, which is intended to update and guide the land use, circulation, design, development and

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

redevelopment, and other aspects of the area, to achieve a desired area-wide outcome. As a result, there are draft new standards and zoning to be adopted for the area which aren't yet in effect. In addition, there is a draft preferred transportation alternative which has some preferred circulation and intersection improvements which differ from those in the adopted Transportation System Plan and Highway 18 Corridor Plan.

Therefore, the timing of the application presents some unique issues which the application must address:

- As a condition of approval, the final development plan will be subject to the design and development principles and standards attached to this decision document, except that, if 3MLAP principles and standards are adopted prior to submittal of the PD final development plan, the more stringent principles and standards shall apply.
- The applicant will need to submit additional information for ODOT and City review and approval, and demonstrate the proposed mitigation is consistent with the OR-18 Corridor Plan and Draft 3MLAP Preferred Transportation Alternative as interim improvements consistent with each plan, and that they are providing the necessary public right-of-way dedication for the future long-term improvements needed. **Staff has recommended a continuance of the public hearing as both ODOT and the City have requested additional information from the applicant relative to this issue.**

Figure 1. Vicinity Map

(See Figure 4 for portion proposed for map amendment).



Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

Figure 2. Comprehensive Plan Map
(See Figure 4 for portion proposed for map amendment)

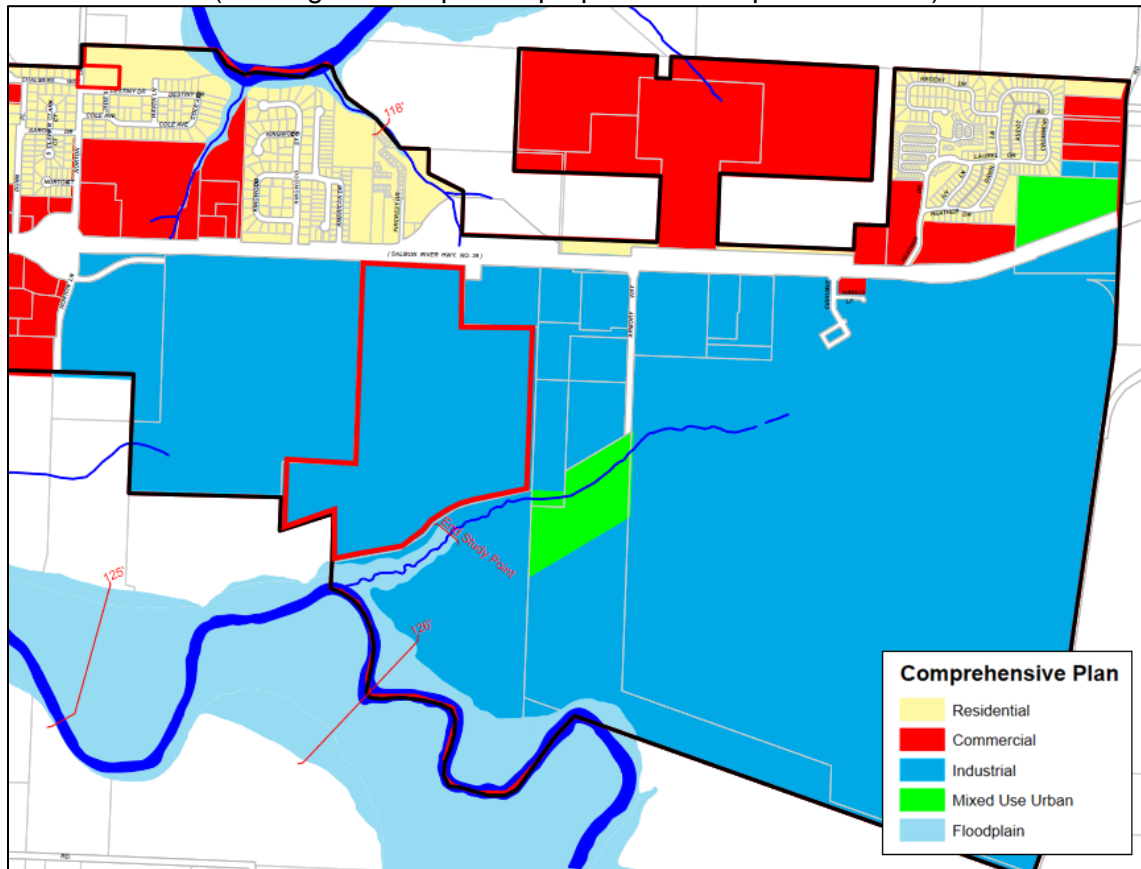
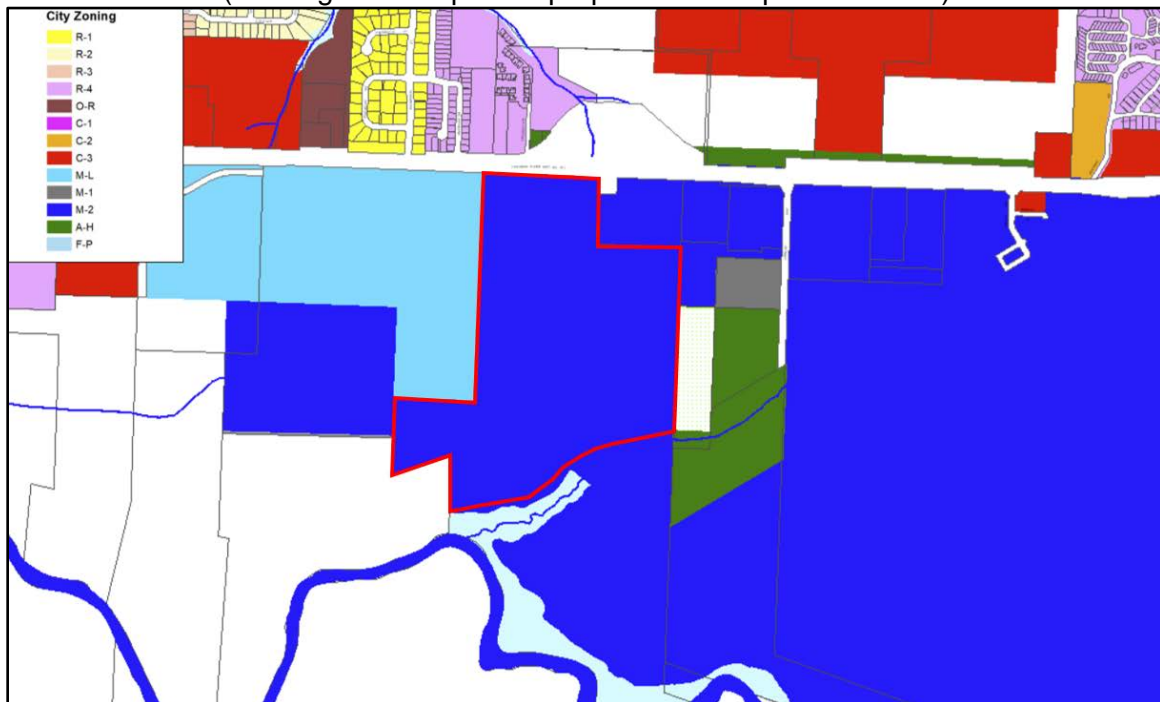


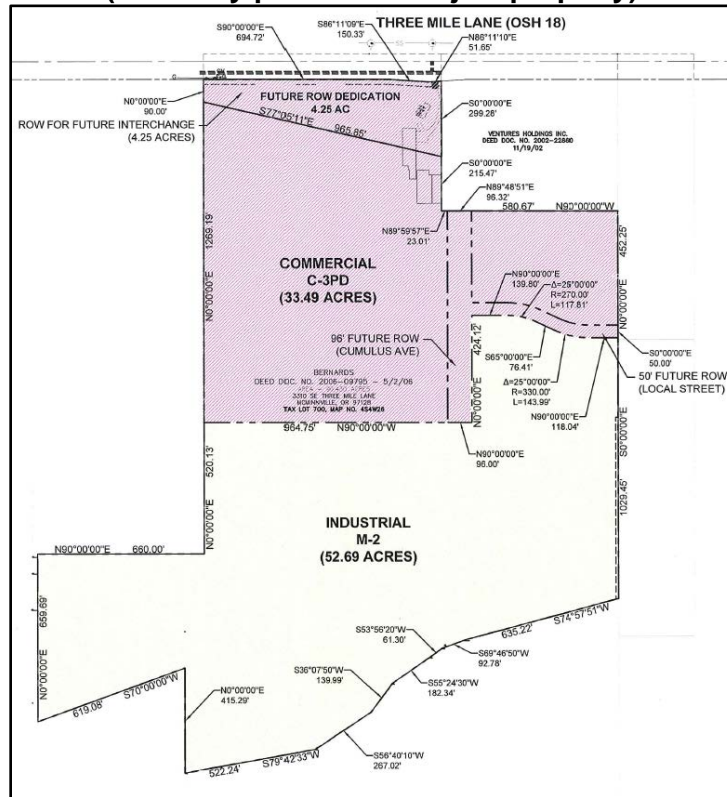
Figure 3. Zoning Map
(See Figure 4 for portion proposed for map amendment)



Attachments:

- Attachment 1 – Application and Attachments;
- Attachment 2 - DSL Wetland Land Use Notice Response

Figure 4. Applicant’s Proposed Map Amendment (Northerly portion of subject property).



II. CONDITIONS:

1. For transportation mitigation, the applicant shall provide additional information to the City and ODOT for their review and approval and shall obtain their approval for transportation mitigation of “significant effect” that affects the state and local systems. The specific designs of the mitigation improvements will need to be approved prior to the submittal of the preliminary development plan.
2. Prior to development, the applicant shall submit a preliminary development plan for the site to be reviewed in the same manner as a planned development amendment per Section 17.72 of McMinnville Municipal Code. The applicant will need to submit a development plan that meets all of the criteria of Section 17.51.030 (except that they only need to submit twelve (12) copies of the preliminary development plan and one electronic file). The preliminary development plan to be submitted shall also be subject to the design and development principles and standards attached as **Attachment 2**. If the 3MLAP is adopted prior to submittal of the preliminary development plan, then the most restrictive provisions shall apply.
3. Use and development of the property shall be subject to any overlays which apply to the property. Including the Three Mile Land Overlay and the Airport Overlay Zone.
4. Disposition of any wetlands on the property at the time of submittal of the development plan shall be subject to the design and development principles and standards, and subject to review and approval by DSL.

Attachments:

- Attachment 1 – Application and Attachments;
- Attachment 2 - DSL Wetland Land Use Notice Response

5. The applicant shall record a copy of the approving ordinance, disclosing these conditions of approval.

III. ATTACHMENTS:

1. CPA 2-20/ZC 3-20 Application and Attachments (on file with the Planning Department)
2. Development Standards Adopted as Condition of PD Overlay Approval
3. DSL Wetland Land Use Notice (on file with the Planning Department)
4. ODOT Comments

IV. COMMENTS:

Agency Comments

This matter was referred to the following public agencies for comment: McMinnville Fire Department, Police Department, Engineering Department, Building Department, Parks Department, Public Works Department, Waste Water Services, City Manager, and City Attorney; McMinnville Water and Light; McMinnville School District No. 40; Yamhill County Planning Department; Ziplly Fiber (formerly Frontier Communications); Comcast; Recology; Northwest Natural Gas; Oregon Department of Transportation; and Oregon Department of State Lands.

Responses were received from the following agencies, provided below:

- McMinnville Engineering Department
- McMinnville Building Department
- McMinnville Fire Department
- McMinnville Water & Light
- Oregon Department of State Lands
- Oregon Department of Transportation

- McMinnville Engineering Department:
No concerns from Engineering

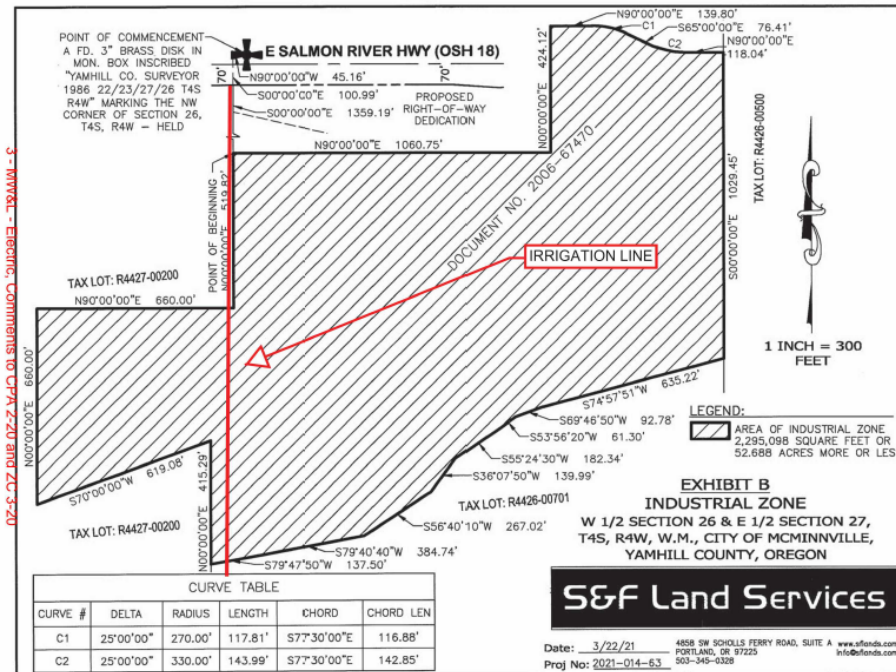
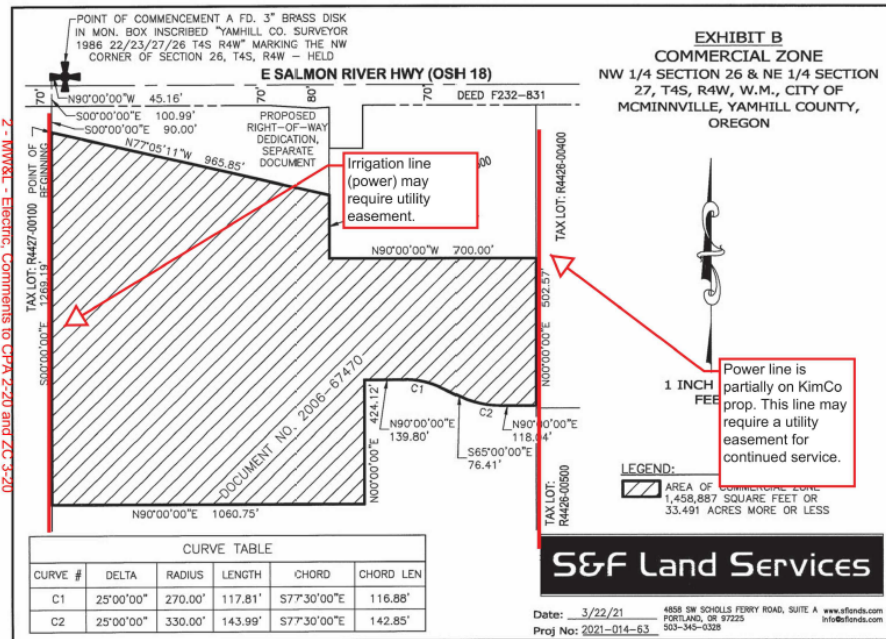
- McMinnville Building Department
No identified building code issues at this time.

- McMinnville Fire Department
No issues from the Fire Department for the development. Note: required access and water supply must be approved prior to development.

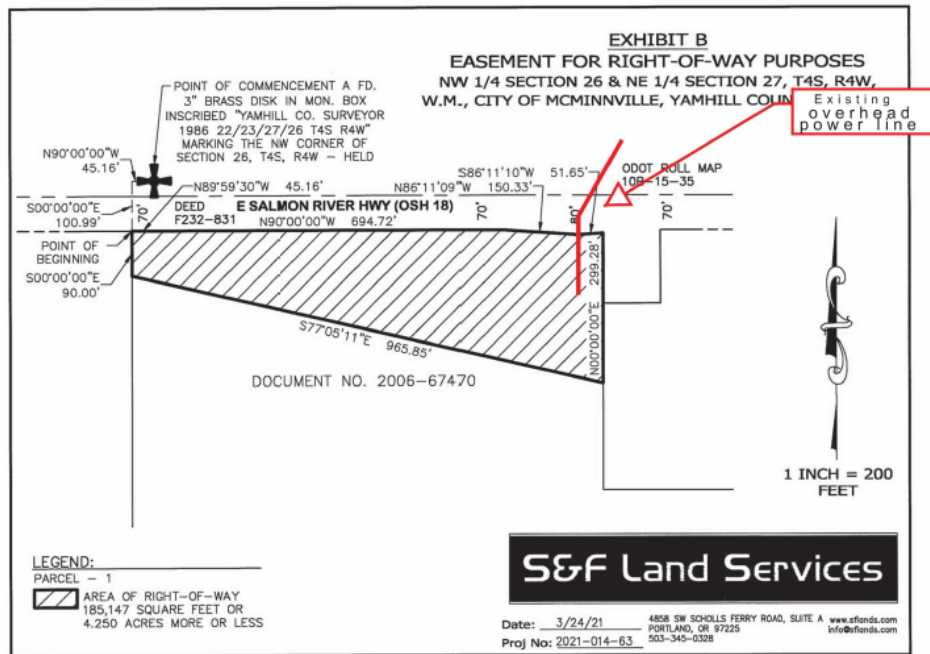
- McMinnville Water & Light
McMinnville Water & Light provided comments in mark-up text call-out boxes on pages excerpted from the application, summarized and shown below. (Some issues will apply at time of development, and not in conjunction with the map amendment).

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response



Attachments:
 Attachment 1 – Application and Attachments;
 Attachment 2 - DSL Wetland Land Use Notice Response



- Note provided on Page 9 of Applicant’s Narrative: “MWL’s ability to provide adequate electric service to the commercial and/or remaining industrial property is predicated upon the intensity of the development’s requirements. Additional infrastructure may be required to serve all or some of the site.”
- Note provided on Page 31 of Applicant’s Narrative: “In previous inquiries involving this parcel, MW&L has communicated that it may not have sufficient feeder/distribution capacity to serve a full development of the 90 acres. Significant upgrades to the existing electric system, or construction of a new feeder may be necessary.”
- Oregon Department of Transportation
 ODOT provided initial comments followed by a letter from ODOT Region 2 Traffic.

Initial Comments:

The following are provided as ODOT comments on the proposal:

1. The City and ODOT, working with the public and area stakeholders, have spent a great deal of time and effort developing the Three Mile Lane Area Plan which is close to completion. To respect those efforts, any mitigation required for this development should be consistent with the agreed upon recommendations of the city’s area plan.
2. No funding has been identified for any remaining improvements recommended in the original Three Mile Lane Refinement Plan or recommended improvements in the current plan discussed above. Therefore, any improvements necessary as a result of this project are considered development mitigation.
3. Region 2 Traffic staff are completing their review of the transportation impact analysis (TIA) and comments will be available tomorrow (May 4). I will forward those comments as soon as they are received.

Attachments:

Attachment 1 – Application and Attachments;
 Attachment 2 - DSL Wetland Land Use Notice Response

Thank you again for the opportunity to comment on this proposal. These are ODOT's comments on the proposed CPA/ZC and should be included in the record of the project proceedings. You can contact me if you have any questions or need additional information.

Letter from ODOT Region 2 Traffic:

A May 4, 2021 letter from ODOT Region 2 Traffic is attached as **Attachment 4**.

- Oregon Department of State Lands

We have an OLD determination, WD2004-0629, and an old, now expired, delineation WD 2009-0013 showing wetlands on this property. We have no other records regarding this property. A new delineation will be needed. A WLUN submittal to verify this is appropriate. The proprietary program will review and comment separately if needed.

Public Comments

Notice of this request was mailed to property owners located within 300 feet of the subject site. No public testimony was submitted in advance of the hearing at the time this staff report was prepared.

V. FINDINGS OF FACT - PROCEDURAL FINDINGS

1. The application was submitted on December 21, 2020. The applicant submitted the necessary documentation to demonstrate a neighborhood meeting was noticed and held in accordance with the provisions of Section 17.72.095 of the Zoning Ordinance.
2. The application was initially deemed incomplete on January 20, 2021, and additional information was requested and submitted on March 29, 2021.
3. The application was deemed complete on April 8, 2021.
4. On April 8, 2021, notice of the application was provided to the Oregon Department of Land Conservation and Development (DLCD).
5. On April 13, 2021, notice of the application was referred to the following public agencies for comment in accordance with Section 17.72.120 of the Zoning Ordinance: McMinnville Fire Department, Police Department, Engineering Department, Building Department, Parks Department, Public Works Department, Waste Water Services, and City Manager; McMinnville Water and Light; McMinnville School District No. 40; Yamhill County Planning Department; Ziplly Fiber (formerly Frontier Communications); Comcast; Recology; Northwest Natural Gas; Oregon Department of Transportation; and Oregon Department of State Lands. Notice of the application was also subsequently provided to the City Attorney.

Comments received from agencies are addressed in Section IV of the Decision Document.

6. On April 29, 2021, notice of the application and Planning Commission public hearing was mailed to property owners within 300 feet of the subject property in accordance with Section 17.72.120 of the Zoning Ordinance.
7. On May 11, 2021, notice of the application and Planning Commission public hearing was published in the newspaper in accordance with Section 17.72.120 of the Zoning Ordinance.
8. The Planning Commission held a public hearing on May 20, 2021 to consider the request.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

VI. FINDINGS OF FACT - GENERAL FINDINGS

1. **Location:**
 - o **Site Address:** Part of 3310 SE Three Mile Lane
 - o **Map & Tax Lot:** Part of R4426 00700
2. **Size:** The map amendment applies to 37.7 acres of a 90.4-acre property. The 37.7 acres includes 4.25 acres intended for right-of-way dedication for future highway improvements. The application also shows a portion of the area subject to the map amendment intended for a north-south extension of Cumulus Avenue and future east-west street connectivity.
3. **Comprehensive Plan Map Designation:** Industrial
4. **Zoning:**
 - a. **Subject Property:** M-2 (General Industrial)
 - b. **Surrounding Properties:**
 - i. **North:** Across Highway 18: Public right-of-way and R-4; M-2 south of the Highway to the north and east of the portion of the property proposed for amendment.
 - ii. **West:** M-L to the west of the portion of the property proposed for amendment
 - iii. **South:** To the south of the portion of the property proposed for amendment is the remainder of the property proposed to be retained with M-2 zoning.
 - iv. **East:** The property to the east of the portion of the property proposed for is zoned M-2. There is also an area of county AF-20 zoning within City limits to the southeasterly extent of the area proposed for amendment.
5. **Overlay Zones/Special Districts:**
 - a. Three Mile Lane Overlay (Ordinance 4131 as subsequently amended)
 - b. Airport Overlay
6. **Current Development:** The property is predominantly unimproved. There is an agricultural building on the northerly portion of the property to the east of NE Cumulus Avenue.
7. **Inventoried Significant Resources:**
 - a. **Historic Resources:** None
 - b. **Other:** Wetlands (See comments from DSL. Also, the Statewide Wetland identifies possible wetlands near the west property line (PEM1A)
8. **Other Features:**
 - a. **Slopes:** The property is generally level.
 - b. **Easements:** There are no public easements identified on the property.
 - c. **Trees:** There is a stand of trees near the OR-18 Highway frontage.
 - d. **Irrigation:** There is an irrigation line along the westerly portion of the property.
9. **Utilities:**
 - a. **Water:** A 24-inch distribution line is present along the OR-18 Highway frontage.
 - b. **Sewer:** 12" sanitary sewer is present along the north side of Highway OR-18, with an 8" crossing to the south side on the west side of NE Cumulus Avenue
 - c. **Stormwater:** There are storm drainage lines along OR-18 and along the south side of the property
 - d. **Power:** Overhead power is present near the NE corner of the property west of NE Cumulus Avenue and along the east side of the property.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

10. **Transportation and Access:** The property has frontage along Highway OR-18 and along the east side of the frontage of the NE Cumulus Avenue right-of-way which extends approximately 140' south of the OR-18 right-of-way. That right-of-way terminates on the adjacent property, with private access on that property continuing from the terminus of the right-of-way, extending to the south and east.

VII. CONCLUSIONARY FINDINGS:

The Conclusionary Findings are the findings regarding consistency with the applicable criteria for the application. The applicable criteria and standards for a Comprehensive Plan Map amendment and Zone Change are found in Chapter 17.74 of the Zoning Ordinance. The additional criteria for a Planned Development Overlay designation, including with a deferred development plan, are found in Chapter 17.51 of the Zoning Ordinance.

In addition, the goals, policies, and proposals in Volume II of the Comprehensive Plan are to be applied to all land use decisions as criteria for approval, denial, or modification of the proposed request. Goals and policies are mandated; all land use decisions must conform to the applicable goals and policies of Volume II. "Proposals" specified in Volume II are not mandated, but are to be undertaken in relation to all applicable land use requests.

Comprehensive Plan Volume II:

The following Goals, Policies, and Proposals from Volume II of the Comprehensive Plan provide criteria applicable to this request:

The implementation of many of the goals, policies, and proposals as they apply to quasi-judicial land use applications are accomplished through the provisions, procedures, and standards in the city codes and master plans, which are sufficient to adequately address applicable goals, policies, and proposals as they apply certain applications, and are not addressed below

The following additional findings are made relating to specific Goals and Policies:

CHAPTER II. NATURAL RESOURCES

GOAL II 1: TO PRESERVE THE QUALITY OF THE AIR, WATER, AND LAND RESOURCES WITHIN THE PLANNING AREA.

APPLICANT'S RESPONSE: No response.

FINDING: NOT APPLICABLE. The policies provided under this goal don't relate to a quasi-judicial application to amend the Comprehensive Plan map and zoning map. The land policies address issues such as unincorporated lands within the UGB, natural hazards, mineral and aggregate resources, and reclamation of aggregate site. The water policies address issues such as drinking water standards, floodplain, water quality standards, and drinking water source watershed protection. Other provisions of the Comprehensive Plan which address natural features such as wetlands, trees, etc. are addressed under the respective provisions herein.

CHAPTER III. CULTURAL, HISTORICAL, AND EDUCATION RESOURCES

HISTORIC PRESERVATION

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

GOAL III 2: TO PRESERVE AND PROTECT SITES, STRUCTURES, AREAS, AND OBJECTS OF HISTORICAL, CULTURAL, ARCHITECTURAL, OR ARCHEOLOGICAL SIGNIFICANCE TO THE CITY OF MCMINNVILLE.

GOAL III 3: INCREASE PUBLIC AWARENESS AND UNDERSTANDING OF McMINNVILLE’S HISTORY AND ITS HISTORIC PRESERVATION PROGRAM

Policies:

17.04. Increase interpretation effort’s of the City’s historic resources.

Proposals:

3.11. Support character and place identity of neighborhoods within the City through survey and historic context research to understand the unique history and their role relative to the growth and development of McMinnville. This can help support a connection between residents and their neighborhoods’ history, the preservation of buildings, and education through walking tours.

GOAL III 4: ENCOURAGE THE PRESERVATION AND REHABILITATION OF HISTORIC RESOURCES

GOAL III 5: DOCUMENT AND PROTECT HISTORIC RESOURCES

Proposals:

3.39. Evaluate a MPD (Multiple Property Designation) for “Historic Granaries of McMinnville.”

GOAL III 6: INCREASE HERITAGE TOURISM

Policies

17.14. Amplify the heritage tourism program for McMinnville.

APPLICANT’S RESPONSE REGARDING CHAPTER III GOALS, POLICIES, AND PROPOSALS: No response.

FINDING REGARDING CHAPTER III GOALS, POLICIES, AND PROPOSALS: SATISFIED WITH CONDITIONS. (Condition 2). The Goals, Policies, and Proposals of this Chapter of the Comprehensive Plan reflect the community’s desire to see it’s history and heritage reflected in the built environment and including increased interpretive efforts of it’s history and heritage. This theme is integral in the planning goals for the Three Mile Lane Area Plan (3MLAP). In addition, this chapter reflects an understanding of the economic development benefits of heritage tourism as a competitive advantage when the built form differentiates itself from other communities by incorporating it heritage into new development as growth occurs. In the Three Mile Lane area, this is reflected in the agricultural and aviation traditions. Retaining, interpreting, and incorporating elements of the heritage into the development of the property provide an authenticity which provides a competitive advantage.

As specified in Section 17.51.010(B)(2), the Council and Planning Commission shall set forth reasons for approval and the areas of concern that must be addressed when final plans are submitted.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

As a condition of approval, design and development principles and standards are attached to the PD overlay designation, specifying that this issue is to be addressed in the development plan, in order to address an area of concern that McMinnville retain its unique identify and that consistency with the Comprehensive Plan requires that this issue be addressed as part of a Planned Development. Specifically, development should address use of the existing agricultural building on the property and provide for landscape elements consistent with the agricultural character of the area.

This heritage is distinctly different from the history and heritage-based characteristics of the historic downtown area. The development plan should complement the downtown, and not duplicate or mimic the experience provided downtown.

CHAPTER IV. ECONOMY OF MCMINNVILLE

GOAL IV 1: TO ENCOURAGE THE CONTINUED GROWTH AND DIVERSIFICATION OF MCMINNVILLE'S ECONOMY IN ORDER TO ENHANCE THE GENERAL WELL-BEING OF THE COMMUNITY AND PROVIDE EMPLOYMENT OPPORTUNITIES FOR ITS CITIZENS.

COMMERCIAL DEVELOPMENT

GOAL IV 2: TO ENCOURAGE THE CONTINUED GROWTH OF MCMINNVILLE AS THE COMMERCIAL CENTER OF YAMHILL COUNTY IN ORDER TO PROVIDE EMPLOYMENT OPPORTUNITIES, GOODS, AND SERVICES FOR THE CITY AND COUNTY RESIDENTS.

Policies

21.00 *Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the City. Such uses shall locate according to the goals and policies in the comprehensive plan.*

APPLICANT'S RESPONSE: The 2013 EOA's conclusion about retail leakage, which is supported by the 2020 EOA and 3MLAP, is quoted above. The application summary findings in the "Property Description" and Project Background" sections and these findings describe the Property's suitability for capturing retail leakage and accommodate population-growth related retail demand. The proposed rezone will allow (upon subsequent land use reviews) which are not presently available or are underserved, to locate on the Property.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The application notes that retail leakage is occurring in part due to a lack of product offerings available in McMinnville. As a condition of approval, the development plan should include businesses that represent a mix of offerings, including those categories not already present in McMinnville to address retail leakage, expanding the mix of offerings rather than only duplicating those which are already available elsewhere in McMinnville, and which would not help address the retail leakage.

21.01 *The City shall periodically update its economic opportunities analysis to ensure that it has within its urban growth boundary (UGB) a 20-year supply of lands designated for commercial and industrial uses. The City shall provide an adequate number of suitable, serviceable sites in appropriate locations within its UGB. If it should find that it does not have an adequate supply of lands designated for commercial or industrial use it shall take corrective actions which may include, but are not limited to, redesignation of lands for such purposes, or amending the UGB to include lands appropriate for industrial or commercial use.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: In support of the requested land use change designation, the adopted 2013 EOA stated:

“As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.
- Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56)

The proposal to rezone 33.5 excess industrial acres to commercial is consistent with Policy 21.01 and the 2013 EOA. The Property is suitable for commercial zoning, as described in the “Suitability of the Property for Conversion from Industrial to Commercial” section of the application findings and detailed throughout these findings, the Property includes site characteristics which are conducive to capturing retail leakage and accommodating population growth-related retail, such as visibility from and access to Highway 18 and proximity to retail leakage markets.

FINDING: SATISFIED. As demonstrated by the EOA, McMinnville has a deficit of commercial land within the UGB, and redesignation of a portion of the industrial surplus to commercial consistent with the identified need is a corrective action that addresses the identified deficit.

21.02 *The City shall encourage and support the start up, expansion or relocation of high-wage businesses to McMinnville.*

1. *The City shall coordinate economic efforts with the Greater McMinnville Area Chamber of Commerce, McMinnville Industrial Promotions, McMinnville Downtown Association, Yamhill County, Oregon Economic and Community Development Department, and other appropriate groups.*
2. *Economic development efforts shall identify specific high-wage target industries and ensure that adequately sized, serviced, and located sites exist within the McMinnville urban area for such industries.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). This policy is included under the “**COMMERCIAL DEVELOPMENT**” section of Chapter IV of the Comprehensive Plan, so its references to “high-wage businesses” and “high-wage target industries” are not limited to industrial use “industries.” The design and development principles and standards document attached as a condition of approval includes some “recommendations” which are advisory only. One of the “recommendations” in the document is that, where there are multiple options to select businesses that will meet the same or similar need, including the need to offset retail

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

leakage on the property, the applicant is **encouraged** to select businesses which offer comparatively higher than average wages and/or benefits.

- 21.03 *The City shall support existing businesses and industries and the establishment of locally owned, managed, or controlled small businesses.*

APPLICANT’S RESPONSE: The 2013 EOA indicates that there is an annual leakage of \$192 million in consumer spending in Yamhill County to areas outside its boundaries (Pg 32) along with a shortfall of 36 commercially designated acres through 2033 (Pg 56). Furthermore, the 2013 EOA states local businesses suffer from “Limited duration of tourism visitation & low expenditure capture. While the McMinnville area and Yamhill County can now boast some of the state’s top tourism attractions, visitor spending does not appear to match visitation. This is because visitors tend not to stay overnight (but are often day visitors) and do not appear to be making substantial expenditures while in the area. A key challenge for the future is to provide more and better value-added opportunities for visitors to spend more time and money while visiting the McMinnville area.” (2013 EOA Pg 32-33)

The Property is suitable for capturing retail leakage documented in the 2013 EOA and further supported by the 2020 EOA and 3MLAP, as quoted above. Because the leakage sales are not being met in the market, existing businesses do not rely upon those sales, which means that satisfying the leakage will not impact existing business. Instead, existing businesses could be supported by retail development of the Property because consumers will stay within and be drawn to the market area.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2).

Note: *The 2013 EOA was completed prior to the formation of Visit McMinnville, McMinnville’s Destination Marketing Organization (DMO), and Visit McMinnville’s reports subsequent reports provided updated trends and visitor surveys regarding visitation and overnight stays.*

While direct conditions regarding specific tenants are beyond the scope of this quasi-judicial land use application, the development and design principles and standards attached as a condition of approval includes “recommendations” which are advisory only. Consistent with the objectives of the 3MLAP, it is **recommended** that the applicant seek out and market to local businesses consistent with the 3MLAP principles and seek to maximize the local multiplier effect. This may include (a) supporting existing local businesses, and (b) considering the needs of locally owned, managed, and controlled small businesses that may seek a location in the Three Mile Lane Area consistent with the vision of the Three Mile Lane Area Plan which is under development. This can be in seeking to provide a mix of retail, entertainment, and hospitality uses that serve as a destination that complements the downtown and existing local businesses, serving to increase day trips and also providing additional reasons for visitors to make overnight trips and stay longer. This includes providing a development and mix of uses that support and complement local businesses and purchase of locally made products, and the planned innovation campus, providing an experiential concept that is uniquely McMinnville. The mix of uses should also be supportive of the needs of the neighborhoods planned in the surrounding area.

While it is beneficial to reduce retail leakage, it is also beneficial to maximize the Local Multiplier Effect. In effect, it is beneficial for money to be spent in McMinnville to reduce leakage; however, it is also important that dollars spent in McMinnville stay and in McMinnville and be “recycled” in the local economy.

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

The applicant is encouraged to give preference to tenants that maximize the positive economic impact to McMinnville and the region, including through the “Local Multiplier Effect”

For example:

- Businesses that offer comparatively higher wages and benefits to employees
- Locally and/or regionally-owned businesses
- Businesses that use locally-based services, such as banking, accounting, marketing, printing, etc.
- Businesses that source local raw materials or products and/or sell local products
- Businesses that support community causes

21.05 *Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the city. Such uses shall locate according to the goals and policies in the comprehensive plan. (Ord.4796, October 14, 2003)*

APPLICANT’S RESPONSE: See response to Policy 21.00.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). While some businesses may seek to maximize their saturation with multiple locations within a community, that doesn’t necessarily reduce retail leakage if that strategy doesn’t offer the diversified offerings of commercial uses and services which are not presently available to McMinnville residents. In marketing to tenants, the applicant has control over whether the mix of uses and services provides increased saturation of uses that are already present in the community, or whether the mix of uses and services offers a diversified mix and choice, more effectively reducing leakage. That is not intended to be mutually exclusive from encouraging clusters of similar or complementary uses that offer choice, may attract a greater breadth of consumers, and may help McMinnville be recognized as a destination for a cluster. As a “recommendation” in the development and design standards attached a condition of approval, the applicant is encouraged to seek and market to these uses consistent with the intent of this policy and the 3MLAP.

GOAL IV 3: TO ENSURE COMMERCIAL DEVELOPMENT THAT MAXIMIZES EFFICIENCY OF LAND USE THROUGH UTILIZATION OF EXISTING COMMERCIALLY DESIGNATED LANDS, THROUGH APPROPRIATELY LOCATING FUTURE COMMERCIAL LANDS, AND DISCOURAGING STRIP DEVELOPMENT.

APPLICANT’S RESPONSE: The 2013 EOA concluded that utilizing existing commercially designated lands are not sufficient to accommodate the demonstrated commercial land need, and that re-designating excess industrial land is the solution.

No specific development is proposed with this application. Once a formal project application is submitted to the City, the requested Planned Development overlay designation means that the development will be subject to the Planned Development Ordinance. The project application will be open to public comment, be reviewed by the Planning Commission, and approved at the discretion of the City Council. The project layout and design elements shall be assessed at that time.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As addressed in the 2020 UGB amendment, the Comprehensive Plan provisions specify that part of the commercial land need is to be met by the redesignation of surplus industrial acreage to commercial acreage. Otherwise, a larger industrial surplus would remain, and the City would have needed to increase the size of the UGB by about 35 acres to meet the identified commercial land need. The Three Mile Lane Planning work underway identifies the need and suitability for commercially-designated land at this location. Those project goals are also consistent with

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

the Goal to discourage strip development. That is achieved through a master planned development which has good circulation and connectivity to the surrounding area, while limiting piecemeal development and uncoordinated access to major streets. With the development plan subject to the development and design standards attached to the PD overlay as a condition of approval addressing site design issues, this criterion is satisfied with conditions.

General Policies:

- 22.00 *The maximum and most efficient use of existing commercially designated lands will be encouraged as will the revitalization and reuse of existing commercial properties.*

APPLICANT'S RESPONSE: The types of retail that is leaking from the City requires parcels that range from 5 to 20+ acres. The City's inventory of vacant and partially vacant commercially designated properties in that size range are very limited: the 2013 EOA, Figure 27 indicates there is one vacant commercially designated parcels that is 11 acres, and 2 over 20 acres, one of which is the Evergreen Aviation & Space Museum, which is encumbered with a tourism-related PUD; 2020 EOA, Exhibit 39 shows that there are zero vacant or partially vacant C-3 lot. This lack of inventory led the s, and a single 12.1 acre partially vacant C-3 lot the 2013 EOA concluded that utilizing existing commercially designated lands was not sufficient to accommodate the demonstrated commercial land need, and that re-designating excess industrial land is the solution. Therefore, the ability of existing commercial lands to be revitalized and reused will not be impacted by this amendment, because the needed retail uses that will be facilitated by this amendment cannot be accommodated on existing commercially zoned parcels.

FINDING: SATISFIED. The designation or redesignation of lands to meet identified needs does not conflict with policies to encourage the most efficient use of existing commercially designated lands and/or the revitalization and reuse of existing commercial properties. Different commercial needs can be met through a balanced approach.

- 23.00 *Areas which could in the future serve as commercial sites shall be protected from encroachment by incompatible uses.*

APPLICANT'S RESPONSE: No response.

FINDING: SATISFIED. There is an identified need in the Comprehensive Plan for redesignation of industrial land to commercial designation. It is appropriate to redesignate land needed for commercial use, rather than leave it in an industrial designation if that is not the intended use.

Further, the Three Mile Lane planning work is intended to evaluate the broader area and apply appropriate designations and compatible mix of uses for a variety of types of residential, commercial, and industrial uses.

- 24.00 *The cluster development of commercial uses shall be encouraged rather than auto-oriented strip development. (Ord.4796, October 14, 2003)*

APPLICANT'S RESPONSE: No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance which will discourage auto-oriented strip development. The project application will be open to public comment, be reviewed by the Planning Commission, and approved at the

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

discretion of the City Council. The project layout and design elements shall be assessed at that time.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The provisions of Section 17.51.010(B)(2), regarding an initial PD overlay designation without an initial specific development plan provide that the Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.

As a condition of approval of the PD overlay, the accompanying development and design principles and standards specify that the development plan shall not be auto-oriented strip development, and they provide guidance on what that means for site development.

Locational Policies:

- 24.50 *The location, type, and amount of commercial activity within the urban growth boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord.4796, October 14, 2003)*

APPLICANT'S RESPONSE: The 2013 EOA identified a deficit of at least 36 acres of commercial land, which should be accommodated by redesignating excess industrial land. The 2013 EOA Conversion Suitability Factors (detailed above), as well as the 3MLAP and 2020 EOA, support the conclusion that the Property is suitable to accommodate retail leakage and growth-related retail uses. Among the Property's key site characteristics are site size, proximity to retail leakage markets, and visibility and access to Highway 18.

FINDING: SATISFIED. The proposed map amendment is consistent with the type and amount of commercial land needs identified in the Comprehensive Plan and EOA, and provides opportunities for site design consistent with the needed site sizes for a mix of commercial uses.

- 25.00 *Commercial uses will be located in areas where conflicts with adjacent land uses can be minimized and where city services commensurate with the scale of development are or can be made available prior to development.*

APPLICANT'S RESPONSE: The only existing adjacent uses south of Highway 18 are the Jackson Family Winery and the US Army National Guard Armory and Recruiting Office, which are located on M-2 and M-1 land east of the Property, farming activity on the M-L zoned land to the west, and farming activity on the land zoned M-2 to the south. Given the width of Highway 18, land north of the highway is not "adjacent" to the Property. Nevertheless, the uses north and north east of the Property include a senior housing development and single family development (R1 and R-4 zoning) and to the northwest is the Evergreen Aviation & Space Museum (C-3PD zoning).

The Property is within the City's Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft "includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

shopping and services for adjacent office and residential development.” (3MLAP Memorandum 6, pg 10-13)

For the development of larger scale retail like the Project is expected to include, the Property’s location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. The only potential offsite impact is traffic. As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. In comparison, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville “feel.”

Specifically for the Property, Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. **(Attachment XX)** The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address and minimize potential conflicts, if any, through revisions or conditions of approval, and any deficiencies in city services can be addressed through conditions of approval.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. The applicant has submitted a TIA with recommended mitigation for “significant effect” on transportation facilities to be addressed for consistency with the Transportation Planning Rule. ODOT has requested additional information for review of the TIA and must approve any proposed mitigation affecting Highway 18. Further, at the time of a specific development plan, specific traffic characteristics of the specific use, development, and access configuration will need to be evaluated and addressed consistent with the OR-18 Corridor Plan, as may be amended, and the 3MLAP.

FINDING: SATISFIED WITH CONDITIONS. (Condition 1 and 2). The Three Mile Lane planning work underway has evaluated several concepts and developed a preferred alternative which demonstrates how a mix of different types of residential, commercial, and industrial uses and land use designations can be planned in a compatible configuration that can minimize conflicts and complement one another. Consistency of the PD development plan with the development and design principles and standards attached as a condition of

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

approval provides for compatibility with the 3MLAP work underway.

Notice of the proposed amendment was provided to service providers, and no issues were identified capacity of major utilities including sewer, water, or stormwater drainage based on the proposed map amendment. Specific issues will need to be reviewed when a final development plan is submitted. McMinnville Water & Light noted some potential issues related to power that may need to be addressed at the time of development, depending on the scale and intensity for the specific development (some of which could potentially apply to a more intensive development of the property with industrial use, and are therefore not comments which are specifically applicable to the proposed map amendment.

- 26.00 *The size of, scale of, and market for commercial uses shall guide their locations. Large-scale, regional shopping facilities, and heavy traffic-generating uses shall be located on arterials or in the central business district, and shall be located where sufficient land for internal traffic circulation systems is available (if warranted) and where adequate parking and service areas can be constructed.*

APPLICANT’S RESPONSE: As detailed in response to Policy 25.00 the Property is an appropriate location for commercial development. No specific development is proposed with this application. However, the type of retail that could be developed on the property that is intended to capture retail leakage would likely be considered large-scale or a regional shopping facility by Policy 26.00. The Property is a suitable location for these commercial uses based upon Policy 25.00’s and 26.00’s considerations. The Property is located on OR 18, which McMinnville’s TSP classifies as a Major Arterial and a State Highway. The 33.5 acre Property is adequately sized to accommodate internal traffic circulation and parking. For example, the site plan at Exhibit XX includes an internal road system.

FINDING: SATISFIED. The location of the proposed commercial designation is suitable for a commercial site of approximately 34 acres, and includes the characteristics described by this policy. The Applicant’s response effectively supports this finding.

Design Policies:

- 29.00 *New direct access to arterials by large-scale commercial developments shall be granted only after consideration is given to the land uses and traffic patterns in the area of development as well as at the specific site. Internal circulation roads, acceleration/deceleration lanes, common access collection points, signalization, and other traffic improvements shall be required wherever necessary, through the use of planned development overlays.*
- 30.00 *Access locations for commercial developments shall be placed so that excessive traffic will not be routed through residential neighborhoods and the traffic-carrying capacity of all adjacent streets will not be exceeded.*
- 31.00 *Commercial developments shall be designed in a manner which minimizes bicycle/pedestrian conflicts and provides pedestrian connections to adjacent residential development through pathways, grid street systems, or other appropriate mechanisms. (Ord.4796, October 14, 2003)*
- 32.00 *Where necessary, landscaping and/or other visual and sound barriers shall be required to screen commercial activities from residential areas.*
- 33.00 *Encourage efficient use of land for parking; small parking lots and/or parking lots that are broken up with landscaping and pervious surfaces for water quality filtration areas. Large*

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

parking lots shall be minimized where possible. All parking lots shall be interspersed with landscaping islands to provide a visual break and to provide energy savings by lowering the air temperature outside commercial structures on hot days, thereby lessening the need for inside cooling. (Ord.4796, October 14, 2003)

APPLICANT’S RESPONSE (Policies 29-33): No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project’s access, bicycle/pedestrian connections, landscaping/screening, parking, layout and design elements shall be assessed at that time.

FINDING (Policies 29-33): SATISFIED WITH CONDITIONS. (Condition 2). The issues identified in these design policies are areas of concern identified by the Council and Planning Commission to be addressed as part of the Planned Development Overlay designation, which are included in development and design principles and standards attached as a condition of approval, and which are to be addressed during review of the specific PD development plan.

34.00 *The City of McMinnville shall develop and maintain guidelines concerning the size, placement, and type of signs in commercial areas.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). This issue is an area of concern identified by the Council and Planning Commission as part of the Planned Development Overlay designation, which is included in development and design principles and standards attached as a condition of approval, and to be addressed during review of the specific PD development plan, in addition to the sign standards of the Zoning Ordinance and Three Mile Lane overlay.

GOAL IV 4: TO PROMOTE THE DOWNTOWN AS A CULTURAL, ADMINISTRATIVE, SERVICE, AND RETAIL CENTER OF McMINNVILLE.

Downtown Development Policies

36.00 *The City of McMinnville shall encourage a land use pattern that:*

1. *Integrates residential, commercial, and governmental activities in and around the core of the city;*
2. *Provides expansion room for commercial establishments and allows dense residential development;*
3. *Provides efficient use of land for adequate parking areas;*
4. *Encourages vertical mixed commercial and residential uses; and,*
5. *Provides for a safe and convenient auto-pedestrian traffic circulation pattern.*

APPLICANT’S RESPONSE: This application for designating additional land as “Commercial” in Comprehensive Plan under a C-3 zoning district would potentially permit additional retail development within the City that cannot be accommodated in the format of downtown merchant spaces. One fundamental goal of this land use change application is to maintain

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

consumer spending within the City limits and will contribute to the overall vibrancy and well being of residents. Rather than cannibalizing retail dollars from the downtown district, alleviating the shortage of commercial acreage that is attributable to retail leakage could draw shoppers to McMinnville for a spectrum of needs that currently cannot be found within the City limits.

FINDING: SATISFIED. The Comprehensive Plan identifies a deficit of commercial land of approximately 35 acres, which the proposed amendment would address. The Downtown Development policies provide strategies for the vibrancy of the Downtown core area.

- 41.00 *The City of McMinnville shall encourage the expansion of retail and other commercial enterprises east of the railroad tracks and north and south of Third Street consistent with the adopted “Downtown Improvement Plan.”*

APPLICANT’S RESPONSE: The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville’s commercial business district. Despite this land being designated “Commercial” land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the area east of the railroad tracks and north and south of Third Street.

FINDING: SATISFIED. The Comprehensive Plan identifies a deficit of commercial land just over 35 acres, which the proposed amendment would address. The Downtown Development policies provide strategies for the vibrancy of the Downtown core area, including the area east of the railroad tracks and north and south of Third Street.

- 46.00 *The City shall work to implement the recommendations of the adopted “McMinnville Downtown Improvement Plan.”*

APPLICANT’S RESPONSE: The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville’s commercial business district. Despite this land being designated “Commercial” land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the McMinnville Downtown Improvement area.

FINDING: SATISFIED. The Comprehensive Plan identifies a deficit of commercial land just over 35 acres, which the proposed amendment would address. The Downtown Development policies provide strategies for the vibrancy of the Downtown core area.

Proposals:

- 6.00 *A planned development overlay should be placed on the large cluster commercial development areas and the entrances to the City to allow for review of site design, on-site and off-site circulation, parking, and landscaping. The areas to be overlaid by this designation shall be noted on the zoning map and/or comprehensive plan map.*

APPLICANT’S RESPONSE: The application requests a Planned Development overlay, consistent with Policy 6.00. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project's site design, on-site and off-site circulation, parking, and landscaping, shall be assessed at that time.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The City is the planning process for the Three Mile Lane Area Plan intended to address the overall development of the area, including large commercial development areas. As a condition of approval of the PD overlay, development and design principles and standards specify issues that will need to be addressed at the time of submittal of a specific development plan. Those standards include provisions addressing site design, circulation, parking, and landscaping. Those issues are also “areas of concern” that must be addressed when final development plans are submitted.

8.00 *The City of McMinnville should encourage the development of a commercial planned development center in the southwestern portion of the city large enough in scale to serve the needs of the area's population. The center should be in proximity of the intersection of Old Sheridan Road, U.S. Highway 99W, and Oregon Highway 18.*

APPLICANT'S RESPONSE: This area is already zoned C-3, which allows large scale commercial development, and is currently undeveloped. The 2013 EOA included this area as a part of the City's inventory of available commercial land and concluded that there is nevertheless a 35.8 acre deficit. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the southwestern portion of the city.

FINDING: NOT APPLICABLE. This proposal is separate from, and in addition to, the need to designate an additional 35.8-acres of commercial land to address the identified deficit.

INDUSTRIAL DEVELOPMENT

GOAL IV 5: TO CONTINUE THE GROWTH AND DIVERSIFICATION OF McMINNVILLE'S INDUSTRIAL BASE THROUGH THE PROVISION OF AN ADEQUATE AMOUNT OF PROPERLY DESIGNATED LANDS.

APPLICANT'S RESPONSE: In support of the requested land use change designation, the adopted 2013 EOA stated:

“As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.
- Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56). Figure 27 of the 2013 EOA indicates that there are 5 industrial parcels that are 20+ acres in size, so the City will continue to have an adequate supply of larger industrial parcels if the Property is converted from Industrial to Commercial.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

FINDING: SATISFIED. The Comprehensive Plan and EOA identify a surplus of industrially-designated land. There is sufficient industrial acreage to redesignate the proposed area to a commercial designation while retaining a surplus of industrially designated land.

GOAL IV 6: TO INSURE INDUSTRIAL DEVELOPMENT THAT MAXIMIZES EFFICIENCY OF LAND USES, THAT IS APPROPRIATELY LOCATED IN RELATION TO SURROUNDING LAND USES, AND THAT MEETS NECESSARY ENVIRONMENTAL STANDARDS.

Locational Policies

49.00 *The City of McMinnville shall use its zoning and other regulatory methods to prevent encroachment into industrial areas by incompatible land uses.*

APPLICANT’S RESPONSE: The 2013 EOA concluded that there is an excess amount of industrial land. Converting some of that surplus land to commercial will have no impact on the uses permitted in the remaining industrial land. Further, 3MLP that is currently moving through the community and legislative review process recommends a mix of commercial and industrial uses within this area, specifically focusing commercial districts along the OR-18 frontage.

FINDING: SATISFIED. The Applicant’s response addresses this policy.

49.01 *The City shall designate an adequate supply of suitable sites to meet identified needs for a variety of different parcel sizes at locations which have direct access to an arterial or collector street without having to pass through residential neighborhoods. (Ord. 4961, January 8, 2013)*

49.02 *The location, type, and amount of industrial activity within the Urban Growth Boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord. 4961, January 8, 2013)*

50.00 *The City of McMinnville shall encourage industrial uses to locate adjacent to the airport and south of Three Mile Lane, adjacent to the existing Riverside Drive industrial area, and in existing industrial areas through the proper designation of lands on the comprehensive plan and zoning maps. Comprehensive plan and/or zoning map changes to industrial designations in other areas may be granted if all the applicable goals and policies of the plan can be met.*

APPLICANT’S RESPONSE: Policies 49.01, 49.02 and 50.00 are directed at the suitability of sites for industrial development. The 2013 EOA has “recommended to better match the commercial inventory to current and anticipated needs include re-designating a portion of the excess industrial inventory to commercial use including focus on needs for commercial sites across a range of size classes, increasing emphasis on redevelopment and density of development, and greater flexibility of use for mixed commercial/industrial areas. Also needed may be parcelization of some larger 20+ acre industrial sites for which there is no readily apparent demand to meet demonstrated needs for smaller industrial sites, especially in the 1-9- acre size ranges.” (2013 EOA, Pg 67).

The 2013 EOA Conversion Suitability Factors (detailed above) confirm that the Property has site characteristics that are more appropriate for commercial development than industrial development. Redesignating the Property from Industrial to Commercial will not impact the adequacy of the supply of suitable industrial sites; the City will continue to have a surplus of over 200 acres of industrial land, including four parcels that are 20+ acres. 2013 EOA, Figure 27.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

The Property is within the City's Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft "includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development." (3MLAP Memorandum 6, pg 10-13)

FINDING: SATISFIED. Policies 49.01, 49.02, and 50.00 address industrial land needs and attributes of land to be designated or redesignated for industrial use. The proposed amendment is to redesignate industrial land to commercial land. The amount of land to be redesignated is based on the need identified in the Comprehensive Plan, and retains an industrial surplus.

51.00 *The City of McMinnville shall encourage the location of airport-related industrial uses only on the industrial land which is adjacent to the airport. Those lands so reserved shall be designated in the planned development overlay covering this area.*

APPLICANT'S RESPONSE: The Property is near the airport, but does not abut it, and is separated from the airport by a public park (Galen McBee Airport Park), the South Yamhill River, a military base and the Jackson Family Winery. The portion of the Property closest to the airport is the southerly 52.5 acres that will retain an Industrial land use designation.

FINDING: SATISFIED. The proposed amendment doesn't redesignate industrial land adjacent to the airport.

52.00 *The City of McMinnville shall create a new "limited light industrial" zone which shall be placed on the industrial areas on the south side of Three Mile Lane in those areas where residential development is expected on the north side of the road. The new zone will allow only those types of industrial uses that will not conflict with the residential uses.*

APPLICANT'S RESPONSE: Policy 52.00 is directed at the City pursuing a legislatively created new zoning designation. Policy 52.00 reflects the City's desire to minimize conflicts with residential uses north of Three Mile Lane. As detailed elsewhere in these findings, the uses allowed by the proposed C-3PD designation are more compatible with residential uses than those uses permitted allowed by the current M-3 zoning, which is consistent with Policy 52.00. Further, the City is in the process of re-evaluating the Three Mile Lane Area through the 3MLAP. That city-led long range planning process is the forum for addressing Policy 52.00.

FINDING: NOT APPLICABLE. The proposed amendment is to redesignate land from industrial to commercial. A limited light industrial zone wouldn't be applicable to commercial land.

CHAPTER V. HOUSING AND RESIDENTIAL DEVELOPMENT

APPLICANT'S RESPONSE: No response.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

FINDING: NOT APPLICABLE. Chapter V addresses residential use, residential designations, and residential planned developments, which are not applicable to the proposed map amendment from industrial to commercial.

CHAPTER VI. TRANSPORTATION SYSTEM

GOAL VI 1: TO ENCOURAGE DEVELOPMENT OF A TRANSPORTATION SYSTEM THAT PROVIDES FOR THE COORDINATED MOVEMENT OF PEOPLE AND FREIGHT IN A SAFE AND EFFICIENT MANNER.

MASS TRANSPORTATION

Policies:

100.00 *The City of McMinnville shall support efforts to provide facilities and services for mass transportation that serve the needs of the city residents.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As a condition of the Planned Development overlay designation, the development and design principles and standards provide for coordination with the transit provider and provision of a conveniently located transit stop as part of the final PD development plan.

TRANSPORTATION DISADVANTAGED

Policies:

106.00 *The City of McMinnville, through public and private efforts, shall encourage provision of facilities and services to meet the needs of the transportation disadvantaged.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As a condition of the Planned Development overlay designation, development and design principles and standards will provide for coordination and provision of a conveniently located transit stop as part of the final PD development plan. Additional provisions address convenient and comfortable transportation facilities for other modes for all ages and abilities.

AIR

115.00 *The City of McMinnville shall encourage the development of compatible land uses in the vicinity of the airport as identified in current and future airport and comprehensive plans.*

APPLICANT’S RESPONSE: The Property is within .5 miles of the McMinnville Municipal Airport. While the Airport Layout Plan completed in 2004 discourages the expansion of residential use near the airport and encourages agricultural and manufacturing areas, it does not explicitly address commercial use (McMinnville Municipal Airport Layout Plan Study – December 2004, 1-9). The request to add a commercial element through the land use designation and zoning change would not run incongruent to the future sustainability and potential expansion of the airport.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

FINDING: SATISFIED. The Three Mile Lane Area Planning work underway addresses properties in the vicinity of the airport. Current comprehensive plan policies also address industrial use of properties adjacent to the airport. Some of these policies focus on the economic development aspect of compatible uses adjacent to the airport. The Airport Overlay zone also addresses safety and compatibility issues in the vicinity of the airport. Any development will be required to comply with the provisions of the different sub-areas of the Airport Overlay Zone, which include use, height, radio interference, and other safety considerations.

STREETS

119.00 *The City of McMinnville shall encourage utilization of existing transportation corridors, wherever possible, before committing new lands.*

APPLICANT’S RESPONSE: The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

FINDING: SATISFIED. The proposed commercial designation is located where it would be served by existing and planned major transportation corridors identified in the Transportation System Plan. Additional streets will be needed for local connectivity, to be addressed at time of submittal of a final development plan, and to address connectivity needs to be consistent with those to be identified in the Three Mile Lane Area Planning work underway.

123.00 *The City of McMinnville shall cooperate with other governmental agencies and private interest to insure the proper development and maintenance of the road network within the urban growth boundary.*

APPLICANT’S RESPONSE: Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The scope, methodology, findings and recommendations have been coordinated with the City of McMinnville and the Oregon Department of Transportation (ODOT). In addition, at the time development is proposed on the Property in the future, the City of McMinnville will notice the ODOT, surrounding project owners, and the city at-large, issue a staff report and conduct planning commission and city council hearings to assess that proper development and maintenance of the road network is ensured.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. The City is coordinating with ODOT in the 3MLAP process, and will coordinate review to ensure mitigation is consistent with the 3MLAP preferred transportation alternative and that interim mitigation measures don’t conflict with the 3MLAP alternative.

The applicant has submitted a TIA with recommended mitigation for “significant effect” on transportation facilities to be addressed for consistency with the Transportation Planning Rule. ODOT has requested additional information for review of the TIA and must approve

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

any proposed mitigation affecting Highway 18. Further, at the time of a specific development plan, specific traffic characteristics of the specific use, development, and access configuration will need to be evaluated and addressed consistent with the OR-18 Corridor Plan, as may be amended, and the 3MLAP.

FINDING: SATISFIED WITH CONDITIONS. (Condition 1 and 2). The condition of approval for the development and design principles and standards also specify that development of transportation facilities necessary to serve the final PD development plan will be required to be consistent with applicable transportation plans and development standards, and connectivity standards.

BIKE PATHS

Policies:

- 131.00 *The City of McMinnville shall encourage development of bicycle and footpaths in scenic and recreational areas as part of future parks and activities.*
- 132.00 *The City of McMinnville shall encourage development of subdivision designs that include bike and foot paths that interconnect neighborhoods and lead to schools, parks, and other activity areas.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The final development plan will need to address connectivity for all modes, including potential bicycle and footpath connections to amenities and neighborhoods, consistent with the 3MLAP if adopted, and consistent with the development and design principles and standards attached as a condition of approval.

Complete Streets

- 132.24.00 *The safety and convenience of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers shall be accommodated and balanced in all types of transportation and development projects and through all phases of a project so that even the most vulnerable McMinnville residents – children, elderly, and persons with disabilities – can travel safely within the public right-of-way. Examples of how the Compete Streets policy is implemented:*
1. *Design and construct right-of-way improvements in compliance with ADA accessibility guidelines (see below).*
 2. *Incorporate features that create a pedestrian friendly environment, such as:*
 - a. *Narrower traffic lanes;*
 - b. *Median refuges and raised medians;*
 - c. *Curb extensions (“bulb-outs”);*
 - d. *Count-down and audible pedestrian signals;*
 - e. *Wider sidewalks;*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- f. *Bicycle lanes; and*
 - g. *Street furniture, street trees, and landscaping*
3. *Improve pedestrian accommodation and safety at signalized intersections by:*
- a. *Using good geometric design to minimize crossing distances and increase visibility between pedestrians and motorists.*
 - b. *Timing signals to minimize pedestrian delay and conflicts.*
 - c. *Balancing competing needs of vehicular level of service and pedestrian safety.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final PD development plan, the street design, intersections, connectivity, and pedestrian amenities will be reviewed for consistency with these elements, to provide for safe, convenient, and comfortable facilities for all modes and all ages and abilities. The PD development plan will be reviewed for consistency with the development and design principles and standards attached as a condition of approval, and with the 3MLAP if adopted at the time of submittal of the development plan.

MULTI-MODAL TRANSPORTATION SYSTEM

132.25.00 *The transportation system for the McMinnville planning area shall consist of an integrated network of facilities and services for a variety of motorized and non-motorized travel modes. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final PD development plan, the proposal will be reviewed for circulation and connectivity to address motorized and nonmotorized travel modes, consistent with the 3MLAP if adopted and with the development and design standards attached as a condition of approval.

CONNECTIVITY AND CIRCULATION

132.26.00 *The vehicle, pedestrian, transit, and bicycle circulation systems shall be designed to connect major activity centers in the McMinnville planning area, increase the overall accessibility of downtown and other centers, as well as provide access to neighborhood residential, shopping, and industrial areas, and McMinnville’s parks and schools.*

APPLICANT’S RESPONSE: No response.

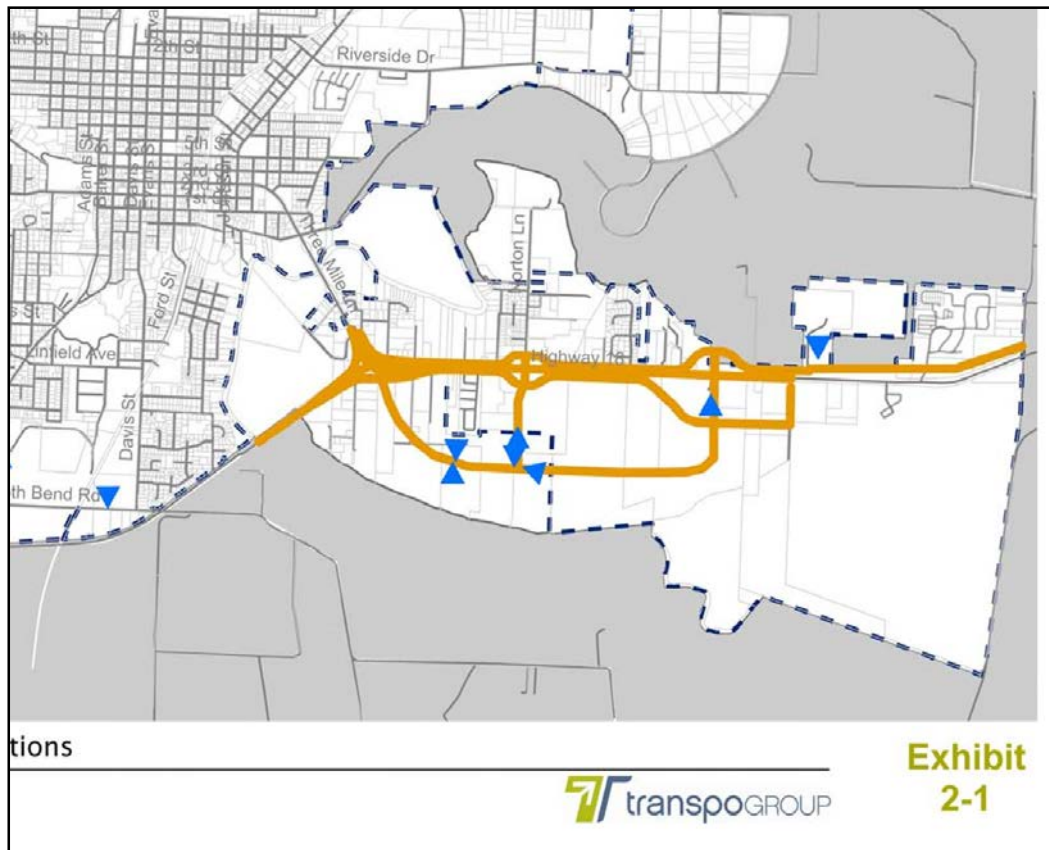
FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final PD development plan, the proposal will be reviewed for circulation and connectivity to and from the site and within the site, consistent with the 3MLAP if adopted and with the development and design standards attached as a condition of approval.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

132.26.05 *New street connections, complete with appropriately planned pedestrian and bicycle features, shall be incorporated in all new developments consistent with the Local Street Connectivity map.*

APPLICANT’S RESPONSE: The Local Street Connectivity (Exhibit 2-1 of the TSP) map identifies future east/west frontage road and back road connections south of OR 18, as shown in the figure below. The subsequent development of the Property under the proposed zoning will require the development of collector streets consistent with the transportation system plan and McMinnville (OR-18) Corridor Refinement Plan which require sidewalks and bicycle lane. The proposed development plan will need to show these connections as well as how pedestrians and bicyclists access the buildings on-site.



FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final development plan, the proposal will need to include complete street connections, consistent with connectivity requirements, consistent with the 3MLAP if adopted and with the development and design standards attached as a condition of approval.

Note: *The Local Street Connectivity Map shows critical points of local street connectivity where specific points of local street connectivity are critical for continuation of a street connection, but where the connection isn’t classified as a higher order street such as a collector or arterial and shown in the map of collectors and arterials. The Local Street Connectivity Map does not show all local street connections that may be needed to address other connectivity requirements to and within the subject property and surrounding areas and properties.*

Supportive of General Land Use Plan Designations and Development Patterns

- Attachments:*
 Attachment 1 – Application and Attachments;
 Attachment 2 - DSL Wetland Land Use Notice Response

132.27.00 *The provision of transportation facilities and services shall reflect and support the land use designations and development patterns identified in the McMinnville Comprehensive Plan. The design and implementation of transportation facilities and services shall be based on serving current and future travel demand—both short-term and long-term planned uses. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed transportation facility modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan. Development will include construction of the collector streets identified in the TSP Exhibit 2-1 (frontage and back roads). As part of the design of these roadways, sidewalks and bicycle lanes will be provided.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. The City is coordinating with ODOT in the 3MLAP process, and will coordinate review to ensure mitigation is consistent with the 3MLAP preferred transportation alternative and that interim mitigation measures don’t conflict with the 3MLAP alternative. Transportation analysis conducted in conjunction with draft 3MLAP work indicates that adequate transportation capacity to accommodate the preferred land use designations and development patterns analyzed through that work with specified mitigation.

An area of concern to be addressed at the time of submittal of the final PD development plan is how and whether the proposed site plan, circulation, and access proposal is consistent with and supportive of the land use plan designation and development patterns in the Three Mile Lane Plan work currently underway. This is an Area of Concern that shall be addressed at the time of final development plan – the circulation system shall be consistent with the work of the 3MLAP.

The applicant has submitted a TIA with recommended mitigation for “significant effect” on transportation facilities to be addressed for consistency with the Transportation Planning Rule. ODOT has requested additional information for review of the TIA and must approve any proposed mitigation affecting Highway 18. Further, at the time of a specific development plan, specific traffic characteristics of the specific use, development, and access configuration will need to be evaluated and addressed.

FINDING:: SATISFIED WITH CONDITIONS. (Condition 1 and 2). The condition of approval for the development and design principles and standards also specify that development of transportation facilities necessary to serve the final PD development plan will be required to be consistent with transportation plans and development standards, and connectivity standards.

GROWTH MANAGEMENT

132.29.00 *The construction of transportation facilities in the McMinnville planning area shall be timed to coincide with community needs, and shall be implemented so as to minimize*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

impacts on existing development. Prioritization of improvements should consider the City's level of service standards.

- 132.29.05 *Off-site improvements to streets or the provision of enhanced pedestrian and bicycle facilities in the McMinnville planning area may be required as a condition of approval for land divisions or other development permits.*

APPLICANT'S RESPONSE: No response.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. To address any significant effect on transportation facilities, ODOT requires additional information to review the TIA and must approve mitigation for TPR compliance. The City will coordinate with ODOT to ensure mitigation is consistent with the 3MLAP work underway. In addition, at the time of review of the PD final development plan, conditions of approval for specific transportation facilities will be included to ensure provision of transportation facilities and improvements necessary to serve the development and meet the City's performance standards as well as ODOT's mobility standards.

Off-site improvements, proportional to the proposed map amendment, which are necessary to address safety or mobility issues, will be required a condition of approval.

AESTHETICS AND STREETSCAPING

- 132.38.00 *Aesthetics and streetscaping shall be a part of the design of McMinnville's transportation system. Streetscaping, where appropriate and financially feasible, including public art, shall be included in the design of transportation facilities. Various streetscaping designs and materials shall be utilized to enhance the livability in the area of a transportation project. (Ord. 4922, February 23, 2010)*

APPLICANT'S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of submittal of the final development plan, the proposal will be reviewed for consistency with the policies of the Comprehensive Plan discussed above. The intent of the Three Mile Lane Area plan underway is to provide a unique identity of the Three Mile Lane area that reflects McMinnville's heritage within the context of the area. As a result, streetscape and on-site areas will be reviewed to incorporate thematic treatments consistent with the objectives of the Three Mile Lane Area plan to reflect this heritage through public art, landscaping and streetscaping treatments, interpretive information, and incorporation of existing agricultural features into the design of the streetscape and property. The development and design principles and standards adopted as conditions of approval address this issue).

GROWTH MANAGEMENT

- 132.40.00 *Mobility standards will be used to evaluate the transportation impacts of long-term growth. The City should adopt the intersection mobility standards as noted in Chapter 2 of the Transportation System Plan. (Ord. 4922, February 23, 2010)*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: The TIA study intersections within the City’s jurisdiction and ODOT’s jurisdiction and applied each jurisdiction’s applicable mobility standard as a basis for recommending mitigation measures. See, for example, TIA Table 2 and 18.

FINDING: SATISFIED WITH CONDITIONS. The TIA provides information used to evaluate the transportation impacts, and it shows consistency with performance standards with mitigation measures. The specific design, circulation, connectivity, and access configuration of the final development plan will need to be reviewed for consistency with mobility standards at the time it is submitted and reviewed.

132.40.05 *Conditions of Approval – In accordance with the City’s TSP and capital improvements plan (CIP), and based on the level of impact generated by a proposed development, conditions of approval applicable to a development application should include:*

1. *Improvement of on-site transportation facilities,*
2. *Improvement of off-site transportation facilities (as conditions of development approval), including those that create safety concerns, or those that increase a facility’s operations beyond the City’s mobility standards; and*
3. *Transportation Demand management strategies*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. At the time of submittal of a specific development plan, conditions will be attached to the development as necessary to address the level of impact.

CIRCULATION

132.41.30 *Promote Street Connectivity – The City shall require street systems in subdivisions and development that promote street connectivity between neighborhoods.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of submittal of the final development plan, the plan will be reviewed for connectivity for all modes between the site and the surrounding land uses and neighborhoods consistent with the Three Mile Lane planning work underway. Connectivity between the site and surrounding areas for all modes shall also be well-connected within the development site. This issue is addressed in the development and design principles and standards.

SYSTEMS DEVELOPMENT

132.51.15 *Connecting Shared-Use Paths – The City will continue to encourage the development of a connecting, shared-use path network, expanding facilities along parks and other rights-of-way. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The final development plan will be reviewed for convenient connectivity with shared use path system facilities identified through the Three Mile Lane area planning process. The site will be a key destination and attractor, and it should be well-connected to such a system, and nearby neighborhoods, and nearby parks and recreational destinations connected to that system. The connection to the system will need to consider the desirability of the system on-site, and it should be treated as

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

an amenity connected to pedestrian gathering places on the property. It should be more than an isolated circulation route through vehicular parking lots and vehicular circulation areas. This issue is addressed in the development and design principles and standards.

TRANSIT SYSTEM PLAN

132.57.05 *Transit-supportive Urban Design – Through its zoning and development regulations, the City will facilitate accessibility to transit services through transit-supportive streetscape, subdivision, and site design requirements that promote pedestrian connectivity, convenience, and safety. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The final development plan will be reviewed for provision of a transit stop, coordinated the current and planned transit routes, that will support safe, convenient pedestrian access from the transit stop to on-site destinations for all ages and abilities. This issue is addressed in the development and design principles and standards.

FREIGHT MOBILITY, AIR, RAIL AND PIPELINE PLANS

132.59.10 *Airport area land use – Do not permit land uses within airport noise corridors that are not noise compatible, and avoid the establishment of uses that are physical hazards to air traffic at the McMinnville Airport. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. This policy is addressed through the Airport Overlay Zone and its sub-areas. Specific use and development will be required to comply with the standards of the Airport Overlay Zone.

McMinnville TSP Implementation

132.62.00 *TSP as Legal Basis – The City of McMinnville shall use the McMinnville TSP as the legal basis and policy foundation for actions by decision makers, advisory bodies, staff, and citizens in transportation issues. The goals, objectives, policies, implementation strategies, principles, maps, and recommended projects shall be considered in all decision-making processes that impact or are impacted by the transportation system.*

APPLICANT’S RESPONSE: The proposed rezone and subsequent development of the subject property is consistent with the goals, objectives, policies, implementation strategies, principles, maps, and recommended projects within the McMinnville TSP as shown below:

Goal: To encourage development of a transportation system that provides for the coordinated movement of people and freight in a safe and efficient manner.

The proposed rezone and subsequent commercial development work in the direction of achieving this goal by providing intersection improvements to increase the safety and traffic flow of the surrounding roadway network for all users. The proposed modifications are consistent with the implementation strategies (McMinnville (OR-18) Corridor Refinement Plan) as shown in Exhibit 4-6 (Projects and Programs) in the

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

TSP, as well as the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plan maps set forth in the TSP.

Policies:

1. Transportation System Plan

The proposed site plan will be developed consistent with the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plans set forth in the TSP. The proposed rezoning and subsequent commercial development will fund transportation improvements which will work toward implementing the TSP.

2. Complete Streets

The traffic signals and intersection improvements identified in the TIA will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines. Site development will aim to create a pedestrian and bicycle friendly environment.

3. Multi-Modal Transportation System

The site plan review process will ensure that the proposed site is consistent with the Local Street Connectivity map and provides connections for pedestrians and bicycles.

4. Connectivity and Circulation

The Local Street Connectivity map identifies a future east/west connection south of OR 18. The site plan will be developed consistent with this plan and providing this connection.

Pedestrian and bicycle facilities will be provided as appropriate for each roadway classification. Site development will preserve right-of-way for design of a future interchange at OR 18 and Cumulus Avenue.

5. Supportive of General Land Use Plan Designations and Development Patterns

The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

6. Regional Mobility

The location of the proposed site along OR 18 provides ease of access to regional centers such as downtown McMinnville, Lafayette, and Newberg. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may reduce regional transportation demand by

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

capturing existing trips that travel to the greater Portland and Salem area for these uses today.

7. Growth Management

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area. Additionally, the improvements recommended in the TIA bring local intersections (some of which do not meet level of service standards under existing conditions) up to standard. The proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

8. Transportation System and Energy Efficiency

The location of the proposed site along OR 18 provides opportunity for transportation system and energy efficiency with easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of- direction travel. In addition, the proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

9. Transportation Safety

The traffic impact analysis (TIA) recommends modifications to improve the safety of the OR 18 corridor and other intersections within the study area.

10. Public Safety

The site plan review process will ensure that emergency vehicle access is provided on the proposed site. In addition, the safety improvements identified in the TIA should result in crash reductions as a number of intersections within the study area.

11. Accessibility for Persons with Disabilities

On-site connections, as well as traffic signal and intersection improvements identified in the TIA, will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines.

12. Economic Development

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area.

13. Livability

The site plan review process will incorporate multi-modal facilities to increase the livability of the greater McMinnville area.

14. Health and Welfare

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

The proposed site will be accessible via many modes of transportation, including transit and active transportation (by bicycle and by foot).

15. Transportation Sustainability

The location of the proposed site along OR 18 provides easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today. The traffic impact analysis (TIA) recommends some modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site.

16. Aesthetics and Streetscaping

The site plan review process will incorporate aesthetics and streetscaping to enhance visitor experience and livability of the greater McMinnville area.

17. Intergovernmental Coordination and Consistency

Kittelson & Associates, Inc., prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The methodology, findings and recommendations have been coordinated with the City of McMinnville and ODOT Region 2.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. While the TSP serves as the legal basis for decisions, with a Planned Development request the TSP must also be considered in conjunction with the Planned Development provisions of 17.51.010(B)(1) and (2) and the context provided therein. One of the predominant “unique characteristics” which must be present under (B)(1) to authorize a PD overlay designation with a deferred development plan per Section 17.51.010(B) is the nature of the 3MLAP work underway for this area. One of the reasons for approval under this section and areas of concern that must be addressed in the development plan under (B)(2) is the ability to treat the application as timely and orderly while recognizing that the 3MLAP work underway could potentially result in revisions to certain aspects of the TSP, and that the deferred PD development plan for the subject property should be consistent with the efforts of the 3MLAP, which may result in amendments or refinements to certain aspects of the TSP.

Further, while the City and ODOT were involved in the scoping of the TIA, ODOT has indicated they need additional information for review of the TIA, and must approve mitigation to OR-18. The City will also coordinate with ODOT to ensure mitigation is also consistent with the draft preferred transportation alternative in the 3MLAP work underway.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- 132.62.20 *TSP Use in Review of Land Use Actions – The City of McMinnville shall consider and apply the goals, policies, planning principles, recommended projects, implementation strategies, and maps contained in McMinnville TSP in the review of land use actions and development applications.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. As evidenced in this review of the proposed map amendment, the applicable goals and policies serve as review criteria, and the planning principles, recommended projects, implementing strategies, provide the basis for applying the goals and policies. At the time of submittal of a final PD development plan, the TSP will also be used to evaluate the development plan. In addition, the proposal shall be consistent with the development and design principles and standards attached as a condition. If the 3MLAP subsequently amends the TSP, the PD development plan will need to be consistent with the 3MLAP, and mitigation will be reviewed to ensure it doesn’t conflict with potential amendments to the TSP resulting from the 3MLAP work. this manner to review the development plan.

CHAPTER VII. COMMUNITY FACILITIES AND SERVICES

GOAL VII 1: TO PROVIDE NECESSARY PUBLIC AND PRIVATE FACILITIES AND UTILITIES AT LEVELS COMMENSURATE WITH URBAN DEVELOPMENT, EXTENDED IN A PHASED MANNER, AND PLANNED AND PROVIDED IN ADVANCE OF OR CONCURRENT WITH DEVELOPMENT, IN ORDER TO PROMOTE THE ORDERLY CONVERSION OF URBANIZABLE AND FUTURE URBANIZABLE LANDS TO URBAN LANDS WITHIN THE McMINNVILLE URBAN GROWTH BOUNDARY.

APPLICANT’S RESPONSE: This Goal is targeted primarily at rural land that is included in the UGB and is transitioning to urbanizable and urban land, and directs the City to plan utilities for that transition. The Property is in the UGB, so this Goal is not applicable. Nevertheless, when development is proposed and evaluated through a public process in the future, the adequacy of public and private facilities for the development will be determined.

FINDING: SATISFIED WITH CONDITIONS. The application was provided to public facility and service providers for review and comment. Comments did not identify major issues with the ability to provide public facilities and services needed to serve development that would be enabled by the proposed map amendment. McMinnville Water & Light provided comments regarding feeder lines that may need to be addressed depending on the scale and intensity of proposed uses. At the time the final PD development plan is submitted for review, specific requirements for public facilities will need to be addressed as a condition of approval.

Sanitary Sewer System

- 136.00 *The City of McMinnville shall insure that urban developments are connected to the municipal sewage system pursuant to applicable city, state, and federal regulations.*
- 138.00 *The City of McMinnville shall develop, or require development of, sewer system facilities capable of servicing the maximum levels of development envisioned in the McMinnville Comprehensive Plan.*

APPLICANT’S RESPONSE: This Goal is targeted primarily at the City’s facility planning. There are no known sanitary sewer deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of sewer system facilities will

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.

FINDING: SATISFIED. No development is proposed at this time. Service providers were notified of the proposed map amendment and no concerns were noted regarding the ability to serve the property with the sanitary sewer conveyance system. At the time of development, construction and connection to the municipal sanitary sewer system will be required.

Storm Drainage

142.00 *The City of McMinnville shall insure that adequate storm water drainage is provided in urban developments through review and approval of storm drainage systems, and through requirements for connection to the municipal storm drainage system, or to natural drainage ways, where required.*

APPLICANT’S RESPONSE: No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project’s storm drainage shall be assessed at that time.

FINDING: SATISFIED. No development is proposed at this time. Service providers were notified of the proposed map amendment and no concerns were noted regarding the capacity of the municipal storm drainage system. At the time of development, the applicant will be required to comply with all federal, state, and local storm drainage permitting requirements, and comply with any requirements for detention and stormwater runoff quality.

WATER SYSTEM

144.00 *The City of McMinnville, through McMinnville Water and Light, shall provide water services for development at urban densities within the McMinnville Urban Growth Boundary.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. No development is proposed at this time. Service providers were notified of the proposed map amendment and no concerns were noted regarding the ability to serve the property with municipal water. At the time of development, the applicant will be required to construct and connect to the municipal water system to serve the property.

Water and Sewer-Land Development Criteria

151.00 *The City of McMinnville shall evaluate major land use decisions, including but not limited to urban growth boundary, comprehensive plan amendment, zone changes, and subdivisions using the criteria outlined below:*

1. *Sufficient municipal water system supply, storage and distribution facilities, as determined by McMinnville Water and Light, are available or can be made available, to fulfill peak demands and insure fire flow requirements and to meet emergency situation needs.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

2. *Sufficient municipal sewage system facilities, as determined by the City Public Works Department, are available, or can be made available, to collect, treat, and dispose of maximum flows of effluents.*
3. *Sufficient water and sewer system personnel and resources, as determined by McMinnville Water and Light and the City, respectively, are available, or can be made available, for the maintenance and operation of the water and sewer systems.*
4. *Federal, state, and local water and waste water quality standards can be adhered to.*
5. *Applicable policies of McMinnville Water and Light and the City relating to water and sewer systems, respectively, are adhered to.*

APPLICANT’S RESPONSE: There are no known water or sewage deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of water and sewer system facilities will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.

FINDING: SATISFIED. Notice of the application was provided to service providers. No issues with water supply, storage, or distribution facilities were identified. No issues with municipal sewage facilities were identified. No issues were identified regarding sufficient water and sewer system personnel or resources for the maintenance and operation of the water and sewer systems or that would differ for personnel and resources to provide service to commercially-zoned land rather than industrially-zoned land. No issues were identified with the ability to meet applicable standards and policies in serving the property with water and sewer.

Police and Fire Protection

155.00 *The ability of existing police and fire facilities and services to meet the needs of new service areas and populations shall be a criterion used in evaluating annexations, subdivision proposals, and other major land use decisions.*

APPLICANT’S RESPONSE: There are no known police or fire facility or service deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of these facilities and services will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.

FINDING: SATISFIED. Notice of the application was provided to service providers. No issues were identified with the ability of existing police and fire facilities and services to meet the needs of the property as a result of the proposed map amendment. At the time of development adequate water facilities will be required in order to meet applicable fire flow requirements of the applicable structural codes.

PARKS AND RECREATION

167.00 *The City of McMinnville shall encourage the retention of open space and scenic areas throughout the community, especially at the entrances to the City.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

168.00 *Distinctive natural features and areas shall be retained, wherever possible, in future urban developments.*

169.00 *Drainage ways in the City shall be preserved, where possible, for natural areas and open spaces and to provide natural storm run-offs.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As a condition of approval, the amendment is be subject to development and design principles and standards applicable to the PD development plan that address incorporation of natural features, open space elements, and scenic view considerations into the site design.

CHAPTER VIII. ENERGY

GOAL VIII 1: TO PROVIDE ADEQUATE ENERGY SUPPLIES, AND THE SYSTEMS NECESSARY TO DISTRIBUTE THAT ENERGY, TO SERVICE THE COMMUNITY AS IT EXPANDS.

ENERGY SUPPLY DISTRIBUTION

173.00 *The City of McMinnville shall coordinate with McMinnville Water and Light and the various private suppliers of energy in this area in making future land use decisions.*

ENERGY CONSERVATION

GOAL VIII 2: TO CONSERVE ALL FORMS OF ENERGY THROUGH UTILIZATION OF LAND USE PLANNING TOOLS.

APPLICANT’S RESPONSE: One of the fundamental policies backing the rationale for this land use change request is the consumer spending leakage highlighted in the 2013 EOA. By allowing more potential retail development within the City, residents will no longer be required to drive longer distances to destinations such as Salem or southwest Portland for their needs, which conserves energy.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). Subject to design and development standards as a condition of approval that will need to be addressed at submittal of the development plan, the amendment is consistent with provisions of the Comprehensive Plan, Economic Opportunities Analysis, as well as the Three Mile Lane Area Planning work underway to include commercial land at this location. It would be part of an overall area plan to reduce vehicle miles travelled associated with shopping outside of the McMinnville area and to provide commercial uses in this area to meets needs of surrounding neighborhoods existing and being planned for this area. The design and development standards included provisions to ensure good connectivity to the surrounding lands to reduce out of direction travel and encourage biking, walking, and transit.

Policies:

178.00 *The City of McMinnville shall encourage a compact urban development pattern to provide for conservation of all forms of energy.*

APPLICANT’S RESPONSE: Statewide Planning Goal 14 and its implementing statutes and rules require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need. The

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

2013 EOA demonstrates a need for retail and an excess of industrial land, and the proposed comp plan designation and zoning map amendments satisfy a portion of this need. Accommodating the identified land need within the UGB is consistent with Goal 14 and encourages a compact urban development pattern.

FINDING: SATISFIED. The commercial designation of this property is a key component of the 3MLAP work underway, which is intended to provide for a mix of land uses in a compact development pattern, form, and connectivity that is supportive and encouraging of all transportation modes, including walking, biking, and transit.

CHAPTER IX. URBANIZATION

GOAL IX 1: TO PROVIDE ADEQUATE LANDS TO SERVICE THE NEEDS OF THE PROJECTED POPULATION TO THE YEAR 2023, AND TO ENSURE THE CONVERSION OF THESE LANDS IN AN ORDERLY, TIMELY MANNER TO URBAN USES.

APPLICANT’S RESPONSE: The 2013 EOA quantifies the industrial and commercial land needs for the projected population and concludes that there is a need for retail and an excess of industrial land. The proposed Comprehensive Plan land use designation and zoning map amendments accommodate a portion of the commercial land need. Converting excess industrial land to needed commercial land is consistent with Statewide Planning Goal 14 and its implementing statutes and rules, which require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need.

FINDING: SATISFIED. The proposed commercial map designation is consistent with the identified commercial land needs specified in the Comprehensive Plan and EOA.

GOAL IX 2: TO ESTABLISH A LAND USE PLANNING FRAMEWORK FOR APPLICATION OF THE GOALS, POLICIES, AND PROPOSALS OF THE McMINNVILLE COMPREHENSIVE PLAN

LAND USE DEVELOPMENT TOOLS

186.00 *The City of McMinnville shall place planned development overlays on areas of special significance identified in Volume I of the McMinnville Comprehensive Plan. Those overlays shall set forth the specific conditions for development of the affected properties. Areas of significance identified in the plan shall include but not be limited to:*

1. *Three Mile Lane (north and south)...*

APPLICANT’S RESPONSE: The application requests a Planned Development overlay, consistent with Policy 186.00.1. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. Those ordinances require specific conditions for development of the Property, and will be reviewed in a public process.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The City previously adopted a Three Mile Lane overlay which is in effect, but addresses a limited scope of issues. The City is in the process of developing a new Three Mile Lane Area Plan which is comprehensive in scope of issues and will set forth specific conditions for development of the affected properties. Since this request was submitted prior to the adoption of that plan, staff has recommended conditions

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

of approval to include development and design principles and standards, consistent with the draft 3MLAP principles and objectives, which must be addressed in the PD development plan for this property at the time it is submitted for review and approval. If the Three Mile Lane Area plan and standards are developed prior to that submittal, more stringent provisions will govern.

GREAT NEIGHBORHOOD PRINCIPLES

Policies:

- 187.10 *The City of McMinnville shall establish Great Neighborhood Principles to guide the land use patterns, design, and development of the places that McMinnville citizens live, work, and play. The Great Neighborhood Principles will ensure that all developed places include characteristics and elements that create a livable, egalitarian, healthy, social, inclusive, safe, and vibrant neighborhood with enduring value, whether that place is a completely new development or a redevelopment or infill project within an existing built area.*
- 187.20 *The Great Neighborhood Principles shall encompass a wide range of characteristics and elements, but those characteristics and elements will not function independently. The Great Neighborhood Principles shall be applied together as an integrated and assembled approach to neighborhood design and development to create a livable, egalitarian, healthy, social, inclusive, safe, and vibrant neighborhood, and to create a neighborhood that supports today's technology and infrastructure, and can accommodate future technology and infrastructure.*
- 187.30 *The Great Neighborhood Principles shall be applied in all areas of the city to ensure equitable access to a livable, egalitarian, healthy, social, inclusive, safe, and vibrant neighborhood for all McMinnville citizens.*
- 187.40 *The Great Neighborhood Principles shall guide long range planning efforts including, but not limited to, master plans, small area plans, and annexation requests. The Great Neighborhood Principles shall also guide applicable current land use and development applications.*
- 187.50 *The McMinnville Great Neighborhood Principles are provided below. Each Great Neighborhood Principle is identified by number below (numbers 1 – 13), and is followed by more specific direction on how to achieve each individual principle.*
1. *Natural Feature Preservation. Great Neighborhoods are sensitive to the natural conditions and features of the land.*
 - a. *Neighborhoods shall be designed to preserve significant natural features including, but not limited to, watercourses, sensitive lands, steep slopes, wetlands, wooded areas, and landmark trees.*
 2. *Scenic Views. Great Neighborhoods preserve scenic views in areas that everyone can access.*
 - a. *Public and private open spaces and streets shall be located and oriented to capture and preserve scenic views, including, but not limited to, views of significant natural features, landscapes, vistas, skylines, and other important features.*
 3. *Parks and Open Spaces. Great Neighborhoods have open and recreational spaces to walk, play, gather, and commune as a neighborhood.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- a. *Parks, trails, and open spaces shall be provided at a size and scale that is variable based on the size of the proposed development and the number of dwelling units.*
 - b. *Central parks and plazas shall be used to create public gathering spaces where appropriate.*
 - c. *Neighborhood and community parks shall be developed in appropriate locations consistent with the policies in the Parks Master Plan.*
4. *Pedestrian Friendly. Great Neighborhoods are pedestrian friendly for people of all ages and abilities.*
 - a. *Neighborhoods shall include a pedestrian network that provides for a safe and enjoyable pedestrian experience, and that encourages walking for a variety of reasons including, but not limited to, health, transportation, recreation, and social interaction.*
 - b. *Pedestrian connections shall be provided to commercial areas, schools, community facilities, parks, trails, and open spaces, and shall also be provided between streets that are disconnected (such as cul-de-sacs or blocks with lengths greater than 400 feet).*
5. *Bike Friendly. Great Neighborhoods are bike friendly for people of all ages and abilities.*
 - a. *Neighborhoods shall include a bike network that provides for a safe and enjoyable biking experience, and that encourages an increased use of bikes by people of all abilities for a variety of reasons, including, but not limited to, health, transportation, and recreation.*
 - b. *Bike connections shall be provided to commercial areas, schools, community facilities, parks, trails, and open spaces.*
6. *Connected Streets. Great Neighborhoods have interconnected streets that provide safe travel route options, increased connectivity between places and destinations, and easy pedestrian and bike use.*
 - a. *Streets shall be designed to function and connect with the surrounding built environment and the existing and future street network, and shall incorporate human scale elements including, but not limited to, Complete Streets features as defined in the Comprehensive Plan, grid street networks, neighborhood traffic management techniques, traffic calming, and safety enhancements.*
 - b. *Streets shall be designed to encourage more bicycle, pedestrian and transit mobility with a goal of less reliance on vehicular mobility.*
7. *Accessibility. Great Neighborhoods are designed to be accessible and allow for ease of use for people of all ages and abilities.*
 - a. *To the best extent possible all features within a neighborhood shall be designed to be accessible and feature elements and principles of Universal Design.*
 - b. *Design practices should strive for best practices and not minimum practices.*
8. *Human Scale Design. Great Neighborhoods have buildings and spaces that are designed to be comfortable at a human scale and that foster human interaction within the built*

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

environment.

- a. The size, form, and proportionality of development is designed to function and be balanced with the existing built environment.*
- b. Buildings include design elements that promote inclusion and interaction with the right-of-way and public spaces, including, but not limited to, building orientation towards the street or a public space and placement of vehicle-oriented uses in less prominent locations.*
- c. Public spaces include design elements that promote comfortability and ease of use at a human scale, including, but not limited to, street trees, landscaping, lighted public areas, and principles of Crime Prevention through Environmental Design (CPTED).*

9. Mix of Activities. Great Neighborhoods provide easy and convenient access to many of the destinations, activities, and local services that residents use on a daily basis.

- a. Neighborhood destinations including, but not limited to, neighborhood-serving commercial uses, schools, parks, and other community services, shall be provided in locations that are easily accessible to surrounding residential uses.*
- b. Neighborhood-serving commercial uses are integrated into the built environment at a scale that is appropriate with the surrounding area.*
- c. Neighborhoods are designed such that owning a vehicle can be optional.*

10. Urban-Rural Interface. Great Neighborhoods complement adjacent rural areas and transition between urban and rural uses.

- a. Buffers or transitions in the scale of uses, buildings, or lots shall be provided on urban lands adjacent to rural lands to ensure compatibility.*

11. Housing for Diverse Incomes and Generations. Great Neighborhoods provide housing opportunities for people and families with a wide range of incomes, and for people and families in all stages of life.

- a. A range of housing forms and types shall be provided and integrated into neighborhoods to provide for housing choice at different income levels and for different generations.*

12. Housing Variety. Great Neighborhoods have a variety of building forms and architectural variety to avoid monoculture design.

- a. Neighborhoods shall have several different housing types.*
- b. Similar housing types, when immediately adjacent to one another, shall provide variety in building form and design.*

13. Unique and Integrated Design Elements. Great Neighborhoods have unique features, designs, and focal points to create neighborhood character and identity. Neighborhoods shall be encouraged to have:

- a. Environmentally friendly construction techniques, green infrastructure systems, and energy efficiency incorporated into the built environment.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- b. *Opportunities for public art provided in private and public spaces.*
- c. *Neighborhood elements and features including, but not limited to, signs, benches, park shelters, street lights, bike racks, banners, landscaping, paved surfaces, and fences, with a consistent and integrated design that are unique to and define the neighborhood. (Ord 5066 §2, April 9, 2019)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). Subject to development and design principles and standards as a condition of approval that will need to be addressed at submittal of the development plan, the amendment is consistent with applicable provisions of the Great Neighborhood Principles. The development and design principles and standards recognize the type of regional uses that address retail leakage, but include provisions to ensure the property also meets commercial needs of surrounding neighborhoods identified in the 3MLAP work underway. Accordingly, the development and design principles and standards address key critical aspects of the Great Neighborhood Principles which apply to commercial use and development and its relationship to surrounding uses and neighborhoods.

NEIGHBORHOOD ACTIVITY CENTERS

GOAL: NEIGHBORHOOD ACTIVITY CENTERS PROVIDE SHOPPING, SERVICES, RECREATION, HIGH-DENSITY HOUSING, OFFICE AND INSTITUTIONAL FACILITIES NEEDED TO SUPPORT A SURROUNDING NEIGHBORHOOD OR URBAN AREA.

Proposals:

- 48.15 The City of McMinnville should develop an Area Plan for the Three Mile Lane area that supports and enhances the district’s economic vitality and marketability, provides opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district, enhances multi-modal connections throughout the district, and creates an aesthetically pleasing gateway to the City of McMinnville.

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The City is in the process of conducting the area planning work for the Three Mile Lane Area. As a condition of approval, at the time of submittal of the PD development plan, the plan shall comply with the development and design principles and standards attached as a condition of approval. If the PD development plan submittal is submitted after adoption of the 3MLAP, the development shall comply with those development and design principles and standards, and the most restrictive provisions shall apply.

- 48.70 **Redesignation to Commercial.** As an identified efficiency measure necessary to reduce the needed size of the “Phase 2” UGB amendment to meet additional Commercial land needs, the City shall initiate a change to the Comprehensive Plan and Zone Map to redesignate and rezone 40 acres of property along the south side of the Highway 18 frontage from commercial to industrial, leaving the rear portions in an Industrial designation. This recognizes that the City will retain an Industrial surplus as a result of adding the Riverside North area to the UGB as part of the “Phase 2” UGB amendment.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. The proposed amendment would amend the map designation for 37.7 acres, which includes 4.25 acres intended for right-of-way dedication for future highway improvements. The proposed map amendment also identifies additional acreage within the area of the proposed amendment for future right-of-way for additional street circulation. Therefore, the proposed map amendment is consistent with additional commercial need identified in the EOA, and a portion of the 40 acres to be redesignated consistent with Proposal 48.70 in the Comprehensive Plan.

CHAPTER X. CITIZEN INVOLVEMENT AND PLAN AMENDMENT

GOAL X 1: TO PROVIDE OPPORTUNITIES FOR CITIZEN INVOLVEMENT IN THE LAND USE DECISION MAKING PROCESS ESTABLISHED BY THE CITY OF McMINNVILLE.

GOAL X 2: TO MAKE EVERY EFFORT TO ENGAGE AND INCLUDE A BROAD CROSS SECTION OF THE COMMUNITY BY MAINTAINING AN ACTIVE AND OPEN CITIZEN INVOLVEMENT PROGRAM THAT IS ACCESSIBLE TO ALL MEMBERS OF THE COMMUNITY AND ENGAGES THE COMMUNITY DURING DEVELOPMENT AND IMPLEMENTATION OF LAND USE POLICIES AND CODES.

APPLICANT’S RESPONSE: This Goal obligates the City to periodically review its Comprehensive Plan, so is not applicable to this application. Nevertheless, the application is consistent with this Goal because the proposal to revise the comprehensive land use plan designation for the site is responsive to the oversupply of industrial and demand for retail as addressed in the 2013 EOA. While consistent with the Three Mile Line Area Plan currently moving through the legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. This would be brought back for consideration at a subsequent public hearing continued to a date certain for consideration through the public process.

ALL OTHER ISSUES: SATISFIED WITH CONDITIONS. (Condition 2). The City is undertaking a 3MLAP process informed by a public process to engage the public in the development of that plan. With the timing of the application, including the PD overlay, as a condition of approval, the application includes development and design principles and standards, consistent with the 3MLAP principles and Great Neighborhood Principles, which will apply to the PD development plan. Review of the PD development plan will be subject to this same public hearing process, as specified in the Zoning Ordinance.

188.00 *The City of McMinnville shall continue to provide opportunities for citizen involvement in all phases of the planning process. The opportunities will allow for review and comment by community residents and will be supplemented by the availability of information on planning requests and the provision of feedback mechanisms to evaluate decisions and keep citizens informed.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. Prior to submitting an application, the applicant is required to conduct a noticed neighborhood meeting, which the applicant satisfied. The public processes provide for review of the map amendment and PD overlay, as well as the subsequent PD development plan provided for citizen involvement through the quasi-judicial amendment to the adopted and acknowledged Comprehensive Plan and implementing ordinances. Due to the timing of the application, the conditions of approval specify development and design principles and standards which will be applicable to the PD development plan, thus capturing the publicly-informed objectives of the Three Mile Lane Planning work to date.

McMinnville Zoning Ordinance (Title 17 of the Municipal Code)

The following Sections of the Zoning Ordinance provide criteria applicable to the request:

Chapter 17.74. Review Criteria

Section 17.74.010. Purpose. The purpose of this chapter is to provide the approval criteria for the following applications:

- Comprehensive Plan Map Amendment
- ...
- Zone Change (Planned Development)

FINDING: SATISFIED. The criteria of this Chapter and applicable sections are the applicable criteria for the proposed Comprehensive Plan Map amendment and Zone Change.

Section 17.74. 020. Comprehensive Plan Map Amendment and Zone Change – Review Criteria

17.74.020. Comprehensive Plan Map Amendment and Zone Change - Review Criteria. *An amendment to the official zoning map may be authorized, provided that the proposal satisfies all relevant requirements of this ordinance, and also provided that the applicant demonstrates the following:*

- A. *The proposed amendment is consistent with the goals and policies of the Comprehensive Plan;*

APPLICANT’S RESPONSE: *The analysis provided in Section 3 of this attachment demonstrates the application’s compliance with the City’s Comprehensive Plan and other adopted policies.*

FINDING: SATISFIED WITH CONDITIONS. (Conditions 1, 3) Findings regarding the goals and policies of the Comprehensive Plan are provided above. Subject to conditions addressing development and design principles and standards and mitigation of “significant effects” to the transportation system resulting from the map amendment, this criterion is satisfied.

- B. *The proposed amendment is orderly and timely, considering the pattern of development in the area, surrounding land uses, and any changes which may have occurred in the neighborhood or community to warrant the proposed amendment;*

APPLICANT’S RESPONSE: *Criterion B is supported by the 2013 EOA, which found that the City could benefit from a regional retail center, that recapture of retail sales leakage*

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

could be achieved by concentrating retail along major highways, and that excess industrial land should be re-designated to commercial use when opportunities arise. While consistent with the Three Mile Line Area Plan currently moving through the legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue.

ALL OTHER ISSUES: SATISFIED WITH CONDITIONS. (Condition 2).

Timeliness for Designation for Identified Land Needs. In some respects, timing is not an issue for the proper designation of lands. Lands within the UGB should be properly designated to meet identified needs over the 20-year planning period as specified in the Comprehensive Plan, both in quantity and location. This serves to ensure an adequate supply of lands designated to meet the identified needs, and also to protect suitable lands that can meet those identified needs from other uses and development under a different plan designation and zoning district, should that not be the intent of the Comprehensive Plan.

In other words, if a subject property is needed and suitable for a specified land use, there is no benefit in retaining the land in a different comprehensive plan designation and zone which may conflict with the long terms needs to be met with a different designation and zoning district. This could also lead to the possibility that lands which are necessary to meet the identified future land use needs for a certain designation and zone could be irreversibly developed under the existing designation and zone before being redesignated and rezoned to the needed plan designation and zone.

This would be a different issue if the property were in an unincorporated portion of the UGB designated with an Urban Holding designation that would require annexation and redesignation/rezoning to an urban plan designation and zone before urban development could occur. However, with the subject application, the property already has an urban industrial plan map designation and zone.

The adopted and acknowledged Comprehensive Plan and EOA identify a deficit of commercial land and a surplus of industrial land. Therefore, the proposed amendment is timely in redesignating land from industrial to commercial consistent with the identified commercial need.

Analysis identifies retail leakage, meaning there is an identified need for certain commercial uses in the community which is not being met. This results in local dollars which could be spent in the community instead being spent in other communities, and also leading to an increase in vehicle miles traveled by local shoppers who are shopping elsewhere. There is also demand within the region and surrounding market area which isn't being met in McMinnville, resulting in those dollars being spent elsewhere, with some longer trips to those destinations and increased length of some trips also leading to increased vehicle miles traveled.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

However, the adopted and acknowledged Comprehensive Plan already specifies the identified need, so from a quantitative standpoint, the current application need not demonstrate that there is need, or the rationale for the need, but rather it needs to demonstrate that it would meet the need already identified in the acknowledged planning documents. Where the Comprehensive Plan may specify a need for different types of commercial land (neighborhood commercial, general commercial, etc.), the application must demonstrate the proposed amount of specified commercial land to be designated is consistent with the type of needed commercial land and is in a location suited for the type of needed commercial land.

Further, the Comprehensive Plan explicitly identifies the redesignation of industrial land to commercial land to meet the identified need. This site has characteristics to meet the need.

Timeliness for Coordinated Area Planning and Development. In planning for how to meet its identified land needs, McMinnville has opted to conduct area planning, including a “Three Mile Lane Area Plan (3MLAP),” to ensure development of properties in separate ownerships develop subject to a publicly vetted plan to occur in a cohesive and coordinated manner, and in a manner that reflects McMinnville’s unique character, and the unique characteristics of different part of McMinnville, avoiding a generic “Anywhere USA” appearance.

The application uses the two-step Planned Development process specified in Chapter 17.51 Zoning Ordinance. This process allows for the Planned Development (PD) Overlay designation to be applied to the property as the first step, without a specific development plan, provided that no development can occur on the portion of the property subject to the PD Overlay until a specific development plan has been submitted and approved through the second step, following the same public hearing process.

While the 3MLAP work is still underway, McMinnville wants to ensure that actions taken to meet identified land needs do not occur before that work is complete which could otherwise conflict with the goals and objectives to be addressed through an area plan. It is not a foregone conclusion that this could be achieved by simply rezoning to one of McMinnville’s existing commercial zoning districts absent a special overlay. Redesignation for commercial use would need to occur in a manner that addresses these issues. If a privately initiated application was not submitted at this time, the public goals and objectives would be addressed through adoption of an area plan with specific use and development provisions and standards. Because that is not adopted and in effect, any privately initiated application will need to demonstrate how it will be consistent with this intent and purpose. This is part of the “unique characteristics” (Section 17.51.010(B)(1)) which authorize use of the PD overlay process with the deferred development plan. Further, the development and design principles and standards specify “areas of concern” required by (Section 17.51.010(B)(2)) to be addressed when final plans are submitted.

Subject to the conditions of approval addressing design and development standards and mitigation of “significant effect” to transportation facilities, the proposed amendment is orderly and timely. The two-step PD process with the deferred submittal of the development plan helps ensure the application for amendment and PD overlay is timely and orderly.

Because the 3MLAP proposes to amend certain aspects of the TSP and OR-18 Corridor Plan, with the timing of the application, the applicant needs to address current requirements and ensure the proposal doesn’t conflict with the 3MLAP work. The

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

application needs to demonstrate that the identified mitigation can be approved by ODOT as well as the City. Further, if the City’s intent is to update aspects of the OR-18 Corridor Plan as part of the adoption of the 3MLAP, this is an “area of concern” that must be addressed as part of the PD approval process. This essentially requires the applicant to demonstrate that mitigation associated with the map amendment is consistent with and will not conflict with the 3MLAP mitigation, and that if the mitigation associated with this application is less than or different than the mitigation associated with changes resulting in the 3MLAP overall, that the mitigation identified by the applicant can developed as an interim improvement and/or phased in such a way that it doesn’t preclude or prevent the necessary 3MLAP mitigation. Finally, since the City has not yet adopted the 3MLAP, then the timing of the application may require greater burden on the applicant to show their mitigation is approvable by ODOT and won’t conflict with the 3MLAP work.

At this time, ODOT’s comments indicate they need additional information to complete their review of the applicant’s mitigation, and that the mitigation identified by the applicant related to ODOT facilities has not yet been approved by ODOT. The City will need to know whether the mitigation identified by the applicant is approvable and can be attached to the proposed amendment as a condition of future development. The City can’t make findings regarding this criterion until this has occurred.

Also, as the applicant hasn’t explicitly proposed that the map amendment include the mitigation as a condition of approval and obtained ODOT approval for the mitigation, they are in effect requiring the City to impose a condition of approval to make the application approvable. The applicant hasn’t demonstrated that the City could simply adopt their identified mitigation as a condition of approval as the “measures” required to address “significant effect” under the TPR. The burden of proof is on the applicant, not the City, to demonstrate that there is an approvable proposal as part of the application to address “significant effect.” Staff recommends a continuance for additional time for preparation and submittal of the additional information for ODOT review and approval of the mitigation to OR-18 and for City approval of the mitigation that doesn’t conflict with the 3MLAP preferred alternative.

C. Utilities and services can be efficiently provided to serve the proposed uses or other potential uses in the proposed zoning district.

APPLICANT’S RESPONSE: There are no known utility or service deficiencies. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will demonstrate the improvements required for City utilities and services to efficiently serve the site.

FINDING: SATISFIED WITH CONDITIONS. Service providers were notified of the proposal. No issues with efficient provision of utilities or services were identified to serve permitted uses in the commercial zoning district.

Per comments provided by McMinnville Water & Light, review of the intensity of any specific use and development will determine whether it will be necessary to upgrade power feeder lines to serve the specific sue and development.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

When the proposed amendment concerns needed housing (as defined in the McMinnville Comprehensive Plan and state statute), criterion "B" shall not apply to the rezoning of land designated for residential use on the plan map.

FINDING: NOT APPLICABLE. The application is a proposed amendment from an industrial comprehensive plan map designation and zoning district to a commercial comprehensive plan map designation and zoning district. It does not affect property with a residential comprehensive plan map designation or zoning district.

In addition, the housing policies of the McMinnville Comprehensive Plan shall be given added emphasis and the other policies contained in the plan shall not be used to: (1) exclude needed housing; (2) unnecessarily decrease densities; or (3) allow special conditions to be attached which would have the effect of discouraging needed housing through unreasonable cost or delay.

FINDING: NOT APPLICABLE: The application is a proposed amendment from an industrial comprehensive plan map designation and zoning district to a commercial comprehensive plan map designation and zoning district. It does not affect property with a residential comprehensive plan map designation or zoning district.

Section 17.74.070. Planned Development Amendment – Review Criteria

APPLICANT'S RESPONSE: No response.

FINDING: NOT APPLICABLE. The criteria in this section only apply to amendment of an existing Planned Development.

Chapter 17.51. Planned Development Overlay

17.51.010. Purpose. *The purpose of a planned development is to provide greater flexibility and greater freedom of design in the development of land than may be possible under strict interpretation of the provisions of the zoning ordinance. Further, the purpose of a planned development is to encourage a variety in the development pattern of the community; encourage mixed uses in a planned area; encourage developers to use a creative approach and apply new technology in land development; preserve significant man-made and natural features; facilitate a desirable aesthetic and efficient use of open space; and create public and private common open spaces. A planned development is not intended to be simply a guise to circumvent the intent of the zoning ordinance.*

FINDING: SATISFIED. The purpose of the PD overlay as applied to the subject property, rather than only a rezone to C-3 without a PD overlay, is to provide for application of specific design and development standards to the property consistent with the principles of the 3MLAP underway for the lands in the Three Mile Lane area, which include objectives consistent with those described in the Purpose above.

In approving a planned development, the Council and the Planning Commission shall also take into consideration those purposes set forth in Section 17.03.020 of this ordinance. A planned development shall be considered as an overlay to an existing zone, and the development of said property shall be in accordance with that zone's requirements, except as may be specifically allowed by the Planning Commission.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The purposes in Section 17.030.020 are as follows:

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

17.03.020. Purpose. The purpose of the ordinance codified in Chapters 17.03 (General Provisions) through 17.74 (Review Criteria) of this title is to encourage appropriate and orderly physical development in the city through standards designed to protect residential, commercial, industrial, and civic areas from the intrusions of incompatible uses; to provide opportunities for establishments to concentrate for efficient operation in mutually beneficial relationship to each other and to shared services; to provide adequate open space, desired levels of population densities, workable relationships between land uses and the transportation system, adequate community facilities; and to provide assurance of opportunities for effective utilization of the land resources; and to promote in other ways public health, safety, convenience, and general welfare.

The proposed map amendment is consistent with the land need identified in the Comprehensive Plan, and the location is suitable for commercial use and development as addressed in the EOA and work underway on the 3MLAP. With the conditions of approval to specify development and design principles and standards consistent with the 3MLAP principles, the proposed amendment is consistent with these purposes.

For purposes of implementing these objectives, two means are available:

- A. *The property owner or his representative may apply for a planned development to overlay an existing zone and shall submit an acceptable plan and satisfactory assurances it will be carried out in accordance with Section 17.51.030. Such plan should accomplish substantially the same general objectives as proposed by the comprehensive plan and zoning ordinance for the area; (The fee charged for processing such an application shall be equal to the one charged for zone changes.)*

FINDING: NOT APPLICABLE. The applicant's submitted the application under Subsection B, below.

- B. *The Council, the Commission, or the property owner of a particular parcel may apply for a planned development designation to overlay an existing zone without submitting any development plans; however, no development of any kind may occur until a final plan has been submitted and approved. (The Planning Director shall note such properties and direct that no building permit be issued in respect thereto.)*

FINDING: SATISFIED WITH CONDITIONS. (Condition 4). The application is submitted under this Subsection. No development of any kind may occur on the portion of the property subject to the PD overlay until a final plan has been submitted and approved as specified in this ordinance.

1. *A planned development overlay may be approved under these circumstances for a property which has unique characteristics (e.g., geological, ecological, location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole. A planned development overlay initiated by the Council or the Planning Commission shall address itself to the purposes set forth herein.*

APPLICANT'S RESPONSE: Comprehensive Plan Policy 6.00 recommends placing a Planned Development overlay on large cluster commercial development areas, and other polices encourage heightened review of proposed development to ensure compatibility with nearby uses. These policies provide a basis for imposing a planned development overlay on the Property, which has the unique characteristics of

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

accommodating needed retail uses to accommodate retail leakage and growth related demand.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The Planned Development submittal is authorized under Subsection (B) because of the unique characteristics of the property and surrounding area which are recognized in the Comprehensive Plan policies specifying unique areas within the UGB where PD overlays should be applied. This property and the Three Mile Lane are unique relative to their character, gateway entry location to the community, and the coordinated 3MLAP work underway for this area.

Approval under this section is subject to the condition of approval for development and design principles and standards that address themselves to the unique characteristics of this area and the planning objectives of the 3MLAP.

2. *The Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plan are submitted;*

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue.

ALL OTHER ISSUES: SATISFIED WITH CONDITIONS. (Condition 2).

Reasons for Approval: The Comprehensive Plan map amendment and zone change are approved to meet identified need for commercial land, meeting part of the commercial deficit and reducing a portion of the industrial surplus. The location and proposed zoning is consistent with commercial land needs of the type identified in the Comprehensive Plan and EOA. Specific issues regarding the use and development characteristics are addressed through the PD overlay and the development and design principles and standards attached as a condition of approval. Subject to these conditions, the submittal under Subsection (B) to apply the PD overlay without a specific development submitted concurrently is the best alternative for coordination with the work underway on the 3MLAP.

Areas of Concern:

1. Development of the site should be consistent with the broader 3MLAP work underway and its objectives. Specific areas of concern, and how to address those, are articulated in the development and design principles and standards attached as a condition of approval.

2. The mitigation identified for “Significant Effect” of the map amendment on transportation facilities needs to be consistent with, and not conflict with, improvements and mitigation identified in the preferred alternative of the 3MLAP. Interim or partial mitigation at some locations needs to be reviewed for consistency with the 3MLAP mitigation. The applicant needs to provide additional information for ODOT’s review and demonstrate recommended mitigation can and will be approved by ODOT.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- C. *The Council and Planning Commission, with the assistance of the Planning Director, shall ensure that no planned development overlay granted under Section A or B above which is merely a guise to circumvent the intent of the zoning ordinance shall be approved. A denial of such a zone request based upon this principle shall be enunciated in the findings of fact adopted by the Planning Commission;*

APPLICANT'S RESPONSE: No specific development is proposed at this time, so the requested Planned Development overlay is not an effort to circumvent the intent of the zoning ordinance. Instead, as noted above, the imposition of the Planned Development overlay is consistent with applicable Comprehensive Plan Policies.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The PD overlay designation concurrent with the Comprehensive Plan map amendment and zone change is intended to provide greater oversight over the future development of the site. The development and design principles and standards attached as conditions of approval clearly demonstrate a means to ensure the intent of the zoning ordinance is not circumvented. Instead, there are specific provisions to address areas of concern and ensure the PD development addresses the objectives and areas of concern. Further, the development and design principles and standards establish expectations up-front regarding what the future PD development plan will need to address.

- D. *A planned development overlay shall be heard and approved under the public hearing procedures set forth in Chapter 17.72 (Applications and Review Process) of this ordinance. (A planned development overlay and change of the underlying zone may be processed simultaneously.)*

APPLICANT'S RESPONSE: The Planned Development overlay request is being considered concurrent with the Comprehensive Plan designation and Zoning Map designating amendment requests, in compliance with the application and review processes in Chapter 17.72.

FINDING: SATISFIED. The application is being processed in accordance with the applicable public hearing procedures and the applications are being process simultaneously.

- E. *A planned development overlay proposed by the Council, the Planning Commission, or the property owner under subsection B above shall be subject to all of the hearing requirements again at such time as the final plans under Section 17.51.030 are submitted, unless those requirements have been specifically changed in the planned development approval;*

APPLICANT'S RESPONSE: The property owner will comply with these requirements at the time final plans for development of the Property are submitted.

FINDING: SATISFIED. This procedure will be required at the time of submittal of the final plans, and this PD overlay approval does not change those requirements.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

CPA 2-20/ZC 3-20

C-3 PD Overlay Zone

Development and Design Principles and Standards

For Review of PD Development Plan

Part of 3310 SE Three Mile Lane, R4426 00700

I. Intent and Purpose.

II. Consistency with Other Documents

III. Amendments

IV. Organization

V. Development and Design Principles, Standards, and Recommendations

V.1. Overall Thematic and Stylistic Design

V.2. Uses

V.3. Architectural Design

V.4. Site Design

V.5. Building Orientation

V.6. Transportation Connectivity

V.7. Views

V.8. Signs

V.9. Landscaping

V.10. Parking and Parking Lot Landscaping

V.11. Screening

V.12. Special Features

V.13. Lighting

V.14. Economic Benefit

VI. Examples with Attributes Noted and Discussed

(not all examples fully illustrate the intent or requirements of these principles and standards)

VI.1. Old Mill District, Bend

VI.2. Bridgeport Village, Tigard

VI.3. Old Town Square/Fred Meyer, Wilsonville

VI.4. The Village at Sunriver

VI.5. Keizer Station

VI.6. The Village at Sunriver

Attachments:

- **Attachment 1.** Three Mile Lane Area Plan (3MLAP) Design Booklet (Draft)
- **Attachment 2.** Three Mile Lane Area Plan (3MLAP) Preferred Alternative: Land Use and Design Analysis (March 23, 2021), including “Design Features” section

I. Intent and Purpose

- These principles and standards provide the basis for the review of the PD Development Plan to be submitted for the subject property.
- These supplement the standards in the Zoning Ordinance to achieve specific objectives for the development of the Three Mile Lane Area.
- The application for the PD overlay designation is submitted in advance of the adoption of the Three Mile Lane Area Plan. A draft preferred alternative has been developed, and the formal public review process will be initiated after May 2021, with adoption expected to occur no later than June 2022. The Development and Design Principles and Standards in this document will apply to the PD Development Plan for the subject property, unless the Three Mile Lane Area Plan and its design principles and standards are adopted prior to submittal of the PD development plan for the subject property. If they are adopted prior to submittal of the PD development plan for the subject property, the more restrictive provisions shall apply in the event of a conflict.

II. Consistency with Other Documents

1. The PD development plan shall be consistent with the Draft Design Booklet of the Three Mile Lane Area Plan (3MLAP), attached as **Attachment 1**.
2. The PD development plan shall be consistent with the Preferred Alternative of the Three Mile Lane Area Plan (3MLAP), including the “Design Features” Section, attached as **Attachment 2**.
3. The PD development plan shall be consistent with the final 3MLAP design principles and standards if adopted prior to submittal of the PD development plan.
4. In addition to these development and design principles and standards, the development shall be consistent with all provisions of the Zoning Ordinance, including the Large Format Commercial Development Standards of Chapter 17.56 of the Zoning Ordinance, except where they may conflict. In the event of a conflict, the standards that are more specific to the 3MLAP shall govern.
5. In addition to these principles and standards, the development shall be consistent with the provisions of the current Three Mile Lane Planned Development Overlay (originally adopted by Ordinance 4131, and subsequently amended), unless repealed prior to submittal of the PD development plan. In the event of a conflict, the more restrictive provisions shall apply.
6. The PD development plan shall pay special attention to the great neighborhood principles in the Comprehensive Plan which are applicable to commercial development, including its relationship to surrounding use and development, and consideration of special features on the site and iconic views.

III. Amendments

The City may amend these development and design principles and standards through the PD amendment process.

IV. Organization

This document is organized by topic, providing principles and standards by topic in each section, as well as recommendations in some sections.

- **3MLAP Design Booklet and Preferred Alternative (Draft)**. These are attached as **Attachment 1 and 2** and shall serve as guiding documents in interpreting and applying the development and design principles and standards in this document.
- **Design and Development Principles & Standards**. The PD overlay designation is subject to a condition of approval requiring that the PD development plan shall comply with these

development and design principles and standards. These will be used by the review body to evaluate the PD development plan when it is submitted for review through the applicable public hearing process. Design and development that meets individual minimum standards, but which as a whole is inconsistent with guiding design and development principles shall not be deemed consistent with this document.

- **Recommendations:** “Recommendations” are provided in some sections of this document. These are encouraged and advisory, but non-binding, as some of these may be outside the scope of land use review.

V. Design Principles, Standards, and Recommendations

V.1. Overall Thematic and Stylistic Design

1. Development shall be consistent with the draft Design Goals of the Three Mile Lane Area Plan attached as **Attachment 1**.
2. Development and site design shall be sensitive to the first impressions created at this gateway location into McMinnville, and the unique attributes of this location, to reflect a unique high-quality appearance, maintain iconic views, and welcome visitors and residents to McMinnville and its unique identity.
3. The site shall have a cohesive design vocabulary.
4. The thematic and stylistic design choices and vocabulary of the architecture and site shall reflect the unique aspects of McMinnville in the context of Three Mile Lane – predominantly drawing from its agriculture and aviation museum design cues, interpreted in a meaningful way. These architectural design cues include features such as the sloping roofs, glass, and grain cellar elements. Landscape elements include agricultural crops, vineyards, agricultural wind breaks, stands of natural trees, tree cover like what is present at Galen McBee Airport Park, riparian vegetation, etc.
5. The thematic and stylistic choices shall not seek to mimic or replicate the vocabulary of the historic downtown area.
6. Corporate branding, identity, and logos of individual tenants should be addressed in the signage, and not in a generic architectural vocabulary or in corporate “logo buildings” which are repeated in other communities, and which are not consistent with the unique identity of Three Mile Lane. There shall be a consistent thematic treatment of the site and development. The site shall not be a collection of corporate “logo building” designs.

V.2. Uses

1. **Number of stores larger than 135,000 square feet.** There shall be a limit of two anchor stores which have gross square footage exceeding 135,000 square feet, except that one additional anchor store exceeding 135,000 square feet may be permitted if the majority of the façade includes separate liner shops with individual exterior entrances.

Liner Shops Rather than Blank Walls



2. **Use Restrictions.** The following uses otherwise permitted in the C-3 zone shall not be permitted in this PD Overlay: self-storage units, mini-storage units, outdoor storage, outdoor sales uses including auto and equipment sales lots, except (a) as may be incidental to an indoor retail use and may include pedestrian-oriented outdoor retail use such as sidewalk sales, farmers' and/or crafters' markets, sidewalk activities; and (b) those which are predominantly the sale of living plant materials, such as nurseries and garden centers, where the predominant appearance of the outdoor sales areas is plants and living landscape materials.
3. **Drive-Through Uses.** The number and concentration of drive-through uses may be limited overall, and/or shall be restricted to certain portions of the site as determined necessary to achieve the pedestrian-orientation provisions of these principles and standards. Drive-throughs shall be limited if they disrupt pedestrian continuity of a building or buildings by creating drive-through aisles which wrap-around three or four sides of a building and/or require buildings to be separated into individual pad structures rather than a continuous multi-tenant row with pedestrian orientation and continuity.

Drive-throughs shall be designed and located to minimize drive-through dominated design and pedestrian disruptions. Drive-throughs shall be limited in design and configuration to achieve this purpose. To achieve this principle, this may include limiting them to u-shaped configurations at end units of buildings so the drive-through aisle doesn't separate the building from adjacent pedestrian street areas and pedestrian features, outdoor dining areas, etc. (See below). Drive-through kiosks may also be limited to a one-sided drive-through, with a second walk-up window allowed when the kiosk located is between a drive through aisle and a pedestrian street as needed to achieve this principle.



4. **Recommendation: Mix of Uses.** The applicant is encouraged to include a complementary mix of retail and entertainment uses, as well as “maker” businesses that make and sell artisan/craft products, including those which are complementary to the innovation district which is proposed as part of the 3MLAP.

V.3. Architectural Design

1. **Thematic and Stylistic Design Elements.** The architectural design shall be consistent with the provisions of the “Overall Thematic and Stylistic Design” section above.
2. **Scale and Massing.** Except upon findings by the review body that the design qualifies for “Exceptions to Scale and Massing” below, buildings shall meet the Large Commercial standards of the Zoning Ordinance in order to provide pedestrian-scaled buildings and facades designed for a comfortable walking environment.



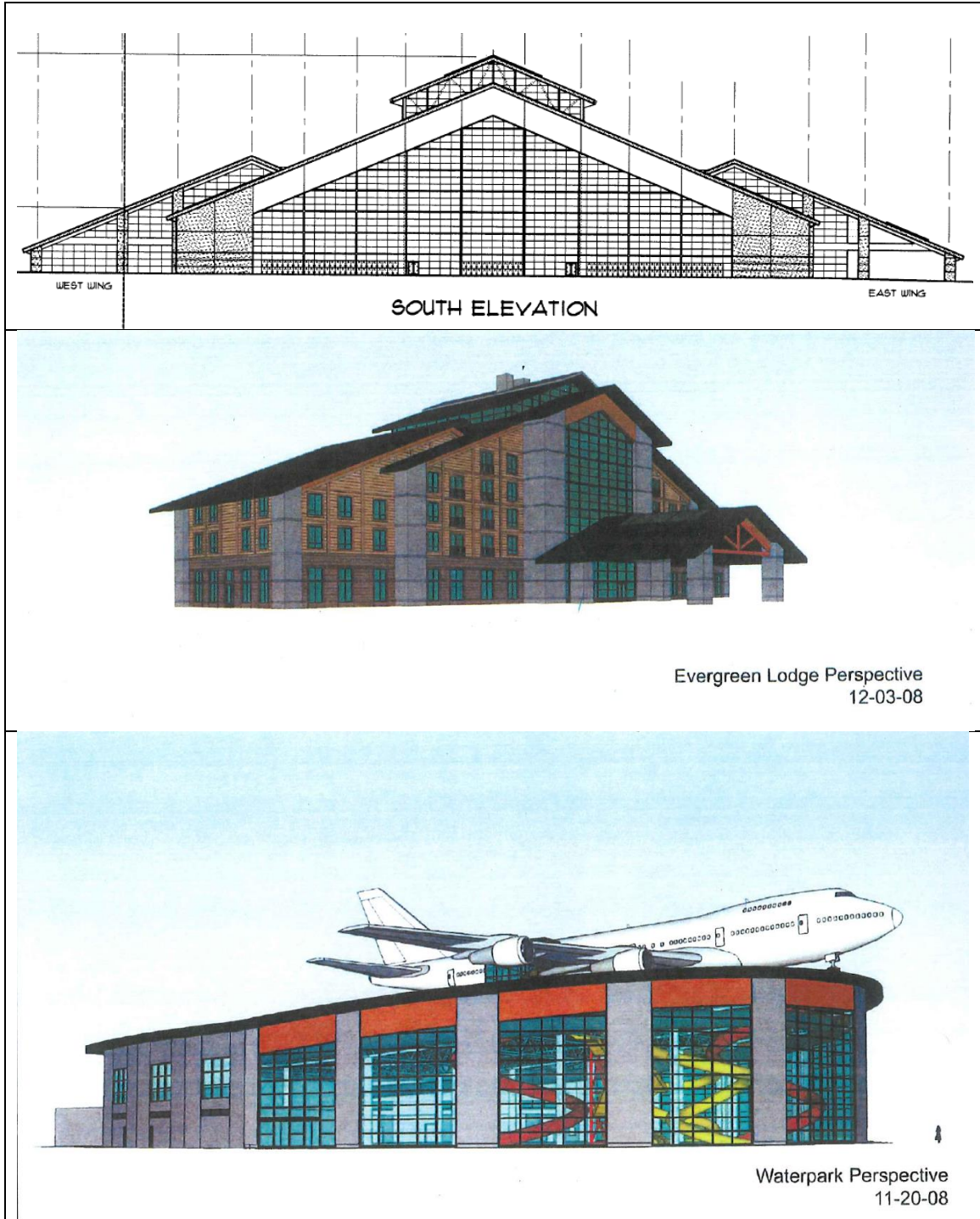


**Reference Designs in 3ML Area for Design Treatments for Large Format Retail Stores
(from Evergreen Campus Concept Graphics)**



Evergreen Lodge Perspective View

Group Mackenzie 2080153.01



- 3. Exceptions to Scale and Massing.** As part of the PD development plan review, exceptions to some aspects of the scale and massing requirements of Chapter 17.56 of the Zoning Ordinance may be authorized by the review body if the review body finds the designs of larger format anchor buildings instead provide for high quality design treatments and elements integral to the building design with features that draw from the larger scale aviation museum and agricultural building themes of the area. Two-dimensional facade treatments will not be considered sufficient to meet this intent. The designs must incorporate predominant elements including

roof forms, glazing, and variation in building height consistent with the design of reference buildings in order to qualify for this exception.

4. **Three-Dimensional Treatments.** Massing and façade articulation treatments shall be designed to provide a three-dimensional appearance that appears as changes in the volume of the building. Two-dimensional treatments, such as vertical changes in parapet height without corresponding changes in the horizontal depth are insufficient to meet the scale and massing requirements of the standards.
5. **Design Elements and Façade Treatments Should Reinforce and Complement One Another.** Changes in vertical height, horizontal depth, materials, trim, glazing, and color should correspond with one another to reinforce and complement one another.
6. **Colors and Materials.**
 - a. The site design shall include one or more color and material palettes for the buildings. Colors and materials shall be consistent with the overall thematic and stylistic design principles. Color and materials selections shall be consistent with the character of the Three Mile Lane area and influences. The intention isn't monotony. Variety rather than a single design treatment is encouraged to contribute to the feeling of organic development of the area occurring over time.
 - b. The 3MLAP Design Booklet and Preferred Alternative attached as **Attachments 1 and 2** encourage vibrant colors. This shall be achieved consistent with the provisions of this section. Colors of principle facades should avoid pure saturated primary and secondary colors. These may be used for accent colors, typically with some variability of hue, saturation, and brightness. In addition, neon or day-glo colors are not permitted as wall surface colors. Pure black or white are generally not permitted as predominant wall surface colors, but may be reviewed as a color for a portion of an exterior wall as part of a cohesive color palette.
 - c. The 3MLAP Design Booklet and Preferred Alternative attached as **Attachments 1 and 2** encourage certain material treatments, especially noted in the "Design Features" section of **Attachment 2**. Exterior material treatments shall be consistent with those allowed in the Large Format Commercial standards in Chapter 17.56 of the Zoning Ordinance, except as otherwise specified in the 3MLAP Design Goals and principles, but some materials authorized in Chapter 17.56 may be further limited in certain amounts or applications to achieve consistency with the design principles and cohesive color and material palette for the site.
7. **Design for Microclimate.** The architectural design shall include features designed for the microclimate as articulated in the "Design Features" Section of the March 23, 2021 Three Mile Lane Area Plan "Preferred Alternative: Land Use and Design Analysis" attached as **Attachment 2**.

V.4. Site Design

1. The site design shall provide for a relationship between buildings, streets, and drive-aisles that provides for multi-tenant structures to be aligned along pedestrian streets or pedestrian street-like drive aisles. These are typically 2-lane and may include on-street parking, typically angled or parallel. Building entrances are oriented to sidewalks and other pedestrian areas such as plazas

and outdoor dining areas. These are lined with buildings and/or outdoor pedestrian areas along the majority of their length, providing both pedestrian-oriented connectivity and continuity. Site design that is predominantly isolated pads for smaller tenant spaces dispersed throughout the parking area without pedestrian-oriented connectivity and continuity of buildings in close proximity along a pedestrian street will generally not meet this requirement.

Larger multi-aisle parking lots shall be located to reduce their visual prominence, and may be located near larger anchor stores, to the side or rear of buildings along a pedestrian street or street-like drive aisle.

An example of a site design meeting this standard is a “barbell” configuration, where a pedestrian street lined with smaller buildings connects anchors at either end, with the larger parking areas located near the anchors, as well as behind buildings, maintaining a pedestrian experience on a portion of the property and meeting the parking needs of larger anchors and other users at locations that encourage a “park once and stroll” experience.

2. Site design shall avoid “through-building” designs in which a building faces a parking lot and street, but is designed with the main entrance facing the parking lot, while the predominant side facing the street is treated as the back of the building with a predominance of service entrances with security doors, meter panels, etc. Those shall be designed to face to the side away from the street, or where impractical, may to a limited extent be minimized and screened with additional landscaping.

V.5. Building Orientation

1. Site design and building orientation shall locate service areas (truck docks, trash and recycling facilities, box crushers, etc.) toward service areas rather than facing the street and screened. Service areas include public and private alleys, service drives, service courtyards, and location at the rear of a site which isn’t visible from and doesn’t face a street, parking area, or amenity intended for use by the public. These locations shall require screening walls and/or landscape screening if the end area at the point of access may be visible. These locations are required rather than site locations which face streets or other areas used by the public and rely entirely on screening walls and landscaping.

V.6. Transportation Connectivity and Facilities

1. The site design shall provide for good transportation connectivity between buildings on the site, and shall provide for good transportation connectivity between the site and adjacent streets and properties.
2. The site shall provide for street connections, and any separated bike and/or pedestrian connections to and/or through the site as specified in the draft 3MLAP preferred alternative, or subsequently adopted 3MLAP if adopted prior to submittal of the PD development plan. When consistent with the intent of the plan, the connectivity through and across the site may be private with access easements designed to a similar public standard, rather than a public facility in a public right-of-way.
3. Bike and pedestrian connectivity shall be designed to be comfortable for all ages, separated from vehicular traffic and parking for safety, and provide relatively direct routes to make connections to connecting facilities or nearby amenities -such as trail systems, Airport Park, riverfront, innovation campus, neighborhoods, etc.

4. Adequate provisions shall be made for shared access, circulation, and parking among properties to allow for circulation between properties while minimizing out of direction travel requiring the need to access the abutting public street system to get from one part of the site to another that could be achieved with a more direct connection.
5. The site design shall accommodate all transportation modes. The site shall provide a location for a covered transit stop with the location coordinated with the transit provider. It shall be located to provide convenient access to on-site uses and pedestrian facilities on-site.
6. Covered bicycle parking shall be provided at a location within 50 feet of a building entrance of anchor stores, and bike parking shall be provided near entrances of other buildings, preferably covered.

V.7. Views

1. Site design, landscape design, architectural design, building orientation, and sign placement/design shall preserve and enhance iconic views of natural and cultural landmarks and landscape features, and should consider views from on-site buildings as an amenity.
2. View features include Mt Hood, and the mountains and hills visible from Three Mile Lane, etc.

V.8. Signs

1. The size and number of building-mounted signs shall be limited to one per exterior public entrance per façade. “Through buildings” may have an additional sign on the opposite façade.
2. Signage should be integral to the varied architectural design and façade treatments of the buildings. Signage should not be predominantly provided through a series of taller “sign parapets” at building entrances. If a limited number of taller parapets are provided, the height of entry parapets and signage at building entrances should be proportional to the height of the principal façade and underlying entryway, so that the parapet and signage are secondary and subordinate to the main façade and underlying entry.

Example. Complies. (Above). The architecture is varied, and signage is integrated into the architectural design - façade-mounted without a separate taller entry parapet, and sized and located to be subordinate to the façade.

Below. Parapet heights and signage in limited instances are not the predominant feature relative to principal adjacent façade height and underlying entry. Parapets are about less than one-fourth in height taller than the principal façade, a ratio of about 1:3 or 1.5 to 2 relative to the underlying entryway, and signage is accordingly subordinate rather than the predominant feature.





Example. Doesn't Comply: Each building entrance has a predominant over-height entry parapet for signage. Parapet heights are more than twice the height of the ground floor entry and/or the height of the principal adjacent façade. Signage is the predominant feature with underlying entryway and main building façade subordinate to parapets and signage.



V.9. Landscaping

1. Landscaping shall be consistent with the 3MLAP Design Goals (Draft) attached as ***Attachment 1***.
2. Landscaping provisions of these principles and standards are in addition to the provisions of the Zoning Ordinance.
3. To provide an enhanced gateway treatment, larger landscape areas shall be provided near the front of the site by Three Mile Lane and the frontage road, to provide space for clusters of mature canopy trees and landscape treatments. These areas shall include a combination of landscape features which include a natural appearance of native trees and landscape materials, and intentionally-designed working landscape features related to the agricultural and viticultural characteristics of the area.

Grocery Store on SW Century Drive, Bend, OR with Tree Preservation



V.10. Parking and Parking Lot Landscaping

1. Portions of the site which have larger multi-aisle parking lots shall be divided into smaller modules, approximately 250 feet x 250 feet, containing approximately three aisles in width, which have more continuous perimeter landscaping and larger landscape areas for larger canopy trees and groupings than would be provided in typical end-island planters. Landscaping at the edges of these modules also provides opportunities for greater landscape buffering and separation for pedestrian circulation through parking areas. Continuous landscaping and pedestrian connectors may also be placed on alternating rows, provided the design is consistent with the pedestrian connectivity requirements of the Large Format Commercial standards of the Zoning Ordinance.



2. Parking aisles shall have end islands which provide space to support of the health of larger shade trees that provide shading and canopy structure that extends over paved areas.
3. Parking lot landscaping areas shall be planted predominantly with living groundcover that will achieve full coverage at maturity.
4. Site grading shall maintain the appearance of natural and gradual contours rather than stark cut and fill forms.
5. If surface stormwater detention facilities are provided on site, they shall be designed to similarly appear as natural landforms, with natural plantings, and a design that appears as an amenity rather than a utility. They shall be predominantly vegetated. If fencing is required, treatments other than chain link fencing shall be used. Chain link fencing with slats is not permitted.
6. If retaining walls over two feet tall are used, they shall have the appearance of natural materials and may include landscaped terracing and/or climbing vines or other vegetation to provide landscape screening. Plain concrete, plain CMU, prefabricated highway panels, etc. shall be avoided unless they can be adequately designed with veneers and/or landscape screening.
7. **Recommendation:** Low-impact stormwater practices are encouraged. If the parking area is graded to drain to stormwater swales or detention features, breaks in the continuous curb will be allowed, subject to adequate provisions for proper runoff treatment.

V.11. Screening

1. Utility vaults shall be located away from prominent public locations and screened or placed underground.
2. Areas adjacent to walls on large format commercial buildings that predominantly lack public entrances and/or windows shall incorporate landscaping areas adjacent to these areas, with enough depth to allow for a more naturalistic planting with a combination of trees and shrubs to de-emphasize the blank walls, rather than strictly a narrow uniform row of evergreen screening materials, which may emphasize and reinforce the presence of the blank wall.
3. Where the Zoning Ordinance specifies that screening walls shall be designed with materials and colors similar in appearance to the main façade, this PD overlay shall also allow for more natural treatments with the appearance of stone and landscape screening with materials and colors intended to de-emphasize and camouflage the visibility of the screening wall consistent with the appearance of landscape treatments rather than building materials.

V.12. Special Features/Spaces for Special Events

1. The site shall incorporate special features such as:
 - a. Preservation and incorporation of the existing agricultural building into a design element such as a gateway feature, entry element to the site, and/or functional use element.
 - b. Public art
 - c. Interpretive information about natural and cultural aspects of the location
 - d. Larger pedestrian and people gathering areas with spaces such as plazas, pedestrian boulevards, green space, outdoor dining patios, linkages between site amenities and nearby amenities.
2. See examples in Section IV for amenities such as:
 - a. Old Mill District, Bend: plazas, public art, landscape features, plazas, waterfront dining areas, fly-casting pond, lawn areas by the river for events etc., pedestrian connections across river to amphitheater.
 - b. Fred Meyer development area in Wilsonville: McMenamin's Old Church and Pub: Outdoor grass terraced amphitheater for outdoor live music

- c. Bridgeport Village: pedestrian area with covered gazebo, play structure with seating, fountains, public art, seating walls, kiosks, hosting of outdoor music and other events.

V.13. Lighting

1. To further the Dark Skies Lighting provisions in Chapter 17.56 of the Zoning Ordinance, any use of LED lighting for parking lot lighting shall consider recommendations in the guidelines from the International Dark Sky Association (IDA), including the following:
 - Use fully shielded fixtures that don't emit light upward.
 - Use "warm white" or filtered LEDs with a color temperature of 3000K or less to minimize blue light emission (and at or below 2700K for ambiance).
 - Use products that enable use of dimmers, timers, motion sensors, and networking.
 - Consider dimming or turning off lights during overnight hours.
 - Avoid over-lighting.
2. If ground-level parking lot illumination can be achieved with lower illumination levels by spacing light poles more closely, with lower heights and lower illumination levels from the source, that shall be provided rather than higher light poles with higher illumination levels from the source with greater spacing between poles.
3. Building-mounted "wall packs" that shine outward into parking areas without downward shielding shall not be employed, except as allowed into service areas not visible from other portions of the site, public right-of-way, or other properties.

V.14. Economic Benefit/Local Multiplier Effect

- **Recommendation:** The applicant is encouraged to give preference to tenants that maximize the positive economic impact to McMinnville and the region, including through the "Local Multiplier Effect"

For example:

- Businesses that offer comparatively higher wages and benefits to employees
- Locally and/or regionally-owned businesses
- Businesses that use locally-based services, such as banking, accounting, marketing, printing, etc.
- Businesses that source local raw materials or products and/or sell local products
- Businesses that support community causes



VI. Examples of Developments, Including Some Experiential Places and Mix of Uses:

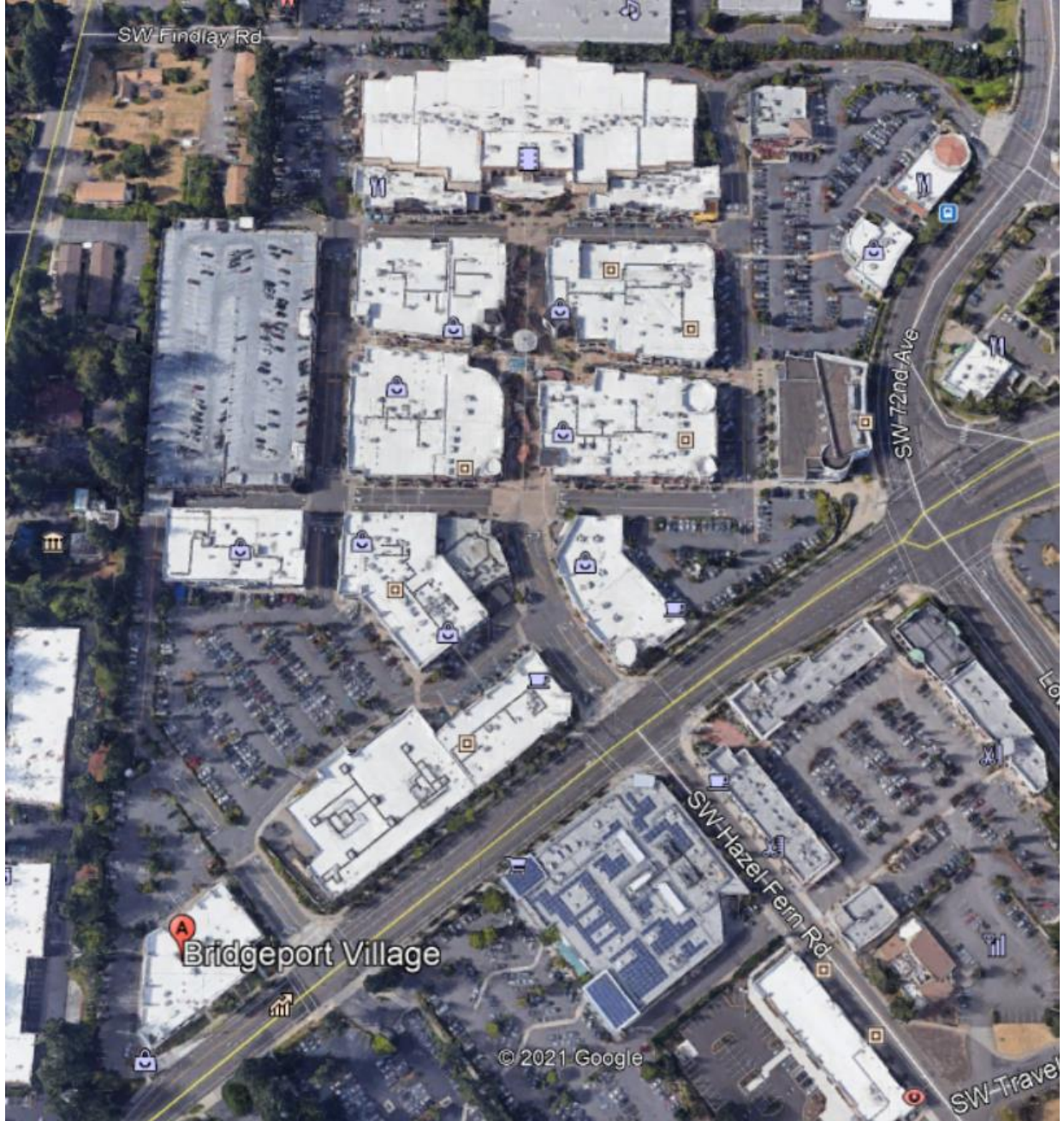
VI.1. Old Mill District, Bend, Oregon

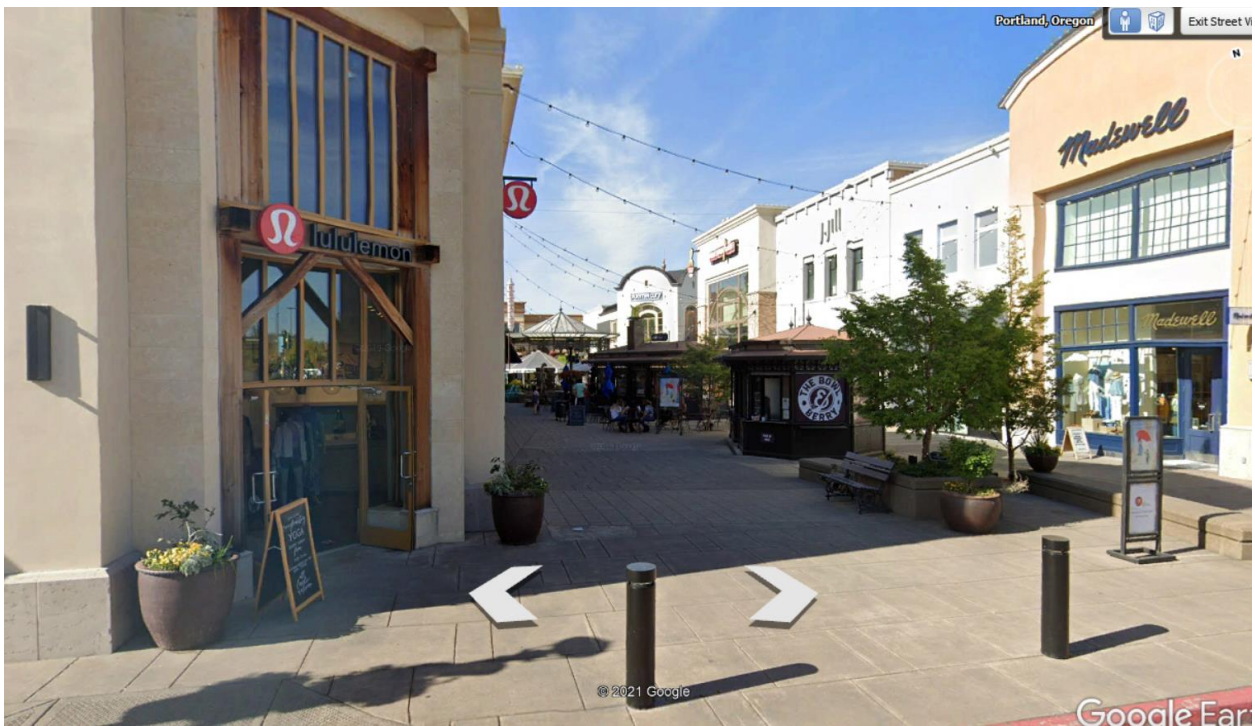
Contains Multiple Attributes Consistent with These Principles and Standards



- Mix of entertainment and retail uses
- Maximizes relationship to site context
 - Linkages to riverfront bike/ped trail system
 - Outdoor dining areas oriented to riverfront and pedestrian street
 - Bike/pedestrian linkages to nearby entertainment venues (amphitheater, brewery, etc.)
 - Connectivity to nearby neighborhoods
- “Barbell” vehicular circulation and parking configuration: Buildings oriented to pedestrian street through site: two lane double-loaded street with angled parking, with wider sidewalks, plazas, etc. adjacent to the street at key locations. Larger multi-aisle parking lot areas are located at convenient but less prominent locations at the ends of the pedestrian street (near the theater, etc.) and behind buildings predominantly out of view of the pedestrian street.
- Pedestrian emphasis of street design includes numerous pedestrian crossings, well-marked with crosswalks, different paving treatments at intersections, and other pedestrian treatments to slow vehicles.
- Experiential destination, encourages lingering and “park once and stroll”
- Unique features, public art, sculptural elements, seating and gathering areas, and interpretive elements on-site. (fly-casting pond and artwork, interpretive/historic information and signage)
- Adaptive reuse of historic elements and structures on-site
- Larger areas for landscape plantings within the pedestrian areas and plazas
- Generous green spaces at prominent locations on the site for aesthetics and use.
- Compatible architecture scaled to pedestrian experience with façades that encourage strolling
- Signage scaled and placed consistent with pedestrian experience and subordinate to facade

VI.2. Bridgeport Village, Tigard, OR
Contains Several Attributes Consistent with These Principles and Standards





- Mix of entertainment and retail uses
- (Somewhat self-contained, not well connected to surrounding properties)

- “Barbell” vehicular circulation and parking configuration: Buildings oriented to pedestrian-oriented streets and exclusive pedestrian areas through site. Larger multi-aisle parking lot areas are separated and located at convenient but outer areas of the site, but near larger anchors like the theater and former grocery store, predominantly out of view of the pedestrian streets and pedestrian ways.
- Experiential destination, encourages lingering and “park once and stroll”
- Unique features, public art, sculptural elements, seating and gathering areas on-site.
- Continuity of pedestrian-oriented areas

VI.3. Old Town Square/Fred Meyer, Wilsonville

Does Not Contain Majority of Attributes Consistent with Standards, but Provides Examples of Certain Attributes Consistent with Standards







- Outlying pads generally provide for good continuous pedestrian continuity.
- The designs provide varied architectural forms, rooflines, etc. which avoid the appearance of a retail strip complex.
- There are some pedestrian pass-throughs
- There are pedestrian visual cues and seating, streetlights, etc.
- There are some entertainment uses incorporated onto the site, with adaptive reuse of an architecturally significant building.
- True pedestrian orientation is limited by 4-5 lane and 7-8 lane adjacent streets (even with landscaped medians), and lack of pedestrian orientation of buildings across the street. Some buildings lack true pedestrian entrances on that side, and/or windows are used for auto-scaled promotional decal signage only

VI.4. Keizer Station

- Example of “Drive and Park Multiple Times” Type of Retail Complex
- Example of a Different Type of Retail Complex with Attributes Which Are Different Than Envisioned and Outlined in These Principles and Standards.



- Large multi-aisle parking lot areas and distance between buildings without connecting pedestrian streets lined with pedestrian-oriented buildings (lack of areas of interest between buildings, dominated by vehicular accommodation, increases perceived distance of walking).
- Separated building pads that discourages pedestrian activity between buildings (lack of continuity of pedestrian-oriented spaces).

- Buildings designed to accommodate drive-through areas that fully wrap around the building pad, or are designed with a high concentration of drive-through uses that dominate the design and discourage pedestrian activity or outdoor dining and gathering spaces.
- “Power Centers” that include a continuous row of large format retail stores where even continuous sidewalks, if present along front of buildings, are dominated by blank walls between building entrances with no pedestrian interest. Decorative Building façade treatments along face of building to break up large blank, unarticulated walls may improve aesthetics, but don’t offer any pedestrian interest.
- Smaller retail buildings meet letter of the law but not intent:
 - Buildings are abutting the street, but are not really accessible from the street, instead back up to the street but are only accessible from parking lot, with no easy pedestrian pass-through areas.
 - Buildings are principally oriented to the parking lot, and where they abut a street, it is a busy, high speed/high volume street or highway with significant road noise lacking buffering or desirable pedestrian experience. Outdoor dining areas are incidental and oriented to a large parking lot without elements present to make the outdoor spaces more appealing, such as narrow sidewalks without low walls or landscaping to enhance and/or separate the pedestrian areas from parking lot area.
- Lack of recreational uses
- Food and beverage options are on isolated pad sites without strong pedestrian connectivity or continuity – facing onto and surrounded by large multi-aisle vehicular parking lots and circulation areas.
- While there are with landscape-buffered sidewalks, only a few buildings are oriented to these streets, and where these is pedestrian connectivity at those locations, they are individual pads isolated from one another and lacking pedestrian/building continuity.

VI.5. The Village at Sunriver

Another Example of Pedestrian-Only Area with Parking at Perimeter Includes Recreational Uses, Linkages



ATTACHMENT 1

TO DEVELOPMENT AND DESIGN PRINCIPLES AND STANDARDS

DRAFT



THREE MILE LANE AREA PLAN DESIGN BOOKLET



DRAFT

HOW TO REVIEW THE LAND USE CONCEPTS:

GOALS AND OBJECTIVES

GOAL 1: SUPPORT AND ENHANCE THE DISTRICT'S ECONOMIC VITALITY AND MARKETABILITY

This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism.

GOAL 2: PROVIDE OPPORTUNITIES FOR A COMPLEMENTARY MIX OF LAND USES, CONSISTENT WITH THE VISION OF A DIVERSE & VIBRANT DISTRICT.

This plan aims to provide a mix of land uses that support one another to create a unique part of the city. McMinnville is in the process of adopting a set of "Great Neighborhood Principles" to evaluate land use concepts for the Three Mile Lane area. A draft of these is included below!

GOAL 3: ENHANCE MULTI-MODAL CONNECTIONS THROUGHOUT THE DISTRICT

This plan aims to create a complete, multimodal transportation network that serves the north and south sides of Three Mile Lane within the district, and that connects the business community, the hospital, residential neighborhoods and tourism amenities to each other and to the city center.

GOAL 4: CREATE AN AESTHETICALLY PLEASING GATEWAY TO MCMINNVILLE

The study area is a primary gateway to the City of McMinnville. Because the land use concepts are fairly high-level, urban design considerations explore aesthetic elements that could be applied in the area.

GREAT NEIGHBORHOOD PRINCIPLES (draft)

- Natural Feature Preservation
- Scenic Views
- Parks and Open Spaces
- Pedestrian Friendly
- Bike Friendly
- Connected Streets
- Accessibility
- Human Scale Design
- Mix of Activities
- Urban Rural Interface
- Housing for Diverse Incomes
- Housing Variety
- Unique and Integrated Design

COMMON ELEMENTS

Overall

- Boundaries remain the same: UGB is in the same location, developable land is always approx. 400 acres
- Airport remains the same
- Roadway designs can be selected independently and combined with any land use concept



Transportation

- Cumulus Avenue is connected to SW Norton Lane through or adjacent to the Chemeketa Community College campus.
- New public 'complete' streets are added to new developments south of Three Mile Lane.
- Three Mile Lane bridge is improved for bicycle and pedestrian safety.
- There are new and improved bicycle and pedestrian connections throughout the area.



Urban Design

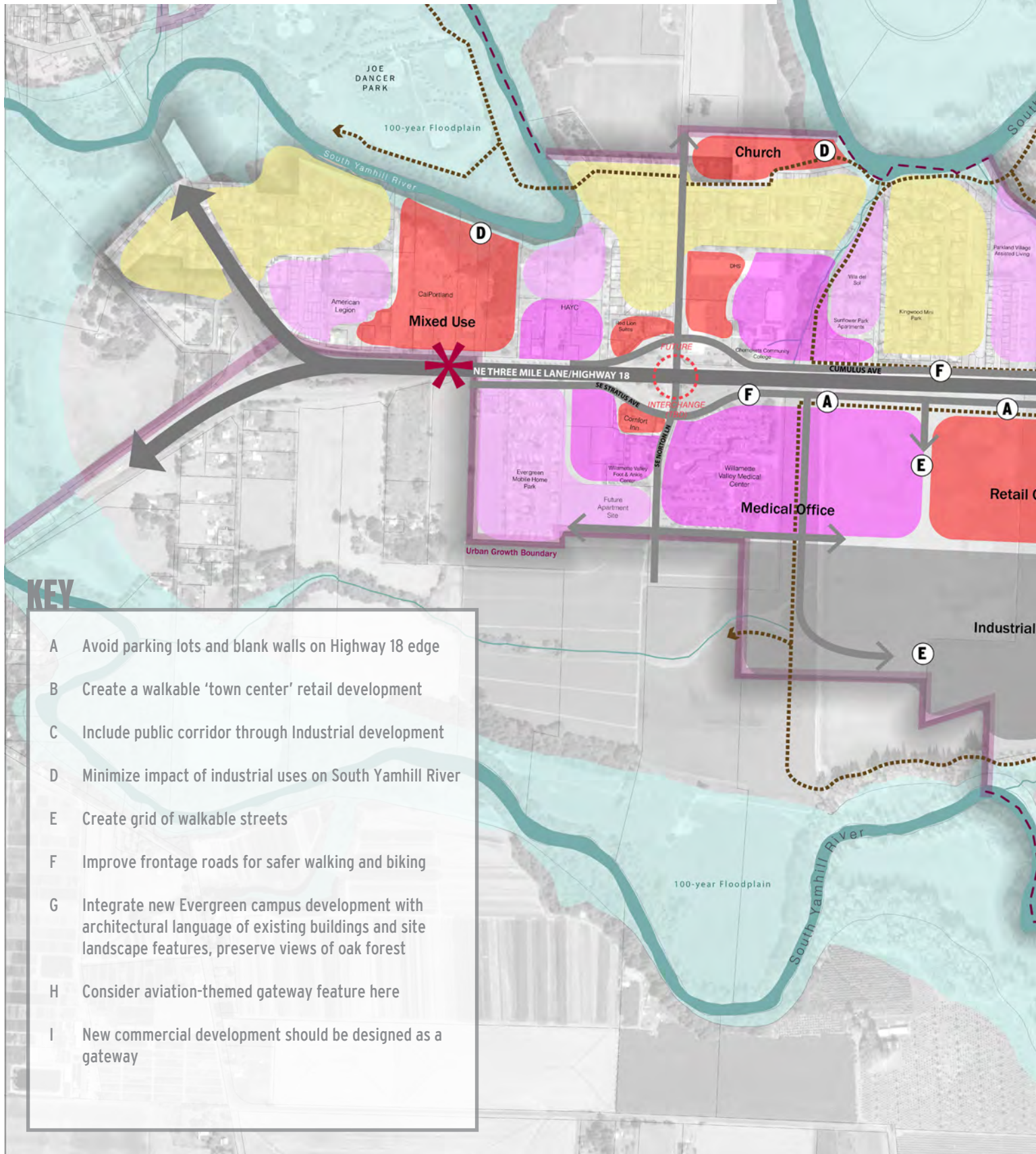
- Landscape and architectural design standards are recommended to ensure new development is designed to reflect regional agricultural and historic forms and support this area's function as a gateway to McMinnville.
- Preserve views to natural features like mountains and the river
- Gateway elements are included to mark the entrance to McMinnville



Parks and Trails

- A trail system connects the South Yamhill River, Galen McBee Airport Park, Evergreen Campus, and Joe Dancer Park along riparian corridors and through new development. The location of these trails changes slightly per concept, but they are always present.
- Recreational access is added to the Yamhill River and riparian corridors and oak stands are protected

INDUSTRIAL CAMPUS



KEY

- A Avoid parking lots and blank walls on Highway 18 edge
- B Create a walkable 'town center' retail development
- C Include public corridor through Industrial development
- D Minimize impact of industrial uses on South Yamhill River
- E Create grid of walkable streets
- F Improve frontage roads for safer walking and biking
- G Integrate new Evergreen campus development with architectural language of existing buildings and site landscape features, preserve views of oak forest
- H Consider aviation-themed gateway feature here
- I New commercial development should be designed as a gateway



INDUSTRIAL CAMPUS

This concept is most similar to existing zoning south of Three Mile Lane. With a large industrial user, this concept is likely to result in the largest building square footage. There are many contemporary examples of light industrial development that integrate well with other land uses. Agricultural building forms could relate well with the existing character of the area. An old grain elevator building is a prominent feature at the west end of this area and inspired the design for the nearby Jackson Family Winery and processing center.

A cluster of new medical office space near Norton Lane on both sides of Three Mile Lane, builds off the central attractor of the Medical Center. This could include space for expansion of the Medical Center.

The Cal Portland site is changed to a mixed-use designation, allowing for a mix of commercial and residential development. On the north side of this parcel, protection of the South Yamhill river edge, potentially with public access, is a key urban design goal.

A significant retail center south of Three Mile Lane at Cumulus Avenue could serve as a regional retail attractor and local amenity.

Another commercial node and additional housing are proposed in the East Neighborhood with gateway signage and context appropriate buildings. At CCC, infill commercial uses support an active street presence.

Gateway markers in this concept are located at mixed-use / commercial areas to draw attention to those uses and support their role in creating a gateway to McMinnville.





Wine industry buildings

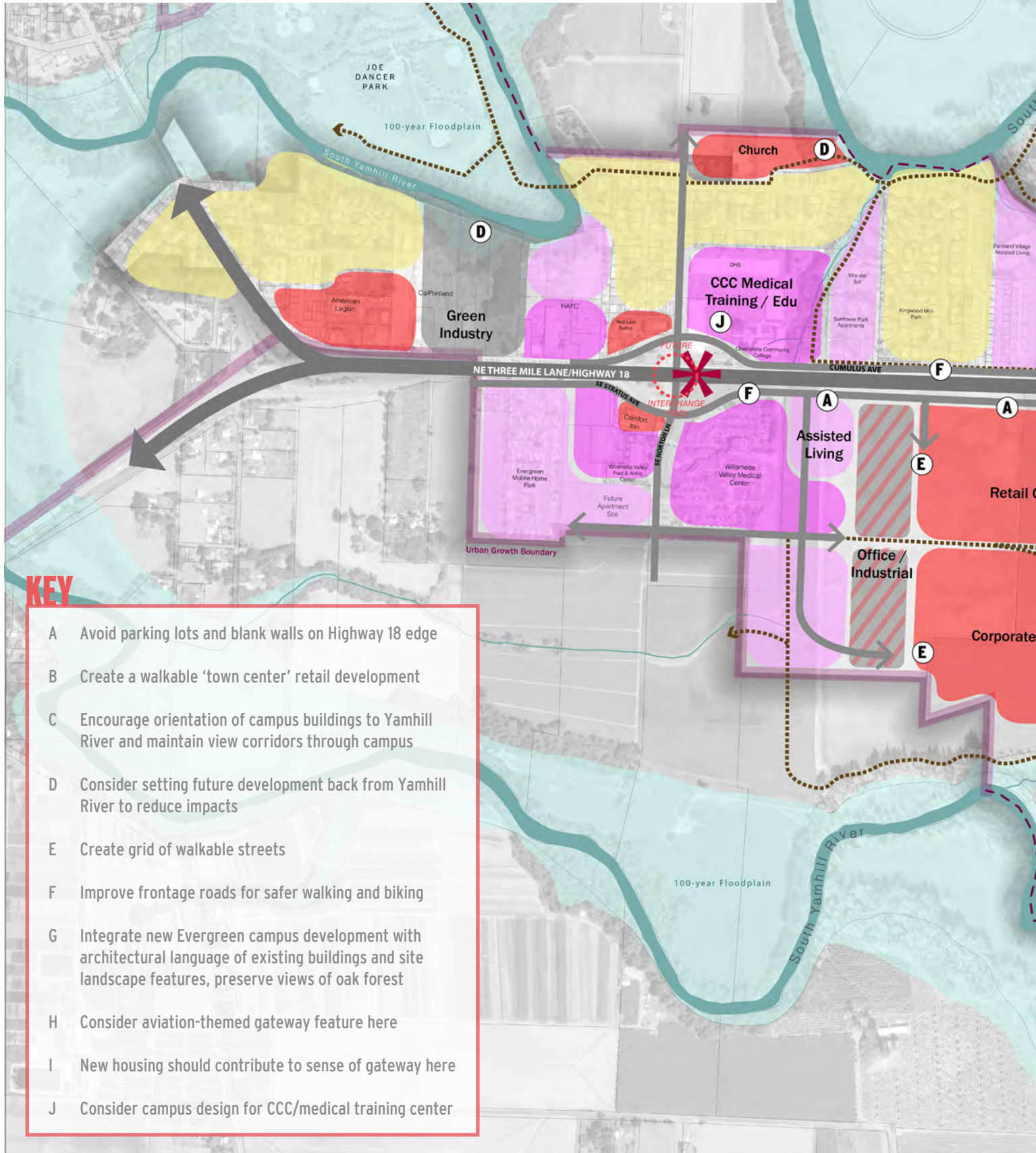


Medical Office



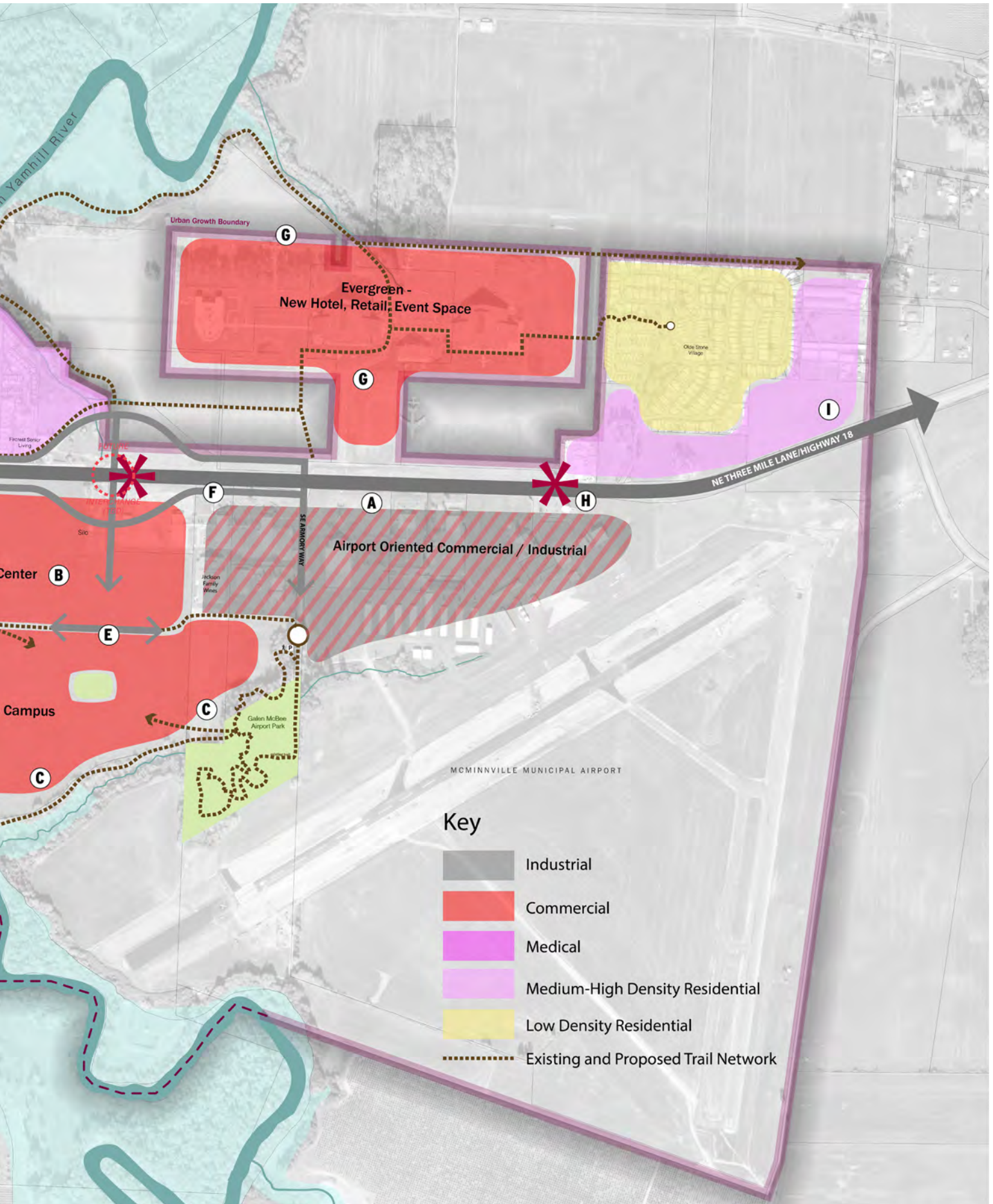
Retail Center

CORPORATE CAMPUS



KEY

- A Avoid parking lots and blank walls on Highway 18 edge
- B Create a walkable 'town center' retail development
- C Encourage orientation of campus buildings to Yamhill River and maintain view corridors through campus
- D Consider setting future development back from Yamhill River to reduce impacts
- E Create grid of walkable streets
- F Improve frontage roads for safer walking and biking
- G Integrate new Evergreen campus development with architectural language of existing buildings and site landscape features, preserve views of oak forest
- H Consider aviation-themed gateway feature here
- I New housing should contribute to sense of gateway here
- J Consider campus design for CCC/medical training center



CORPORATE CAMPUS

A corporate campus and mix of office/industrial south of Three Mile Lane add significant new office space. The large corporate campus could be attractive to a tech company looking for an affordable community with natural amenities and an airport with corporate jet capacity. This area would be a walkable hub of activity and could drive demand for additional local business services. A new park is proposed with trail connections to the Galen McBee Airport Park and the campus could be oriented south to the river, mountain views and the scenic backdrop of agricultural lands.

Evergreen is envisioned to add a new hotel, retail, and event space on undeveloped land in its campus.

New medical office space near Norton Lane and additional assisted living near the Willamette Valley Medical Center are complementary uses which benefit from co-location. Chemeketa Community College's focus on health and medical-related education is also strengthened with complementary uses, including potential out-patient clinics with training for students.

A significant retail center south of Three Mile Lane at Cumulus Avenue could serve as a regional retail attractor and local amenity.

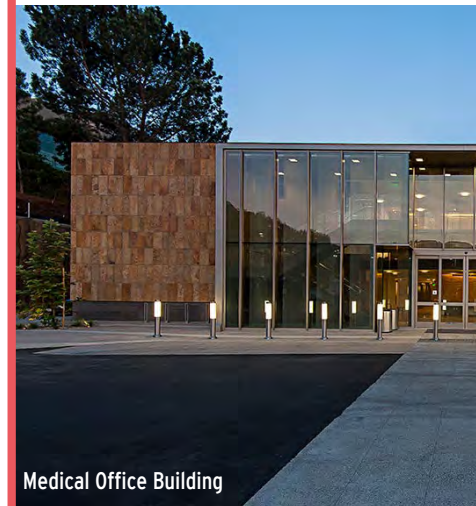
Cal Portland remains industrial, but transitions to a greener industry that is a better neighbor to residential uses with a green edge to the South Yamhill River.

A mix of new housing is added to the Eastern Neighborhood.

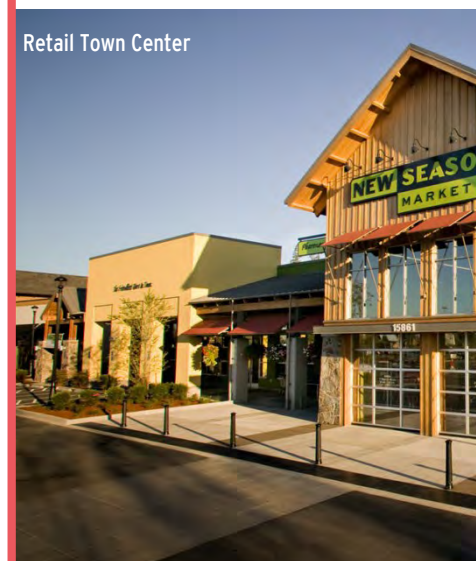
Gateway markers are located at commercial and residential areas to draw attention to those uses and support their role in creating a gateway to McMinnville.



Corporate Campus



Medical Office Building



Retail Town Center



Corporate Campus

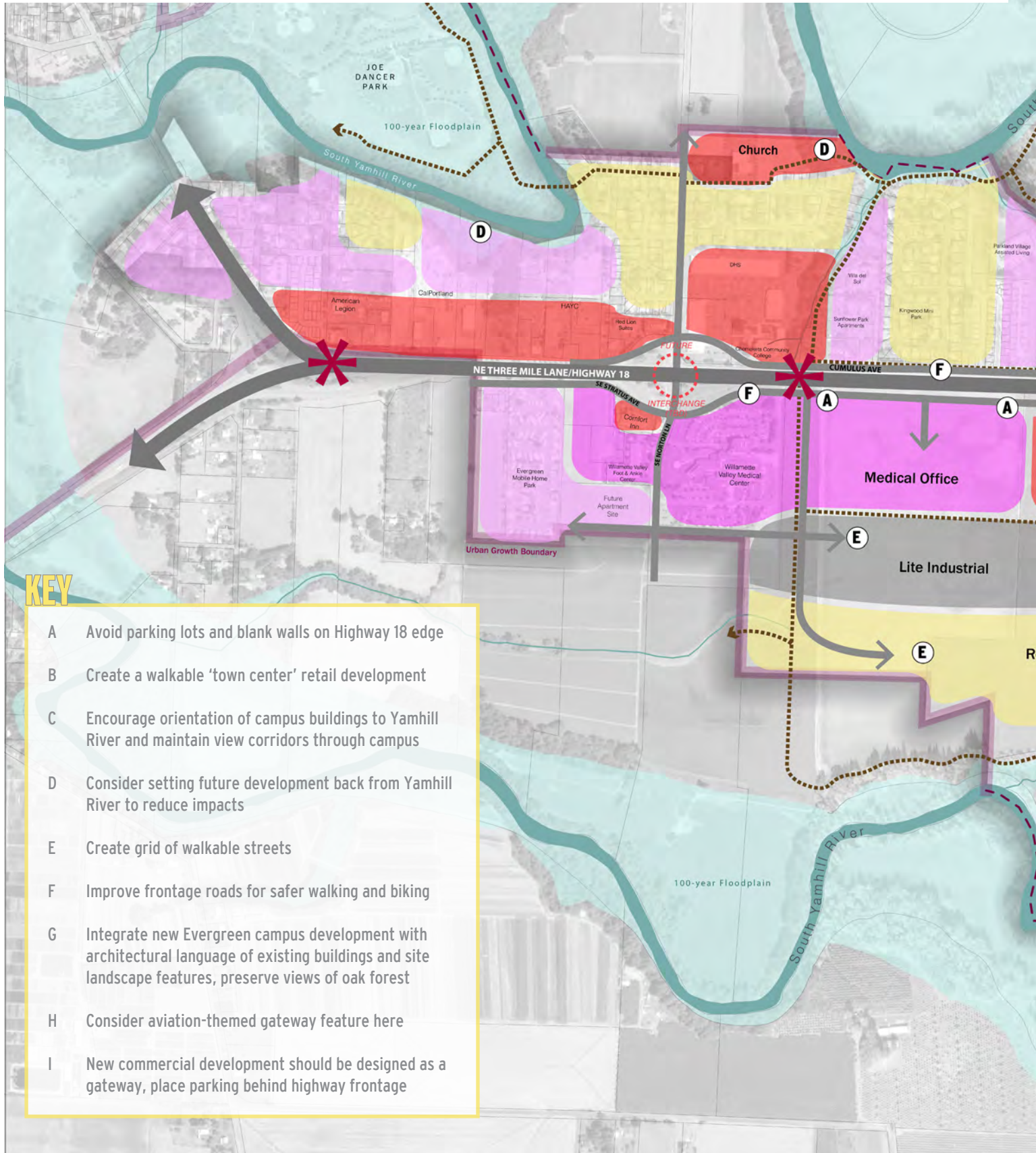


Corporate Campus



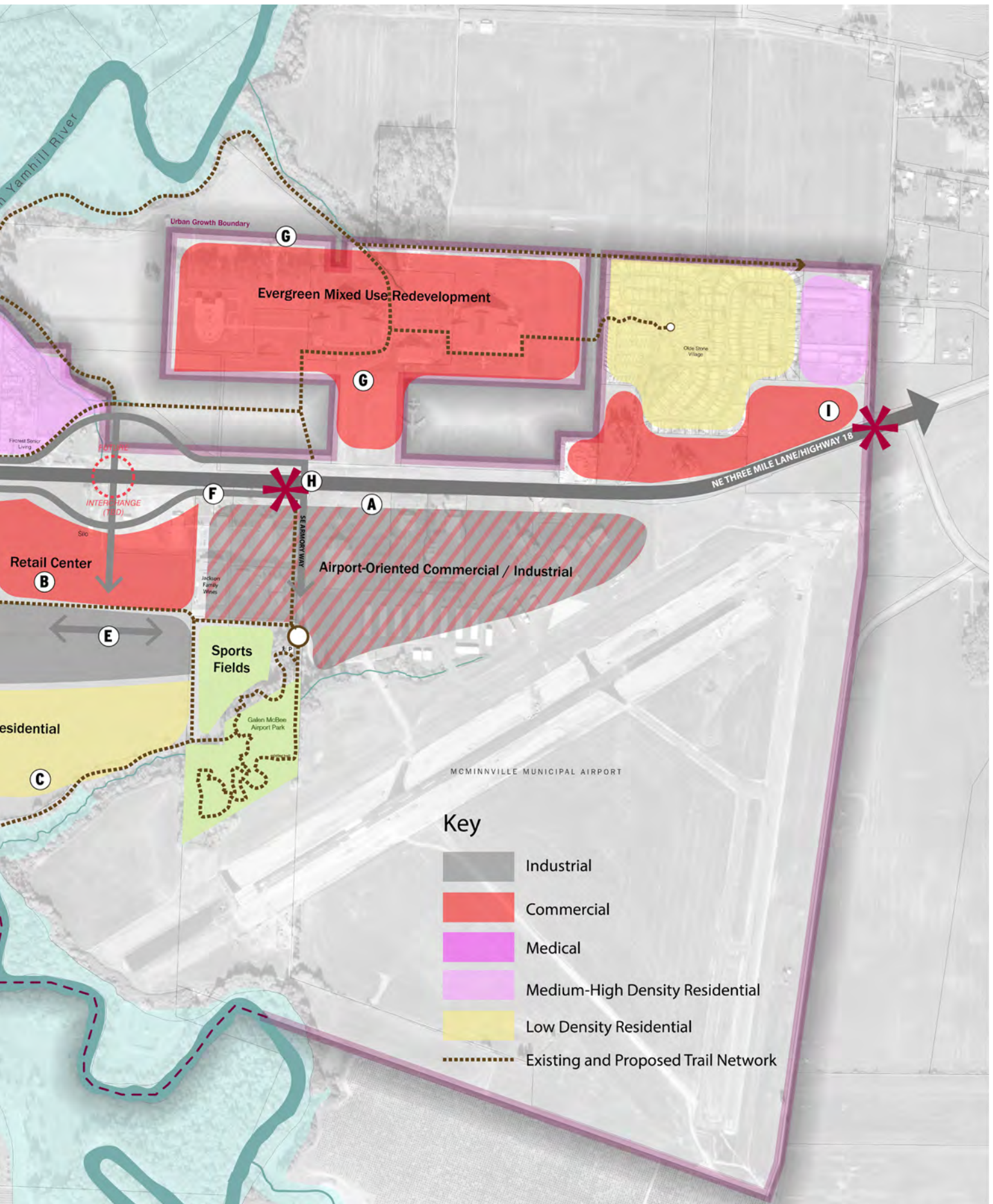
Retail Town Center

S. YAMHILL NEIGHBORHOOD



KEY

- A Avoid parking lots and blank walls on Highway 18 edge
- B Create a walkable 'town center' retail development
- C Encourage orientation of campus buildings to Yamhill River and maintain view corridors through campus
- D Consider setting future development back from Yamhill River to reduce impacts
- E Create grid of walkable streets
- F Improve frontage roads for safer walking and biking
- G Integrate new Evergreen campus development with architectural language of existing buildings and site landscape features, preserve views of oak forest
- H Consider aviation-themed gateway feature here
- I New commercial development should be designed as a gateway, place parking behind highway frontage



S. YAMHILL NEIGHBORHOOD

Providing a range of housing types and densities can help address the City's housing needs. New residences are paired with a greater array of amenities such as parks, trails, and services. This concept includes an expanded Airport Park to serve new residents in the study area, with new trail connections west to new residential development. Design standards could promote site-specific landscape and building forms, including potential 'agrihoods' with integrated community gardens.

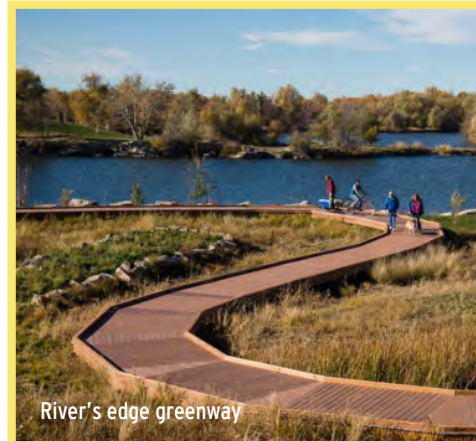
This concept roughly doubles the area for medical office space and potentially new hospital facilities near the Willamette Valley Medical Center south of Three Mile Lane.

A mixed-use redevelopment of the Evergreen Tourism Site includes a mix of residential uses like multifamily buildings or townhomes, office uses, and retail.

The Cal Portland site is redeveloped with commercial frontage on Cumulus Ave and residential uses to the north along the Yamhill River, matching the overall pattern of the rest of the neighborhood north of Three Mile Lane.

A light industrial area south of Three Mile Lane could include uses that minimize noise, traffic and night-time activity like warehousing, food and beverage, or light manufacturing. The southern edge should include a landscape buffer and link to the residential areas.

Gateway markers in this concept are located at the entrances to new recreation trails and serve as signals of entry to vehicles and to mark the pedestrian trail network.



River's edge greenway



Agrihood



Cottages



Commercial Town Center



Small-scale light industrial



Agrifood



Townhouses



Affordable multi-family

GATEWAYS

Three Mile Lane will serve as a figurative gateway to McMinnville, and future design of Highway 18 improvements should consider opportunities for corridor design that respects the area's agricultural heritage and landscape character. There will also be opportunities for specific gateway features that physically mark this entrance to McMinnville. The images below present some design considerations for these features.



Large landscape design gestures, visible from fast-moving vehicles (and the air)



A modest-height, scrolling sculpture, perhaps with backlighting at night



A large-scale public art piece, perhaps dramatically lit at night

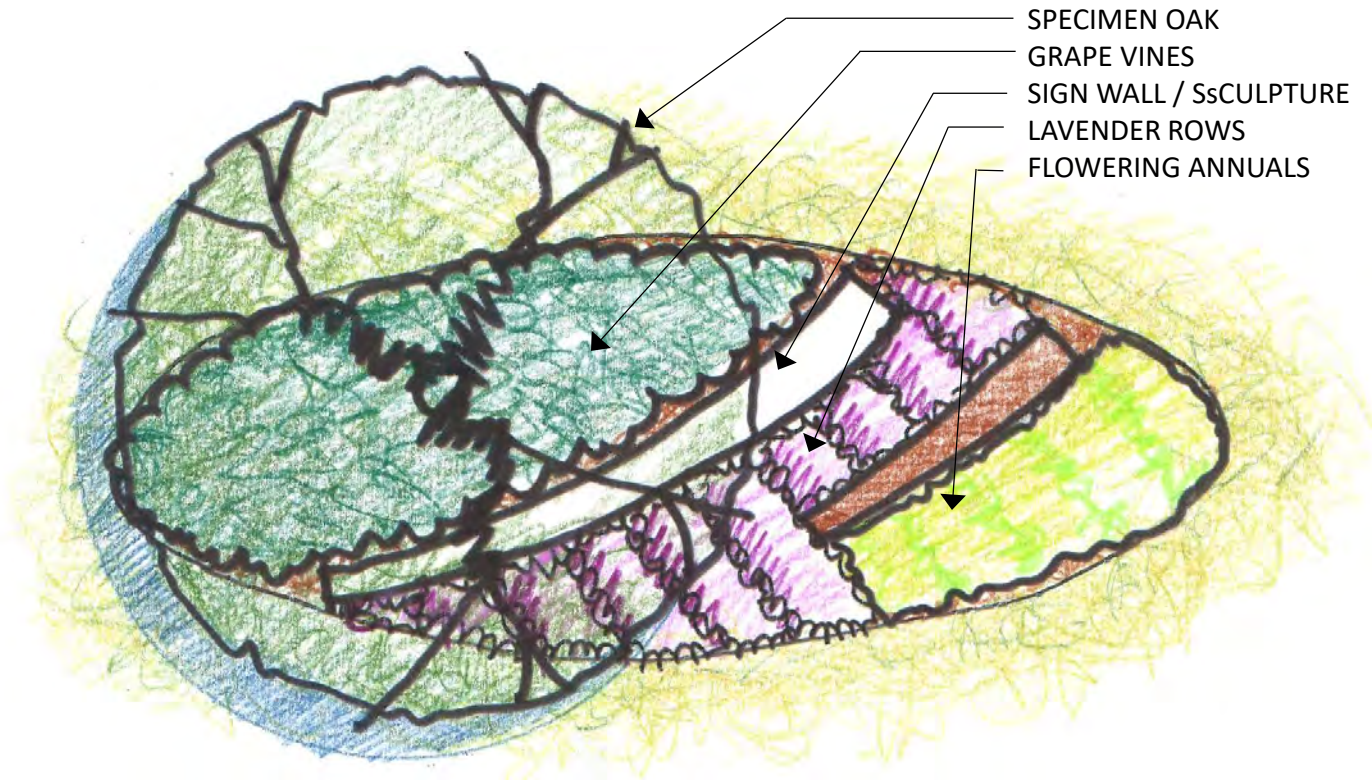


'Super-graphic' lettering on overpasses

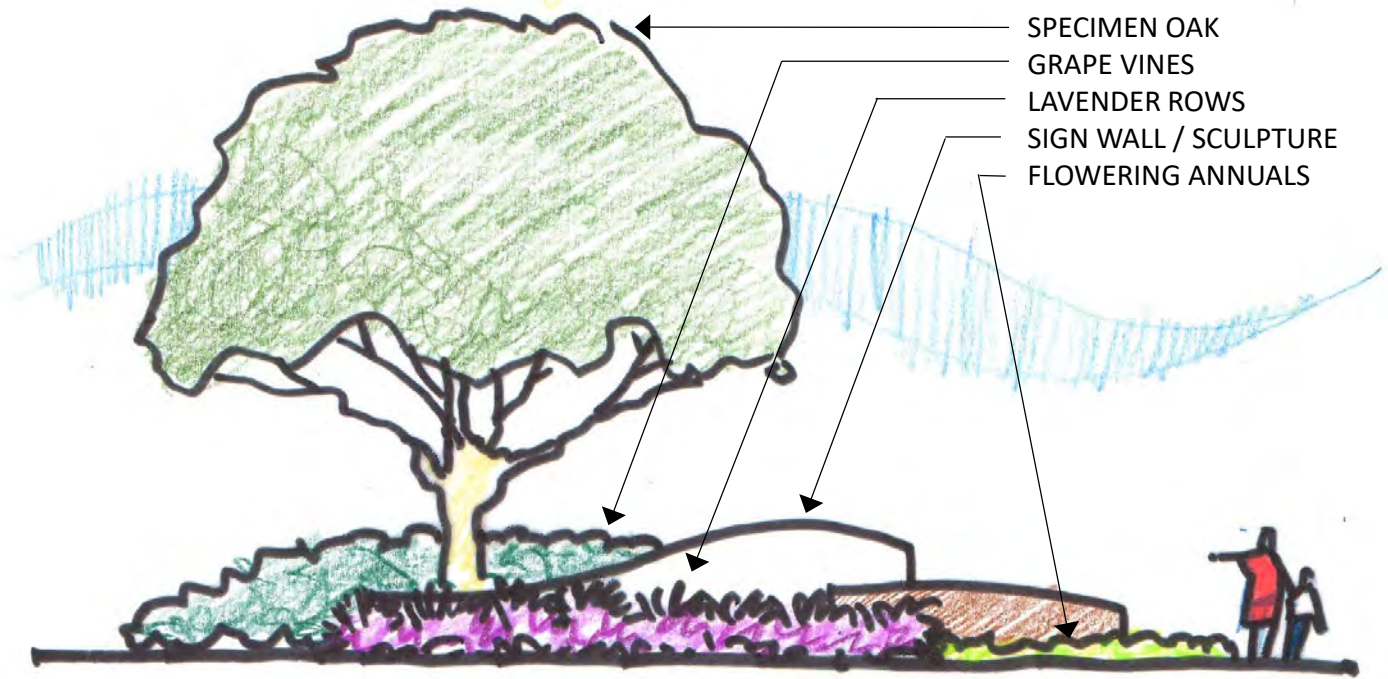


Vertical markers can be effective gateways and wayfinding features

DRAFT



PLAN VIEW



ELEVATION VIEW

CONCEPTUAL GATEWAY FEATURE SKETCH

COMPLETE STREETS DESIGN

The following table summarizes the street standards proposed in McMinnville’s 2010 TSP, with potential adjustments noted to enhance cyclist and pedestrian comfort.

	Major Collector Existing Standards	Notes	Local Residential Existing Standards	Notes
Right-of-Way	74'	<i>Increase to 80'</i>	50'	<i>Increase to 58'</i>
Speed	25-30 mph		15-25 mph	
Maximum Average Daily Traffic (ADT)	16,000		1,200	
Adjacent Land Use Intensity	Medium		Low	
Sidewalks	5' residential 10-12' commercial	6'	5'	<i>Increase to 6'</i>
Planter Strips	6' residential N/A commercial	8'	5'	<i>Increase to 6'</i>
Curb-to-Curb Street Width	44'	<i>Suggest 50'</i>	28'	
On-Street Parking Two Sides	N/A	<i>Possible in urban/ town center area</i>	yes	<i>Switch to one side parking if travelway too narrow...see below</i>
Bike Facility	2 lanes (5')	<i>Change to 8' buffered bike lanes (or cycle tracks)</i>	Shared Lane	<i>OK, with sharrow markings</i>
Median / Center Turn Lane	12'	<i>Ensure canopy trees planted</i>	None	
Travel Lane Width	2 Lanes (11')		See street width	<i>With on-street parking on both sides, the resulting travelway will be 14', two-way, which is narrow.</i>



Buffered Bike Lane



Cycle Track



PROPOSED 3ML MAJOR COLLECTOR STREET CROSS-SECTION



PROPOSED 3ML LOCAL RESIDENTIAL STREET CROSS-SECTION





Preferred Alternative: Land Use and Design Analysis

McMinnville Three Mile Lane Area Plan

DATE March 23, 2021

TO Heather Richards and Jamie Fleckenstein, City of McMinnville

FROM Darci Rudzinski and Andrew Parish, Angelo Planning Group
Ken Pirie, Walker Macy
Sam Brookham and Chris Zahas Leland Consulting Group

CC Michael Duncan, ODOT

INTRODUCTION

Background and Purpose

The goal of the McMinnville Three Mile Lane Area Plan planning project is to create a long-range, 20-year+ plan guiding future growth in the eastern-most area of the City. The purpose of this memorandum is to describe and evaluate the Preferred Alternative for the McMinnville Three Mile Lane Area Plan. The alternative is an outcome of a visioning and refinement process conducted with stakeholders, two advisory committees, and members of the public as described in the Process section.

This memorandum is organized as follows:

1. A brief overview of the process and context of the Three Mile Lane Area Plan project.
2. A detailed description of the Preferred Alternative along with illustrative graphics and precedent photographs.
3. An evaluation of the preferred alternative – how it meets the project’s goals and objectives and how the key features of the preferred alternative can be implemented.
4. A description of the next steps in developing the Three Mile Lane Area Plan.

Members of the project’s Technical Advisory Committee (TAC) and Citizens Advisory Committee (CAC) will be asked to review this memorandum, provide suggested modifications to the Preferred Alternative, and provide direction for implementation. The material contained herein will be adapted for a public event, tentatively scheduled for April 2021.

Process

The Preferred Alternative reflects community comments, the work of the project's advisory committees, and collaborative efforts between City staff and the consultant team. It is informed by a series of technical memoranda that are available on the project website, www.threemilelane.com.

Goals, Objectives, and Scoring Criteria.

An aspirational vision statement, community goals and objectives, and potential criteria to evaluate land use and transportation options for the Three Mile Lane area were developed early in the project. They were created to articulate the Three Mile Lane Area Plan's desired outcomes and help in the evaluation of options for the area. These materials were discussed in project advisory committee meetings and the subject of an online survey and a public open house.

Three Mile Lane Area Plan: Vision Statement and Project Goals

Project Vision Statement: The Three Mile Lane District is a vibrant community that serves as the gateway to Downtown McMinnville and Oregon Wine Country. Employment opportunities, attractive housing options, and tourist destinations characterize the area. Residents and workers enjoy safe and efficient options to travel to Downtown McMinnville and benefit from close proximity to a variety of goods and services, all easily reached by motorist, bicyclist, pedestrian, and transit rider alike. The connection to McMinnville's rich history and the surrounding landscape is reflected in urban design elements throughout the area, highlighting the uniqueness of this special place.

Goal 1: Support and enhance the district's economic vitality and marketability

Goal 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.

Goal 3: Enhance multi-modal connections throughout the district.

Goal 4: Create an aesthetically pleasing gateway to the City of McMinnville.

Based on this vision statement and project goals, the project team developed qualitative and quantitative criteria to evaluate land use and transportation alternatives. These will be discussed in the Evaluation section of this memorandum.

Alternatives Evaluation

Three alternative concepts were created to provide three distinct approaches for the buildout of new land uses, local street networks, and open space amenities. These land use concepts were

developed with input from the community and the project advisory committees, and through in-depth discussions between City staff and the consultant team. The purpose of this evaluation was to identify benefits and drawbacks, rather than to simply pick the highest-scoring concept, and incorporate the best-performing elements into the Preferred Land Use Alternative.

The three land use concepts are described generally below.

Concept 1: Industrial Campus. This concept is most similar to existing zoning south of Three Mile Lane. It allows for a large industrial user, potentially engaged in manufacturing or warehousing, in close proximity to retail services, Three Mile Lane, and other supportive or ancillary uses to the primary industrial employment use.

Concept 2: Corporate Campus. The most significant feature of this concept is a sizable commercially-zoned “corporate campus” and a mix of office/industrial uses south of Three Mile Lane, which would add a significant amount of new office space.

Concept 3: South Yamhill Neighborhood. Concept 3 includes residential land in the southern portion of the study area. Along with a greater number of housing units comes a greater need for amenities such as parks, trails, and services to serve the population.

These land use alternatives were complemented by two alternative designs for Three Mile Lane/Highway 18. The preferred facility option will be informed by additional transportation analysis and modeling and will be the focus of a separate memorandum.

Refinement of the Preferred Alternative

These three concepts were discussed and critiqued by City staff, the project’s TAC and CAC, and the broader public at a July 11, 2019 Town Hall meeting. Feedback received from these groups, particularly the CAC, led to the creation of the Preferred Alternative, described in detail in the next section. This feedback included:

- Support for a Retail Center and Corporate Campus for land south of Highway 18 (elements of Concept 2).
- Support for a mixed-use designation including residential uses at the CalPortland site (elements of Concept 1).
- Concern about the appropriateness of community-scale park uses and new residential uses in the eastern part of the study area due to their proximity to the McMinnville Municipal Airport.
- The need for road connections and public open space as part of the Corporate Campus concept.
- Concern with changing land use designations for developed residential areas.

Great Neighborhood Principles

In April 2019, the City of McMinnville adopted the Great Neighborhood Principles into the City’s Comprehensive Plan. Their purpose is to guide the land use patterns, design, and development of the places that McMinnville citizens live, work, and play. These 13 principles are listed in Figure 1, with additional details that suggest how these principles can be expressed in a site and context-specific way for the unique setting of the Three Mile Lane area.

Figure 1. Great Neighborhood Principles: Design Elements that express “McMinnville-ness”

1. Natural Feature Preservation

- Strive to protect tree groves
- Strive to protect individual trees
- Protect riparian corridors and adjacent native landscape



2. Scenic Views

- Provide and protect views to rolling hills and volcanoes
- Provide visual and physical access to North Yamhill River
- Orient streets and open spaces to views



3. Parks and Open Spaces

- Connect to Galen McBee Airport Park
- Create new gathering spaces that incorporate natural areas and views
- Plant landscapes that incorporate natives and exhibit seasonal variation



4. Pedestrian Friendly

- Provide a network of sidewalks and trails to connect people to key locations
- Incorporate shade streets with mature tree canopy

5. Bike Friendly

- Plan safe routes for residents and touring cyclists

6. Connected Streets

- Connect to existing street grid in the Three Mile Lane area



7. Accessibility

- Design new development for ease of use by all ages and abilities

8. *Human Scale Design*

- Respect typical scale of commercial uses in McMinnville
- Design to reflect the micro-climate—outdoor life, porches, balconies
- Promote inclusion and interaction within the right-of-way



9. *Mix of Activities*

- Encourage mixed-use development where feasible



10. *Urban-Rural Interface*

- Reflect patterns of wine industry—eg, rows of vines, southern orientation, shelter belts of trees
- Consider adjacency to agricultural fields and respect this heritage through careful transitions
- Design simple roof forms (industrial and agricultural). Height and distinctive forms of silos can be inspiration
- Consider functional site planning of vineyard and farm complexes as conceptual model for new development



11. *Housing for Diverse Incomes and Generations*

- Allow for a mix of future housing forms and types, respecting the current character of Three Mile Lane



12. *Housing Variety*

- Respect existing variety of housing types in Three Mile Lane and ensure diversity of design for future housing



13. *Unique and Integrated Design Elements*

- Ensure visibility from highway; Welcome to McMinnville
- Make functions of sites visible (airplanes, wine-making); continue expression of industry/making where applicable
- Aviation legacy: display large planes; consider sensation of low-flying planes, potential visual impact of sites from the air
- Consider local materials for cladding and building structure (timber, corrugated steel cladding, red brick)
- Use vibrant color

The Preferred Land Use Alternative

Key Features

The Preferred Land Use Alternative is shown in Figure 2. The defining characteristics south of the highway include a large (90-acre) area envisioned as a future retail center, and a large site for a potential corporate “Innovation Campus” to the south of this retail center. To the west, in areas near SE Norton Lane and the Willamette Valley Medical Center, opportunities for office and medical uses are envisioned. North of the highway is a new mixed-use designation is proposed on the current Cal-Portland site.

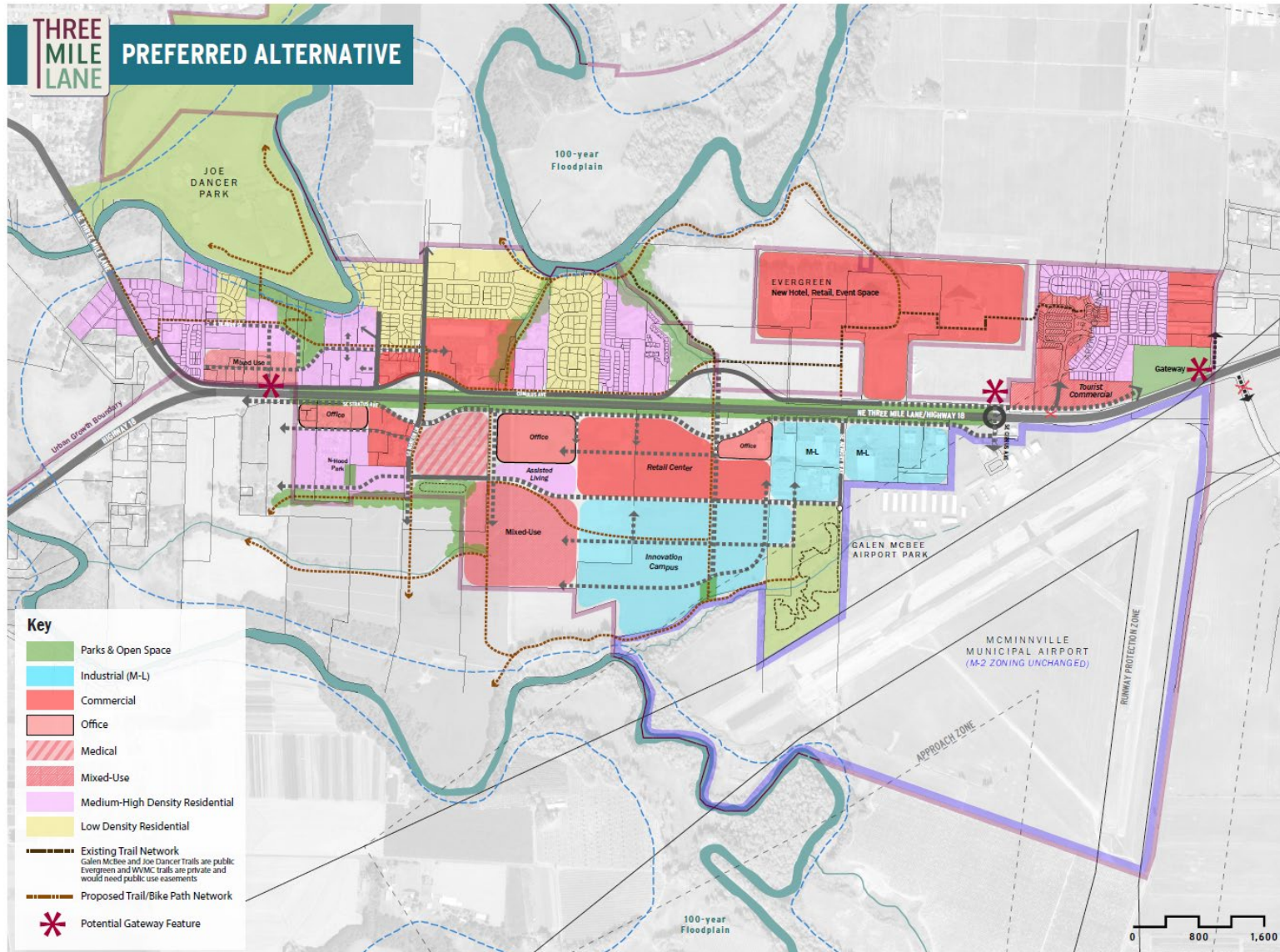
The Preferred Alternative is accompanied by context-sensitive urban design considerations that build on the Great Neighborhood Principles. These include:

- Avoid parking lots and blank walls on Highway 18 edge
- Create a walkable retail development with a “town center” feel (as described in following pages)
- Encourage orientation of industrial campus buildings to Yamhill River and maintain view corridors through campus
- Consider setting future development back from Yamhill River to reduce impacts
- Create grid of walkable streets
- Improve frontage roads for safer walking and biking
- Integrate new Evergreen campus development with architectural language of existing buildings and site landscape features, preserve views of oak forest
- Consider aviation-themed gateway features

Other land uses and features embodied in Figure 2 were discussed by project participants and viewed to be beneficial. Key features include the following:

- **Walkable Retail Development.** A central feature of the Preferred Alternative is a sizable, (over 30-acre) retail center south of Three Mile Lane at Cumulus. The quality of this development’s architecture and streetscape, the connectivity it provides to the street system south of Highway 18, and generally, how well it responds and contributes to McMinnville’s Great Neighborhood Principles will be key to the success of this plan in gaining public approval.
- South of this retail development is a prime location for a mix of corporate office and industrial users in an **Innovation Campus**. Due to its proximity to the Yamhill River, the campus has the potential for “Trail-Oriented Development,” an increasingly popular amenity-driven development trend which offers future users and tenants an appealing orientation to views of natural features.
- West of the retail center and industrial campus site, a **flexible zone of mixed office or industrial** uses is offered, providing potential sites for users drawn by the synergy of being close to larger corporate users, with subcontractors or suppliers in office or light industrial spaces.

Figure 2. Preferred Alternative Map



- **New mixed-use and health care-related uses** have been identified near the existing hospital. Housing, especially senior housing, is a very strong market opportunity. Building forms are expected to be horizontal mixed-use, rather than vertical mixed-use.
- The **Evergreen Tourism Area** is identified as a good location for new hotel, retail, and event space. The site is highly visible and suitable for a clustering of mutually beneficial uses. Travel-related commercial development is envisioned in the northeastern portion of the study area. This area is advantageously situated near the Evergreen complex, making it a good site for additional services and attractions for the traveling public.
- **New residential neighborhoods and continued development of existing neighborhoods** in locations in the western parts of the study area.
- **A cohesive trails system** that ties together major amenities and neighborhoods, with safe crossings of Highway 18 and a potential connection to Joe Dancer Park.

Opportunity Sites

The Preferred Alternative features some distinct areas where change is expected to occur over time. North of Three Mile Lane, the most notable change is the mixed-use designation in the northwest. South of the highway, land use designations that are distinctly different than what exists today include Medical commercial, office, and residential designations near the Willamette Valley Medical Center and the area of Commercial between the hospital and the McMinnville Municipal Airport. Specific features and design considerations for the Three Mile Lane's diverse areas are discussed in this section.

Mixed-use Area (CalPortland Site)

The Three Mile Lane Area Plan envisions continued growth and development in the northwest of the study area between Cumulus Ave and the Yamhill River. Additional households in the Three Mile Lane area will require and support local services, as well as the improved transportation connectivity envisioned with the Three Mile Lane Area Plan that will provide alternatives to Highway-18 for local trips. Existing residential neighborhoods are anticipated to see gradual infill and redevelopment in this area.

Locally serving retail and services have been a major discussion item during this planning process. As the area continues to evolve, providing more opportunities for a mix of uses, employment, and tourism, the existing industrial site on NE Cumulus Avenue may prove to be a more a lucrative site for something other than a ready-mix concrete plant. Allowing for a variety of commercial and residential uses in this area can provide additional housing, locally serving retail and other amenities, and enhanced multi-modal transportation connectivity. This area is well-suited for mixed-use development because it is large enough to accommodate and separate several uses in a way that responds to different context conditions. The site is also mostly flat with potential for good connections to the east and west.

This opportunity site extends between Highway 18 and a steep bluff overlooking the North Yamhill River, two adjacencies which will shape its eventual development. Most of McMinnville's Great Neighborhood Principles can be honored through future site master planning. This infill development can protect natural areas and views, connect to parks and open spaces, provide a

connected, bike and pedestrian-friendly neighborhood, and encourage mixed-use development with diverse housing types and unique, high-quality design. Retail or office uses are better suited to the more visible and accessible southern half of the site. Residential uses are best suited to the northern half, further away from the freeway, with views to the river and Joe Dancer Park.

KEY URBAN DESIGN ELEMENTS:

- Local street grid. Local streets can be logically extended through the site from the west (NE Atlantic) and the east (NE Dunn Place), creating access to the commercial and residential halves of the site, while a new central 'Main Street' can be extended north from NE Cumulus Avenue, bisecting the site and creating two crossroads intersections. The proposed street extending east-west across the northern half of the site follows the top of the bluff and should be designed as a well-landscaped parkway, with an adjacent multi-use trail which will eventually extend throughout the Three Mile Lane study area as a safe parallel route to Hwy 18.
- Building orientation. New buildings should be located to form an urban frontage, with no setbacks, at the intersections of local streets.
- Building and site design. Pedestrian-scaled ground floors, prominent entries, and canopies over sidewalks with street trees, on-street parking, and safe crossings. Surface parking will be located behind these frontages, separated from adjacent uses by well-landscaped green buffers.
- Natural features. Where the Main Street meets the bluff-top street, a public overlook can provide views to Joe Dancer Park and perhaps even a trailhead for a nature trail switch-backing down the bluff to a riverside trail system and a potential footbridge over the river connecting to the park and beyond to downtown.

Tourist Commercial

The Evergreen complex continues to draw visitors to McMinnville who support other local businesses in the Three Mile Lane area and beyond. The Preferred Alternative foresees the continuation and intensification of tourism-related uses as allowed by existing zoning designations. East of Evergreen, land is currently zoned for commercial uses along the highway and has the possibility of hosting more tourism- and travel-related commercial uses in the vicinity of the Aviation & Space Museum and waterpark. The Preferred Alternative envisions activities and uses related to visitors and the traveling public that could boost tourism and be mutually beneficial to existing attractions. A cluster of these uses in the northeast part of the study area could have a synergistic effect, strengthening McMinnville's and the region's reputation as a destination

KEY URBAN DESIGN ELEMENTS:

- Connectivity to the Evergreen complex. Perhaps the most important design element of this visitor-oriented area is connectivity to exiting Evergreen tourist uses. Providing a safe walking and biking connection parallel to Highway 18 would help integrate future development with the Evergreen attractions, which will continue to attract significant amounts of visitors.
- "Gateway" location. In addition, with a prominent location on the east entrance to McMinnville, this development opportunity area should be required to meet the City's Great Neighborhood Principles with high-quality design.

Health Care Area

Vacant parcels surrounding the Willamette Valley Medical Center are a significant opportunity for medical offices, housing for people reliant on medical services, and other uses that benefit from a health care cluster. As envisioned in the Preferred Alternative, existing industrial and high-density residential land and uses fronting the highway and in close proximity to the Medical Center could, over time, develop with housing – including assisted living and long-term care facilities - office uses, and services related to the hospital.

KEY URBAN DESIGN ELEMENTS

- Transitions between health care facilities and surrounding residential areas. Health care facilities are often active around the clock with bright lighting and they generate significant vehicle traffic. They also require a lot of delivery traffic and, in the case of a major medical center, helicopter use. Buffering between uses should be considered, particularly senior housing or market-rate apartments. Assisted living or nursing care facilities, however, would benefit from close proximity to the hospital.
- Transitions between health care facilities and other commercial uses. The scale and orientation of existing uses, as related to future uses should be considered. For example, while Senior Housing might benefit from a location within walking distance of a retail center, there should be careful site planning to ensure the housing isn't directly adjacent to loading or parking facilities. It may be most feasible to place health-care related housing with an orientation south towards views and the river.
- Walkability between uses. Convenient, safe connections between a variety of uses in this area will be important to current and future users.
- Visual quality of buildings facing Highway 18. New development should avoid placing loading docks or creating blank walls visible from passing vehicles.

Retail Center/Innovation Campus

A large area of currently vacant or farmed land stretching from the highway south to the Yamhill River provides a unique opportunity for future development. The design envisioned in the Preferred Alternative is the latest iteration in a process that began with a Property Owners' Workshop. This half-day workshop held at City offices included a presentation of existing site conditions, with confirmation from property owners of natural features, parcel ownership, access, and previous uses. A summary of market conditions was presented, with some suggested adjustments from the owners to reflect their individual research. The workshop concluded with a roundtable discussion of opportunities and constraints, including an exercise where prototypical program 'chips' scaled to the sites, were placed in a variety of potential arrangements to inform initial sketches of concept alternatives.

In addition to the focused property owner workshop, the City of McMinnville held a design charrette for the entire corridor study area with the Citizen Advisory Committee on April 8, 2019. Project participants have identified a number of key strengths, including high visibility from Highway 18, many large and/or underutilized parcels, proximity to the airport, concentration of

tourist amenities and medical uses, strong connections to regional assets, and an abundance of natural features. Specific opportunities the participants identified included: pedestrian bridges over the highway could provide needed connections at key points, the creation of special complete street standards to encourage biking and walking, requiring stormwater treatment and extensive street tree plantings on all study area streets, considering shared parking standards and ‘shadow platting’ to encourage future infill on surface lots, and opportunities for new residential at the south edge of the case study site and west of the hospital.

The retail market continues to evolve rapidly in response to the challenges of competing with online retail and market consolidation. One tactic that the retail industry has successfully used to attract and retain shoppers to brick and mortar establishments is the creation of mixed-use “town centers” that offer gathering spaces, walkable streets and more dining options than typical strip suburban developments or enclosed shopping centers. Mixed-use town centers offer a greater diversity of uses that typical retail developments, particularly as it pertains to entertainment and some office uses, with the latter providing critical daytime population for retailers.

Figure 3. Retail Center Precedent: Old Mill District, Bend, Oregon



Regionally-inspired architecture



Walkable Streetscape with Active Ground Floors

A retail center at Cumulus Ave. is a central feature of the Preferred Alternative. The design of this development, the connectivity it provides to the street system south of Highway 18, and how well it contributes to McMinnville’s Great Neighborhood Principles will be key in the success of this plan.

This almost 60-acre parcel is one of the largest regional sites with easy highway access. The site is flat and developable—a unique characteristic for a site of this size, and has a locational advantage being both near to the highway and the McMinnville Municipal Airport. Attachment A provides an example of how this site could develop, implementing design features desired in the Three Mile Lane Area, as well as provides photographic examples of many of the design elements discussed for this area.

Flexibility is key to attracting a corporate Innovation Campus. The City and/or developer would have to be opportunistic and actively market the property and McMinnville as a corporate destination. Early infrastructure investments and construction of housing and commercial amenities within walking distance of the property would help attract a corporate user, as would a clear but flexible vision and development plan for the property.

Figure 4. Retail Center Precedent: Northwest Crossing, Bend, Oregon



The overall goal is for new developments in the Three Mile Lane Area is to echo the features of traditional, older retail districts like downtown McMinnville. Figures 3, 4, and 5 show examples from other Oregon communities, with similar common features that include:

- Walkable, narrow main streets connecting through the center, with parallel or angled on-street parking in front of retail storefronts.
- Public gathering spaces, bordered by dining and entertainment attractions, featuring play areas and flexible space for programmed public events.
- Parking lots, generally located behind buildings, featuring wide pedestrian walkways, integrated stormwater treatment and ample landscaping including shade trees.

- High-quality architecture, sometimes themed in a regionally appropriate way, with buildings placed in prominent locations that contribute to the quality of the pedestrian experience, versus behind large surface parking lots.
- Building edges that create ‘frontage’ on walkable streets or pedestrian walks, with higher-quality materials, generous windows and pedestrian-scale signage in the first 20-30’ of elevation.
- Proximity and connection to a mix of other uses, to encourage walking from residential or office areas to the retail center.
- Generous landscape buffers between the retail center and roadways or parking lots while maintaining maximum visibility for retailers.
- A prominent entry to the site, with signage or a gateway feature.

Figure 5. Retail Center Precedent: Orenco Station, Hillsboro, Oregon



KEY URBAN DESIGN ELEMENTS

- Local identity. Maintaining the local identity through gateway design elements and development opportunities; establishing formal view protection corridors for Mt Hood, Mt Jefferson, and Amity Hills encouraging mixed uses whenever feasible; and mitigating the visual impact of development on the Highway 18 edge.
- Connectivity. Transportation and connectivity have been major themes during the planning process. Connectivity—in terms of internal circulation to parks and recreational features and surrounding neighborhoods—is essential.
- Parks and open space. The community has provided input on parks and open space opportunities, identifying the following: prioritizing connections to existing trails and open space (such as connections into Joe Dancer Park), creating a public greenway along South

Yamhill River with trail and connections to the study area and McBee Park, and increasing open space opportunities in the study area adjacent to residential uses.

EVALUATION

The Preferred Alternative provides a framework for potential future land use, transportation, and design elements in the Three Mile Lane area. This section evaluates the merits of the alternative and highlights the changes it represents, as compared to existing land use and development requirements. The next sections examine how the alternative meets the expressed goals and objectives for the area, the changes in land use it suggests, and how desired design elements may be achieved. Answers to questions embedded under these topic areas will lead to recommended actions that will help the City realize the vision of the Preferred Alternative over time.

Meeting Project Goals

The land use concept is intended to meet the goals for the area, included earlier in this memorandum, and help the City realize specific objectives associated with each of these goals. Earlier in the planning process evaluation criteria were suggested to help assess how well alternatives meet community goals and objectives.¹ The evaluation table included in this section employs these criteria once again to show how the Preferred Alternative can help achieve the City’s goals. The table includes specific objectives related to individual project goals and indicates how elements of the land use concept perform.

Table 1. Project Goals and the Preferred Land Use Alternative

Evaluation Criteria	Preferred Land Use Alternative Findings
<i>Goal 1: Support and enhance the district’s economic vitality and marketability</i>	
Amount and Type of Employment Land	A significant amount of commercial land is envisioned south of Three Mile Lane, refined to suit desired characteristics of a retail “town center.” A corporate industrial campus is envisioned between the commercial area and the river. There is also an area identified for health-care related uses near the medical center and continued industrial/office opportunities near the McMinnville Municipal Airport.
Opportunities for Additional Goods and Services in the Area	The retail center, a mixed-use site, and the Evergreen complex and nearby Tourist Commercial area provide the opportunity for goods and services to serve locals and visitors alike.
Relationship with and Impacts	Land designated for employment uses within close proximity to

¹ See Evaluation of Land Use Concepts Section in the *Land Use and Transportation Facility Options and Evaluation* memorandum, June 5, 2019.

Evaluation Criteria	Preferred Land Use Alternative Findings
To the McMinnville Municipal Airport	the airport will not change; new opportunities for a neighborhood-serving commercial center and industrial campus with good connection to the airport.
Compatibility of uses adjacent to airport	The proposed commercial designation in the northeastern part of the study area and connections to the park and river have been refined from previous alternatives to better support the airport and its planned expansion.
Support for existing and new tourism opportunities	Significant commercial opportunities are identified throughout the district. Tourism-focused development of the Evergreen site and the “Tourist Commercial” area in the northeastern part of the study area will cater specifically to the travelling community.
<i>Goal 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.</i>	
McMinnville Great Neighborhood Principles	New residential areas are located in the western portion of the study area to create a greater concentration of activity, support new mixed-use development, and increase the likelihood of success for neighborhood-serving commercial. New roadway and trail connections will better connect the neighborhoods of Three Mile Lane to surrounding amenities and services. <i>Also, see Figure 1 and Table 7.</i>
Residential uses, mix, and location	Residential uses are located in the western portion of the study area. The CalPortland site has the opportunity for mixed residential and employment uses, and areas south of Highway 18 may be suitable for senior housing due to the proximity to the medical center.
Transit-supportive land uses	Major new retail, corporate industrial campus, and tourism areas, as well as higher-density housing, can help support transit in the area. The reconnection of Cumulus through the Chemeketa Community College site will be important for improving transit access.
<i>Goal 3: Enhance multi-modal connections throughout the district</i>	
Impacts to OR 18 as a key intercity/freight route.	Key trail and local roadway connections are shown in Figure 2. <i>Specific impacts to OR 18 will be evaluated as part of more detailed analysis for the preferred land use alternative.</i>
Vehicular connectivity through land use types (street density)	
Bicycle/pedestrian connections to key locations outside of the study area	
<i>Goal 4: Create an aesthetically pleasing gateway to the City of McMinnville</i>	

Evaluation Criteria	Preferred Land Use Alternative Findings
<p>Gateway features</p>	<p>The Preferred Alternative has three locations identified for gateway features to signal entry into the City of McMinnville and to help define the Three Mile Lane Area’s identity. Future design of Highway 18 improvements should consider opportunities for corridor design that respects the area’s agricultural heritage and landscape character. There will also be opportunities for specific gateway features that physically mark this entrance to McMinnville.</p>
<p>Building Design</p>	<p>Creating clear requirements for building and site design for the retail center, corporate industrial campus, and other opportunity areas is a priority for this process and will be expanded upon later in this memorandum.</p>
<p>Landscaping and Street Trees</p>	<p>The corporate industrial campus, retail center, and other uses can be compatible with high-quality landscaping. Implementation of these features will be the responsibility of private development and will be required as part of development review. Specific requirements for this area can be included in the City’s development requirements.</p>

Economic Findings

Mixed-use

There is strong demand for additional housing development of all types in McMinnville, and the area shown in the Figure 2 for Mixed-use is an attractive location for significant new construction. Mid-rise development will not only help diversify the housing stock but also improve prospects for neighborhood-scale retail by adding rooftops. The dominant use should be residential, with small opportunities for retail to support the needs of the neighborhood, for reasons detailed below.

The CalPortland site is positioned between downtown and large development sites along Highway 18, both of which are either currently or are planned for significant retail development. Retail on this site, therefore, should focus on serving the needs of the local neighborhood rather than looking to compete with either of these locations. Retail should be limited to the south of the site along Cumulus Ave, which provide around 700 feet of frontage and therefore plenty of development flexibility. The combination of existing market conditions and more competitive retail projects may result in horizontal, rather than vertical mixed-use projects, with housing behind frontage retail. At 11 acres, the site is large enough to accommodate high-quality, horizontal mixed-use product.

While Cumulus, the frontage road, provides good access and connectivity to the surrounding neighborhoods, other nearby locations, such as Chemeketa Community College and uses on college-owned property, have more direct access and better visibility to and from the highway for retail. Existing retail vacancies are therefore more likely to fill before there is demand for new development on the CalPortland site.

Parking will drive the scale and type of development on the CalPortland site. High minimum parking requirements for both residential and retail uses are likely to drive a low-density development type not necessarily in keeping with the City's vision for the area. While the market is unlikely to support the high costs of structured parking, alternative plans for parking should be explored to reduce the burden on the developer but still maintain an adequate parking supply, such as encouraging and codifying shared and on-street parking.

Developing a mixed-use project at greater density may require the City to explore incentives or partnerships that would bridge the feasibility gap. With that said, there are opportunities for additional development on adjacent land parcels, so this site could serve as a catalyst project and build market momentum, thereby improving prospects for a denser mixed-use project at a later date. Facilitating coordination efforts between property owners in the area can help.

For residential development, the existing frontage road (Cumulus) currently provides good access and connectivity to the surrounding area, but improving multimodal connectivity to adjacent land is critical to fostering a high-quality, pedestrian-friendly place. The site benefits from proximity to the river, so improving access to this amenity should be prioritized.

For retail, visibility, access, parking, and signage are critical. Enhancing Cumulus as a multimodal thoroughway to downtown and the center to the east would improve retail prospects for the CalPortland site, as well as for retail in general.

Travel Commercial

While the existing aviation-oriented uses in the Evergreen Tourism Area are already a regional attraction, there is a significant opportunity to build a substantial tourism hub which integrates additional compatible uses that leverage the region's strong wine industry and build and refine McMinnville's brand.

Specifically, the development of additional lodging and hospitality-related uses would help this area become a premium destination that continues to attract tourists of many different backgrounds and brings additional revenue into the City. Lodging would also likely add to the area's event space inventory, improving McMinnville's marketability for conferences and other events.

The Three Mile Lane Area plan provides a platform to develop a clear vision and brand for the Evergreen Tourism Area. A vision can provide the development community with the confidence to pursue a particular type of development that is consistent with what the City wants for the area. A land use program for the area could include a phasing plan that is consistent with current and future market conditions and trends.

Health Care

The economic analysis shows that medical uses is a growing retail type nationally. There is a forecasted demand for approximately 529,000 square feet of additional retail development within the market area over the next decade and part of that demand is for medical and professional offices that typically occupy retail spaces such as dentists and small medical clinics. Housing

demand, too, is strong in the area, especially the demand for senior housing given the forecasted growth in senior age groups. Areas in close proximity to Willamette Valley Medical Center provides opportunities for medical related goods, services, office, and housing.

Retail Center

The property owner workshop provided an opportunity to discuss ideas and information about future land uses and development with key property owners. This discussion was founded on information in the market analysis and a broader discussion of visions, criteria, and principles. The market analysis, for example, provides high-level trends and analysis to indicate development opportunity. Meeting with property owners revealed specific details about the sites, project phasing, and realistic goals and visions for development.

With information from the workshop, the project team develop three alternatives (i.e., case study concepts). Each concept included a description of its primary theme or differentiator as well as key aspects related to its interface with existing adjacent uses and potential phasing implications. A high-level economic impact assessment for each alternative provided an estimated summary of the number of jobs created, the increase in the tax base, and other economic impacts that would result due to the area's development.

The property owner workshop and resulting Case Study Report helped identify opportunities for large-scale retail and employment, as well as continuing housing development. The area's existing industrial designation limits the number of uses allowed in the area; changing to a commercial designation provides for a greater degree of flexibility to respond to fluctuations in market dynamics.

McMinnville is poised to capitalize on strong retail demand and its location in the region. The McMinnville retail trade area extend all the way to the Oregon Coast due to the lack of prominent commercial centers between the Willamette Valley and the coast. However, much of this retail market remains untapped, and the Three Mile Lane study area is poised to capture a significant portion of demand with a diverse array of commercial development. Such development would help foster a sense of place, provide amenities for residents and visitors, and have a significantly greater economic impact than a development build-out comprising simply of traditional industrial.

Corporate Industrial Campus

A large, flat, developable site of this scale is unique in the region and should attract interest from regional and national employers. The campus may be a prime location for light or craft industrial that could align with the City's vision for the area and provide secondary tourism benefits if new development includes experiential or retail components.

With that said, the development of a large campus is likely to be a market-driven initiative. Employment growth in the industries of healthcare and education can be expected to drive most of the demand for new office development. Demand for campus-style industrial is likely tied to food product manufacturing or aviation. However, the emergence of a large corporate user is difficult to forecast, and successful recruitment and the timing of development will require coordinated

marketing efforts between the property owner, the City, and local and regional economic development partners.

In fact, development of such a site requires the City to actively market to the development community. Marketing a prospective campus should also involve a compelling story for why McMinnville is an attractive for a corporation to locate. McMinnville's high quality of life, cultural amenities, business incentives, and proximity to the Portland metro region may indeed be sufficient in attracting a larger company. Additionally, target users could include existing companies looking to expand.

This should also be tied to economic development efforts that consider the broader city-wide needs that would come with the addition of a large employer. These needs would include workforce, housing, transit and transportation, and others. For example, a large corporate user would require additional housing to meet growth from employment. Infrastructure investment will also be critical. The City should not necessarily make early investments without knowing the needs of a prospective corporate user, as these infrastructure needs will greatly vary. They should, however, develop a plan that outlines their intent and be prepared to act quickly in order to attract a user.

Existing Regulatory Framework

The following is an overview of existing requirements that govern how land can be used within the Three Mile Lane area and an evaluation of the changes envisioned with the Preferred Alternative. The most pronounced differences between what is allowed today and the Preferred Alternative lie within the opportunity areas; these are the focus of the evaluation.

Existing Requirements

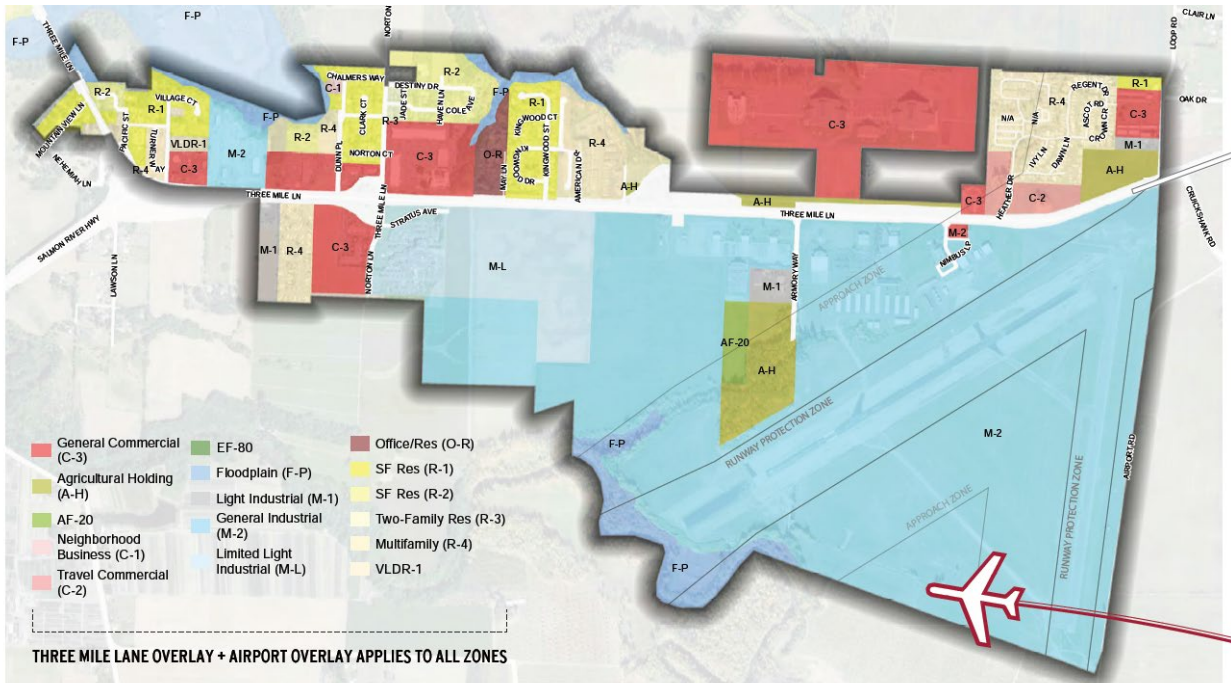
Land use and development in the Three Mile Lane area are currently regulated by the City's Zoning Ordinance and the Three Mile Lane Planned Development Overlay. The Zoning Ordinance governs uses, density, and dimensional requirements for zoning districts in the area, as well as site design and permitting requirements. The Planned Development Overlay contains requirements specific to the Three Mile Lane area that either modify or are in addition to underlying zoning standards.

Zoning

Zoning Ordinance Chapters 17.12 – 17.48 specify the allowed uses and associated regulations for each zoning district in the City. The predominant zoning designation (by acreage) within the study area is Industrial. Most of the land in the study area south of Three Mile Lane is designated General Industrial (M-2) or Limited Light Industrial (M-L). Much of this industrial land is occupied by the McMinnville Municipal Airport. On the north side of Three Mile Lane, there are large areas zoned General Commercial (C-3), including the area that includes the Evergreen Aviation & Space Museum and water park; a small area zoned Travel Commercial (C-2); and a mix of residential zoning. Most of the area zoned for Single-Family Residential (R-1 and R-2) is found in the northwest portion of

the study area. Multiple-Family Residential (R-4) zoning is found in separate areas in the northwest, northeast, and southwest portions of the study area.²

Figure 6. Existing Zoning Designations



Development Standards

In the industrial districts, the M-L zone is largely limited to manufacturing and related uses with limited external impacts, while the M-2 zone allows most industrial uses. In the M-L zone, properties are subject to maximum building heights of 60 feet and minimum setbacks from Three Mile Lane of 120 feet from the centerline. Development in the M-2 zone is not subject to these review requirements. Maximum building height in the M-2 zone is 80 feet and no minimum yard setbacks are required, except adjacent to residential zones.

A wide variety of commercial uses are permitted in the C-3 zone, including commercial recreation facilities, large format retailers, gas stations, and hotels. The maximum height in the C-3 zone is 80 feet and no minimum yard setbacks are required, except adjacent to residential zones. The C-2 zone only covers a small area near the eastern edge of the study area. Permitted uses are largely limited to travel-related uses such as lodging, restaurants, and gas stations. Building height is limited to 45 feet, and the minimum front setback is 30 feet.

² The Airport Overlay Zone (Zoning Ordinance Chapter 17.52) also regulates uses in the Three Mile Lane area. Its intent is to prevent structures or uses that obstruct the safe flight of aircraft in the vicinity of the McMinnville Municipal Airport. Requirements of this overlay are not detailed here, as the Preferred Land Use Alternative assumption is that Airport-related uses will continue to be permitted according to existing City code requirements. The area adjacent to the airport is expected to continue to develop as an airport-oriented commercial and industrial center, reflecting the economic value and potential of this infrastructure.

In the residential zones, density is controlled by minimum lot area per family (or per unit). Within the study area, minimum lot areas are as follows:

- R-1 – 9,000 sf (9,000 sf for two-family corner lots)
- R-2 – 7,000 sf (8,000 sf for two-family corner lots)
- R-3 – 6,000 sf (8,000 sf for two-family corner lots)
- R-4 – 1,500 sf per unit with 2 bedrooms or fewer; 1,750 sf per unit with three bedrooms

The maximum height in the R-4 zone is 60 feet, while the remaining residential zones are limited to 35 feet.

Development within the study area is also subject to floodplain (Chapter 17.48), landscaping (Chapter 17.57), tree (Chapter 17.58), off-street parking (Chapter 17.60), and sign regulations (Chapter 17.62, Planned Development Overlay) requirements.

Three Mile Lane Planned Development Overlay

The 1981 Three Mile Lane Planned Development Overlay outlines several provisions related to the development of properties in the Three Mile Lane area. A 1994 ordinance amending the overlay added a set of detailed provisions related to commercial signage. Provisions include:

- Required 120-foot setback from the centerline of Three Mile Lane
- Access requirements:
 - Minimize access onto Three Mile Lane
 - Provide on-site circulation systems connecting to adjoining properties
 - Provide acceleration-deceleration lanes and left-turn refuges when necessary
 - Provide bikeway connections
- Landscaping and buffering along the highway frontage may be required
- Mixed housing-type residential developments encouraged
- Temporary signage allowed

Development Approval

Development subject to a land use review process within the Three Mile Lane area include the following:

- Plans for proposed uses in the M-L zone. Industrial uses in the M-L zone must be approved by the Planning Commission, after evaluating impacts such as noise, traffic generation, air and water pollution, and appearance.
- Zone changes within the Three Mile Lane Planned Development Overlay. Zone changes in this area are evaluated using Planned Development Overlay standards and procedures and approved by Planning Commission.
- New commercial structures larger than 25,000 square feet of gross floor area. Director approval is required through Large Format Commercial Design Review.

- Signage in areas designated commercial and industrial. Approval by the Three Mile Lane Design Review Committee, after evaluating compatibility and design elements such as color, material, size, form, and relationship to site and building design.

All development within the Three Mile Lane Planned Development Overlay must be approved by the Three Mile Lane Design Review Committee (Ordinance 4572, Section 6(A)).

Preferred Alternative

As described previously, there are particular areas within the Three Mile Lane area that present the greatest opportunities for change. This section compares proposed designations and current zoning for each opportunity area in a series of tables. For each area, there are a series of questions, the answers to which will guide implementation of the Three Mile Lane Area Plan.

As part of plan adoption, the City has an opportunity to modify land uses and requirements either through rezoning or as part of an overlay.

Mixed-use Area (CalPortland)

Table 2. Land Use: Mixed-use Area

Mixed-use Area	
Proposed Designation	Current Zoning
Mixed-use	R-1
Medium-High Density	R-2
	M-2
	C-3

NOTES

- Uses permitted in the City’s Multiple Family Residential (R-4) and General Commercial (C-3) zones generally meet the purpose statement of the Mixed-Use designation.
- The R-4 zone allows single family dwellings (including attached), duplexes, and accessory dwelling units. Building height is limited to sixty feet.
- Uses permitted in the C-3 zone include commercial recreation facilities, large format retailers, gas stations, and hotels. The maximum height in the C-3 zone is 80 feet and there are no minimum yard setbacks required for commercial uses.

QUESTIONS

- Should all residential use types be allowed outright in the Mixed-Use designation?
- Are there commercial use types that are should be restricted in the Mixed-Use designation?
- Should a mix of uses be *required*? If so, should this requirement apply to development proposals over a certain size? Would the requirement apply to only multi-story development?

Tourist Commercial

Table 3. Land Use: Tourist Commercial

Tourist Commercial	
Proposed Designation	Current Zoning
Tourist Commercial	R-4
	C-2
	C-3

NOTES

- The R-4 zone allows single family dwellings (including attached), duplexes, and accessory dwelling units. Building height is limited to sixty feet.
- Uses permitted in the C-3 zone include commercial recreation facilities, large format retailers, gas stations, and hotels. The maximum height in the C-3 zone is 80 feet and there are no minimum yard setbacks required for commercial uses.
- Uses in C-2 Travel Commercial Zone are limited:
 - **Permitted Uses:**
 - Automobile Service Station
 - Gift Shop
 - Lodging
 - RV Park
 - Restaurant
 - Bed and Breakfast
 - Short term rentals
 - **Conditional Uses:**
 - Commercial recreation
 - Repair garage
 - School

QUESTIONS

- Considering the existing uses on the Evergreen site and the land available for development, should the existing C-3 zoning be retained? Are there any use additions or exemptions that should be captured in the plan?
- Given that one of the Preferred Alternative’s focus is to provide more opportunities for tourism-related uses, are C-2 uses appropriate for areas east of the Evergreen complex?

Health Care

Table 4. Land Use: Health Care

Health Care	
Proposed Designation	Current Zoning
Office	R-4
Medium-High Density Residential	C-3
Medical	M-1
Mixed-use	M-L

NOTES

- The R-4 zone allows single family dwellings (including attached), duplexes, and accessory dwelling units. Building height is limited to sixty feet.
- Uses permitted in the C-3 zone include high-density residential and office. Allowed conditional uses include adult day care, or similar use called by a different name or that is a State licensed facility.
- The M-L (Limited Light Industrial) zone is intended to create, preserve, and enhance areas containing manufacturing and related establishments with limited external impact and with an open and attractive setting. Hospitals and medical offices are permitted uses, as is light manufacturing, aerospace industries, warehousing, wholesale distribution, and tasting rooms.
- M-1 (Light Industrial) zone allows all the uses permitted in the M-L zone, plus a wider range of manufacturing, assembly, packaging, or treatment of products from previously prepared or processed materials. Additional permitted uses include warehousing, wholesaling, and limited commercial uses.

QUESTIONS

- Should the overlay restrict commercial uses to those related to medical office and medical services?
- For areas currently zoned for industrial or high-density residential and could not develop/redevelop with all the use types envisions, should the areas be allowed to rezone to C-3, with overlay restrictions?

Retail Center

Table 5. Land Use: Retail Center

Retail Center	
Proposed Designation	Current Zoning
Commercial	M-2

NOTES

- The M-2 General Industrial Zone allows for large and impactful industrial development, including all uses allowed in the M-L and M-1 zones.

- A commercial designation of C-3 would allow a broad range of commercial development. The specific uses, site design, and architectural features envisioned by this planning effort are not required in the code today, and are therefore recommended for inclusion in the Three Mile Lane Overlay Zone.

QUESTIONS

- What level of regulatory control should the City use to implement requirements for the Retail Center? What site design standards should be required? What design elements related to future structures should be included in guidelines or codified as requirements?
- Highway visibility and the style/quality of signage will be important for retail users and for the community as a whole. Are there specific sign requirements/restrictions desired?

Innovation Campus

Table 6. Land Use: Corporate Campus

Corporate Campus	
Proposed Designation	Current Zoning
Industrial (<i>no proposed change</i>)	M-2
	AF-20
	A-H

NOTES

- No change in land use designation is recommended
- Portions of the area are zoned AF-20 and A-H (Agricultural Holding). These are generally associated with Galen McBee Airport Park and not expected to change.

QUESTIONS

- Should the overlay zone require a minimum lot size or other measure to ensure that this space is available specifically for a corporate campus or similar user?
- Design of such a campus will ultimately depend on the needs of the end user. What are the most important elements (e.g., a publicly-accessible park, a connected street grid) that the plan should address or the City should require?

Design Features

Community expectations for the future of the Three Mile Lane Area Plan include ensuring that future development will reflect and respect the unique features of the area and will enhance a neighborhood feel. This section evaluates how the City currently addresses the design features explored in the Preferred Land Use Alternative section through development requirements. Table 7

lists the features, existing requirements, and recommendations on how they might be achieved in the Three Mile Lane area.

Through the development and implementation of the Three Mile Lane Area Plan the City has the opportunity to set land use and transportation policy and create and implement standards and guidelines that will help the community realize the vision for this area.

Table 7. Design Requirement Evaluation

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
1. Natural Feature Preservation		
<ul style="list-style-type: none"> • <i>Strive to protect tree groves</i> • <i>Strive to protect individual trees</i> 	<p>Proposed multi-family, commercial, office and industrial development must be landscaped (§17.57.030). Landscaping plans must show the existing locations of trees over six inches in diameter, their variety, and if they are to remain or be removed (§17.57.060).</p> <p>The removal of individual significant or historic trees or the removal of trees as part of a proposed development subject to site plan, tentative subdivision, or partition review is subject to City approval (§17.58.040).</p>	<p>New policy, adopted as part of 3MLAP. Consider identifying tree groves and tree types to be protected and develop requirements for preservation.</p>
<ul style="list-style-type: none"> • <i>Protect riparian corridors and adjacent native landscape</i> 	<p>Flood Area Zone (§17.48) restrictions.</p> <p>Landscaping required for all development except single-family and two-family residential (§17.57.030).</p>	<p>Confirm riparian corridors are mapped and subject to Chapter 17.48.</p> <p>Require mapping and protection of stream corridors and re-vegetation with native plantings.</p>
2. Scenic Views		
<ul style="list-style-type: none"> • <i>Provide and protect views to rolling hills and volcanoes</i> • <i>Provide visual and physical access to North Yamhill River</i> • <i>Orient streets and open spaces to views</i> 	<p>None.</p>	<p>New policy, adopted as part of 3MLAP.</p> <p>Require viewshed protection as part of Design Review.</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
3. Parks and Open Spaces		
<ul style="list-style-type: none"> • <i>Connect to Galen McBee Airport Park</i> 	None.	<p>Proposed trail connecting to Galen McBee Airport Park loop trails and extending access to the South Yamhill River shown in the preferred alternative; plan adoption will modify transportation system plan.</p> <p>Require connection to proposed trail, trail right-of-way dedication, and trail construction as part of Design Review/development approval.</p>
<ul style="list-style-type: none"> • <i>Create new gathering spaces that incorporate natural areas and views</i> 	None.	New policy, adopted as part of 3MLAP; require as part of Design Review.
<ul style="list-style-type: none"> • <i>Plant native landscapes with seasonal variation</i> 	Proposed multi-family, commercial, office and industrial development must be landscaped (§17.57.030). For industrial, commercial, and parking lot uses landscaping must be 7% of gross area; for multi-family the requirement is 25% of gross area. The Landscape Review Committee approves proposed landscaping; an approval criterion is compatibility with the proposed project and the surrounding and abutting properties.	New policy, adopted as part of 3MLAP. Define approved planting list in plan or in overlay zone.
4. Pedestrian Friendly		
<ul style="list-style-type: none"> • <i>Provide a network of sidewalks and trails to connect people to key locations</i> 	Complete Streets standards require sidewalks (§17.53.101 Streets). Sidewalks must be 10'-12' feet wide in commercial areas to accommodate the Pedestrian zone. Street trees must be placed in tree wells; street trees, furniture and business accesses must meet ADA	<p>Proposed trail system shown in the preferred alternative; plan adoption will modify transportation system plan.</p> <p>Proposed Complete Streets Design increases sidewalk width.</p> <p>Expand pedestrian walkway/connectivity standards to</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
	<p>requirements.</p> <p>Pedestrian ways, 10' or greater in width, may be required to "connect to recreation or public areas such as schools, or to connect to existing or proposed pedestrian ways (§17.53.103 Blocks)."</p> <p>Pedestrian walkway standards apply to Large Format Retail; site design requires connections between buildings and from building entrances to streets (§17.56.050.C.2).</p>	<p>apply to all commercial and office development.</p>
<ul style="list-style-type: none"> • <i>Shade streets with mature tree canopy</i> 	<p>Street Tree Planting (§17.58.080) and Planting Plan (§17.58.100) required for new multi-family development, commercial or industrial development, subdivisions, partitions, or parking lots.</p>	<p>New policy, adopted as part of 3MLAP. Define approved tree list in plan or in overlay zone. Require as part of Design Review.</p>
<p>5. Bike-Friendly</p>		
<ul style="list-style-type: none"> • <i>Plan safe routes for residents and touring cyclists</i> 	<p>Complete Streets standards require bike facilities (§17.53.101 Streets). Minimum bike lane width is 5' on arterial and 4' on collector streets.</p>	<p>Modified Complete Street standards require buffered bike lanes (or cycle tracks) on collector streets and sharrow markings for shared lanes on local residential streets.</p>
<p>6. Connected Streets</p>		
<ul style="list-style-type: none"> • <i>Connect to existing street grid in 3ML</i> 	<p>Street locations must be consistent with adopted comprehensive plan and subdivision standards (§17.53.101 Streets).</p>	<p>Proposed local street connections shown in the preferred alternative; plan adoption will modify transportation system plan.</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
7. Accessibility		
<ul style="list-style-type: none"> • <i>Design new development for ease of use by all ages and abilities</i> 	<p>Complete Streets standards require sidewalks and bike lanes (§17.53.101 Streets). Sidewalks must be 10'-12' feet wide in commercial areas to accommodate the Pedestrian zone. Street trees must be placed in tree wells; street trees, furniture and business accesses must meet ADA requirements.</p>	<p>New policy, adopted as part of 3MLAP. Modified Complete Street standards increase sidewalk and planter strip widths and require buffered bike lanes (or cycle tracks) on collector streets and sharrow markings for shared lanes on local residential streets.</p>
8. Human Scale Design		
<ul style="list-style-type: none"> • <i>Respect typical scale of commercial uses in McMinnville</i> 	<p>Building heights in C-3 zone limited to eighty feet (§17.33.040). No size limits; new commercial structures over 25,000 square feet gross floor area subject to Director's Review/notification. Large Format Retail (Chapter 17.56) requirements address building façade, roof features, and site design (buffering, pedestrian walkways, parking, landscaping), and innovative energy efficient design and construction technologies. Parking spaces shall be provided at no more than 120 percent of the minimum required Large Format Retail site design requirements (§17.56.050) set an off-street parking maximum (no more than 120 percent of the minimum required by Chapter 17.60, Off-Street Parking and Loading).</p>	<p>Requirements for commercial building size and massing. Additional guidelines or standards related to façade treatments. Standards for parking maximums for all uses. Parking lot location requirements for commercial uses.</p>
<ul style="list-style-type: none"> • <i>Design to reflect the micro-climate— outdoor life, porches, balconies</i> 	<p>Large Format Retail pedestrian walkway standards include awning requirements (§17.56.050.C.2.b). Awning are included in Downtown</p>	<p>New policy for development within the overlay. Develop clear and objective design standards for multi-family and</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
	Design Standards and Guidelines (§17.59.070). No residential standards.	mixed-use residential.
<ul style="list-style-type: none"> • <i>Promote inclusion and interaction within the right-of-way</i> 	None.	Requirements for building orientation (set-to, building orientation). Additional guidelines or standards related to façade treatments, including transparency. Provision of on-street parking for ground-floor commercial uses (new requirements allowing on-street spaces to be counted toward parking minimums, new cross-section standards for streets with ground-floor retail).
9. Mix of Activities		
<ul style="list-style-type: none"> • <i>Encourage mixed-use development where feasible</i> 	None.	New policy, adopted as part of 3MLAP.
10. Urban-Rural Interface		
<ul style="list-style-type: none"> • <i>Reflect patterns of wine industry—eg, rows of vines, southern orientation, shelter belts of trees</i> 	None.	New policy, adopted as part of 3MLAP. Examples in Design Booklet.
<ul style="list-style-type: none"> • <i>Consider adjacency to agricultural fields and respect this heritage through careful transitions</i> 	None.	New policy articulating transitions; buffer/perimeter requirements.
<ul style="list-style-type: none"> • <i>Design simple roof forms (industrial and agricultural). Height and distinctive forms of silos can be inspiration</i> 	Large Format Retail development standards require architectural variability in the roof design (§17.56.050.B). Proposed buildings must incorporate two out of three standards: parapets with cornices; overhanging eaves or cornices, and; prominent portions of the roof	Require roof features consistent with Large Format Retail standards for all future development in the 3ML area. Design examples in Design Booklet.

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
	design exhibiting slopes with a plane of between 4/12 (33 degrees) and 6/12 (45 degrees).	
<ul style="list-style-type: none"> • <i>Consider functional site planning of vineyard and farm complexes as conceptual model for new development</i> 	None.	Examples in Design Booklet.
11. Housing for Diverse Incomes and Generations		
<ul style="list-style-type: none"> • <i>Allow for a mix of future housing forms and types, respecting the current character of 3ML</i> 	Existing residential and commercial zoning allows for a variety of housing types.	3MLAP increases the areas available for housing with the change in designation from industrial to Mixed-use use north of Three Mile Lane, and from industrial to residential in the vicinity of the hospital.
12. Housing Variety		
<ul style="list-style-type: none"> • <i>Respect existing variety of housing types in 3ML and ensure diversity of design for future housing</i> 	Housing variety and design not addressed. Site design requirements for Large Format Retail require buffering, (§17.56) Light industrial uses (M-1) must include perimeter treatments to buffer adjacent residential uses.	Guidelines in Design Booklet Buffer/perimeter requirements for Mixed-use, Medical, and Commercial.
13. Unique and Integrated Design Elements		
<ul style="list-style-type: none"> • <i>Ensure visibility from highway; Welcome to McMinnville</i> 	None.	Guidelines in Design Booklet. Requirements for landscape buffering fronting Three Mile Lane. Requirements for façades facing Highway 18, including addressing blank walls and requiring articulation and materials or color variation; design guidelines to encourage a more cohesive visual character along the corridor.

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
<ul style="list-style-type: none"> • <i>Make functions of sites visible (airplanes, wine-making); continue expression of industry/making where applicable</i> 	None.	Examples in Design Booklet.
<ul style="list-style-type: none"> • <i>Aviation legacy: display large planes; consider sensation of low-flying planes, potential visual impact of sites from the air</i> 	None.	Examples in Design Booklet.
<ul style="list-style-type: none"> • <i>Consider local materials for cladding and building structure (timber, corrugated steel cladding, red brick)</i> 	Large Format Retail (Chapter 17.56) requirements address building façade, roof features, and site design (buffering, pedestrian walkways, parking, landscaping), and innovative energy efficient design and construction technologies.	Additional guidelines or standards related to façade treatments. Expand requirements to uses other than commercial, including office, mixed-use, and multi-family.
<ul style="list-style-type: none"> • <i>Use vibrant color</i> 	None.	Additional guidelines or standards related to façade treatments; define acceptable color palate. Require for all new commercial, office, mixed-use, and multi-family.

NEXT STEPS

This memorandum and associated materials will be presented to the Three Mile Lane TAC and CAC at their next meetings. The committees are expected to evaluate elements of the Preferred Alternative and provide additional direction and suggestions for refinement, including:

- Refinement of the attributes that define the Three Mile Lane Area.
- Refinement of the specific attributes desired in the opportunity areas.

- Desired policy, design elements, and code concepts to implement the plan and effectively guide and regulate development within the Three Mile Lane Area.

Following the advisory committee meetings, the project team will bring a revised set of materials to the broader public at Public Event #3, tentatively scheduled for early 2021. The plan concepts of the Preferred Alternative and land use implementation measures will be the focus of this event.

A companion memorandum to this piece (TM 8b) evaluates the transportation impacts of proposed land uses and provides recommendations for the design of Highway 18 through this area. This work is based on a detailed transportation analysis, performed in partnership with the City and Oregon Department of Transportation.

Reflecting revisions informed by public involvement and City review, a final plan document will be created and prepared for adoption. The adoption process will include a public Planning Commission/City Council work session, a Planning Commission hearing, and a City Council hearing. Each of these points provide an opportunity for public participation to review and provide comments on the Three Mile Lane Area Plan.



Walkable Streetscape with Active Ground Floors



Regionally-influenced architecture

PRECEDENT STUDY:
Old Mill District, Bend



- Landscape Buffer
- Parking behind buildings
- Central 'Main Street':
 - Wide sidewalks
 - Street Trees
 - On-street parking
 - Active ground floors
- Public gateway plaza
- Gathering and event space
- Access and orientation to natural features



Regionally-influenced architecture

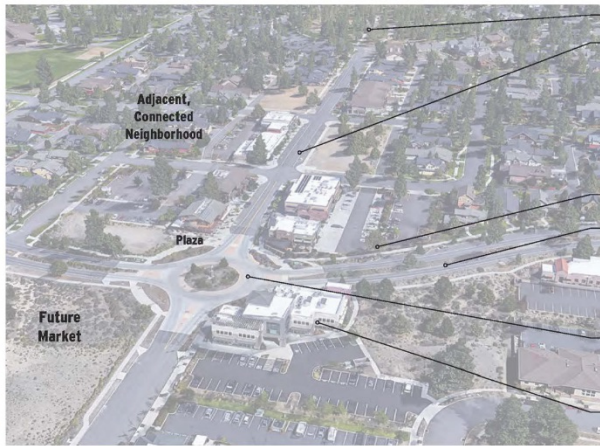


Distinctive entry to Commercial Center



Protected mountain views

PRECEDENT STUDY:
NorthWest Crossing, Bend

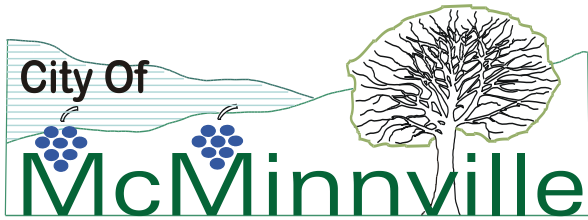


- Integrated park space
- Central 'Main Street':
 - Wide sidewalks
 - Street Trees
 - On-street parking
 - Active ground floors
 - Mixed-use
 - Two blocks closed for Farmer's Market weekly
- Parking behind buildings
- Neighborhood Collector
- Gateway 'marker'
- Adjacent to 'clean' light industrial/office uses



PRECEDENT STUDY:
Orenco Station, Hillsboro, OR

COMMERCIAL DESIGN OPPORTUNITIES
Three Mile Lane Area Plan
March 2021



Planning Department
 231 NE Fifth Street ◦ McMinnville, OR 97128
 (503) 434-7311 Office ◦ (503) 474-4955 Fax
www.mcminnvilleoregon.gov

Office Use Only:	
File No.	_____
Date Received	_____
Fee	_____
Receipt No.	_____
Received by	_____

Comprehensive Plan Map Amendment/ Zone Change Application

Applicant Information

Applicant is: Property Owner Contract Buyer Option Holder Agent Other _____

Applicant Name Kimco McMinnville LLC Phone 650.746.7501

Contact Name Michael Strahs Phone Same as above
(If different than above)

Address 15 Southgate Ave, Suite 201

City, State, Zip Daly City, CA 94015

Contact Email mstrahs@kimcorealty.com

Property Owner Information

Property Owner Name Same as above Phone _____
(If different than above)

Contact Name _____ Phone _____

Address _____

City, State, Zip _____

Contact Email _____

Site Location and Description

(If metes and bounds description, indicate on separate sheet)

Property Address 3310 SE Three Mile Lane

Assessor Map No. R4 4 - 426 - 00700 Total Site Area 90.45-acres

Subdivision 4W Block 26 Lot 00700

Comprehensive Plan Designation Industrial Zoning Designation M-3

This request is for a:

Comprehensive Plan Amendment

Zone Change

1. What, in detail, are you asking for? State the reason(s) for the request and the intended use(s) of the property. _____

See attached narrative.

2. Show in detail, by citing specific goals and policies, how your request is consistent with applicable goals and policies of the McMinnville Comprehensive Plan (Vol. 2). _____

See attached narrative and Attachment 2.

3. If your request is subject to the provisions of a planned development overlay, show, in detail, how the request conforms to the requirements of the overlay. _____

See attached narrative and Attachment 2.

7. Document how the site can be efficiently provided with public utilities, including water, sewer, electricity, and natural gas, if needed, and that there is sufficient capacity to serve the proposed use.

No development is proposed with this application. This documentation is not required for this application.

This study will be completed once approval of this application is completed and a formal PD overlay development application can be submitted.


8. Describe, in detail, how the proposed use will affect traffic in the area. What is the expected trip generation?

See attached narrative Attachment 2, and Attachment 3 (completed TIA).

In addition to this completed application, the applicant must provide the following:

- A site plan (drawn to scale, with a north arrow, legible, and of a reproducible size), indicating existing and proposed features within and adjacent to the subject site, such as: access; lot and street lines with dimensions; distances from property lines to structures; improvements; and significant features (slope, vegetation, adjacent development, drainage, etc.). If of a larger size, provide five (5) copies in addition to **an electronic copy** with the submittal.
- A legal description of the parcel(s), preferably taken from the deed.
- Compliance of Neighborhood Meeting Requirements.
- Payment of the applicable review fee, which can be found on the Planning Department web page.

I certify the statements contained herein, along with the evidence submitted, are in all respects true and are correct to the best of my knowledge and belief.


Applicant's Signature

12/17/2020
Date

Same as Applicant
Property Owner's Signature

Date

City of McMinnville, OR

Three Mile Lane Comprehensive Plan and Zoning Map Amendment

Applicant: Kimco McMinnville, LLC

Contact: Michael Strahs (mstrahs@kimcorealty.com)
Alan Roodhouse (amr@rpsdevco.com)
15 Southgate Ave, Suite 201
Daly City, CA
(650) 746-7501

Property Address: 3310 SE Three Mile Ln
McMinnville, Oregon 97128

Tax Lot ID Number: 172164

Property Size: 90.45 Acres (3,940,002 SF)

**Comprehensive Plan:
Designation** Industrial

Zoning Designation: M-2 (General Industrial)

1. Application Request:

Kimco McMinnville, LLC (“Kimco”) proposes a quasi-judicial comprehensive plan map and zoning map amendment for an approximately 33.5-acre area (the “Property”)¹ fronting Three Mile Lane (Oregon State Highway 18 or SH 18). This proposal is to amend the Property’s comprehensive plan map designation from Industrial to Commercial, and to change the zoning map designation from General Industrial (M-2) to General Commercial (C-3) with a Planned Development (PD) overlay, as depicted on **Attachment 1**. No development is proposed at this time.

Following the map amendments, when a development is proposed, the applicant will pursue the land use approvals required to develop the Property with commercial mixed-uses (the “Project”) through the process prescribed through the PD overlay ordinance. The Project is intended to accommodate the community’s growing demand for retail and to capture some of the area’s retail sales leakage, which are goods that residents travel outside the greater McMinnville area to purchase. Due to the scale of the site, the Project’s development process

¹ Kimco owns a 90.45 acre parcel, of which the 33.5 acre area that is the subject of this application is a part. The remaining 56.95 acres of Kimco’s ownership is not a part of this application and will retain its Industrial comp plan and M-2 zoning designations.

will include imposing a site-specific Planned Development (including design and development standards), a partition or land division, and site plan review.

2. Property Description:

The 33.5-acre Property is a portion of the vacant 90.45-acre parcel located in the Three Mile Lane area within the city limits of McMinnville. The Property is located on the southside of Oregon State Highway 18 in the southeastern portion of the city in proximity to the community hospital and satellite development, the McMinnville Municipal Airport adjacent to the east, and the Evergreen Aviation & Space Museum to the north. The Property's topography is flat in elevation and covered by annual crops with few trees.

As depicted on **Attachment 1**, the Property is generally comprised of two parts. The westerly "Parcel 1" is approximately 25.3 acres and the easterly "Parcel 2" is approximately 5.25 acres. The internal local street connections within the Property are expected to require approximately 2.95 acres.

3. Project Background:

The requested amendments will facilitate a future economic development opportunity that will benefit the City of McMinnville and surrounding communities by converting excess industrial land into needed commercial land. Kimco has owned the vacant Property since 2006 and over the years there has high interest from retailers, both local and national, to open shop and serve the local community. No particular retail use has been identified for the Property, but it's location, access to Highway 18, size, and topography make it attractive to General Merchandise retailers such as Target, Home Depot, and Costco because the goods and services offered by those stores are currently unavailable to McMinnville residents and require a 25-mile drive to Salem or even further to the outskirts of Portland. This existing phenomenon, when demand for certain products and services are not met within a trade area and consumers go elsewhere to shop, is "retail leakage."

The Property is suitable to include a mix of larger retailers and smaller store spaces, which could include both locally owned business and nationally known companies. The Property can accommodate adequate on-site parking and be designed to offer great pedestrian circulation on site and programmed community spaces for visitors to linger and enjoy while shopping.

Located three miles southeast of the downtown core of McMinnville, the Property lends itself to prime commercial retail development. The retail space eventually created through this Project would be suited to businesses that do not fit within the format of existing retail in McMinnville. Downtown businesses are not expected to be negatively affected by retail that will eventually be developed on the Property because the future retailers will provide goods and services that will capture the community's existing retail leakage.

4. Project Rationale:

A. Industrial Land Surplus, Commercial Land Deficit, and Existing Retail Sales Leakage

(1) Adopted Economic Opportunities Analysis

On February 5, 2014, the McMinnville City Council adopted Ordinance No. 4976, which is the Economic Opportunities Analysis completed in November 2013 (2013 EOA), which has been acknowledged. The 2013 EOA concludes that the City has a deficit of 35.8 acres of commercial land and surplus of 235.9 acres of industrial land. (2013 EOA, pg 56, Table 26) The 2013 EOA's data and policies support the need to re-designate and rezone the 33.5-acre Property to C-3. The proposed amendment is consistent with the 2013 EOA because following the proposed zone change, the City will be closer to accommodating the commercial land need, and the supply of industrial land will remain adequate because it will continue to be in excess of (but closer to) the adopted industrial land need.

McMinnville's commercial land deficit is a combination of the land needed to accommodate projected population growth and the pent-up demand for specific retail needs that are not being met within the trade area. This means consumers go elsewhere to shop resulting in retail leakage to areas outside the City. Factors that contribute to the City's retail leakage are that there are no available vacant or re-developable commercial sites that are adequately sized and have the necessary locational factors and site characteristics to support the leaking retail categories. The available commercial land or vacancies in existing buildings are not suitable in format or scale to attract tenants that fulfill these unmet retail leakage needs.

The City's deficit of commercial land generally, and specifically the lack of commercial land suitable for major comparison retail was determined in the 2013 EOA to be a disadvantageous factor that affects the community's economic development potential. The result is retail sales leakage, which is created when demand for a specific product is not being met within a trade area, so consumers go elsewhere to shop or do not shop at all. The 2013 EOA concluded that "there is considerable retail sales leakage of an estimated \$192 million annually throughout Yamhill County – as residents travel to other counties for a significant 23% of their shopping needs." (2013 EOA, pg 32) In the seven years since this report was completed, this continued leakage has potentially cost the City over \$1.3 billion in consumer spending that could have benefited the local economy.

(2) Updated Analyses as Additional Evidence

The 2013 EOA is the binding analysis of the City's adequacy of commercial land and provides an adequate factual base for the proposed rezone. Analyses of commercial land needs since the 2013 EOA provide further support for the application because those analyses show that the deficit is growing, including Leland Consulting's January 2020 EOA Land Supply Update (Leland

2020 Update) **Attachment 4**, the 2020 EOA drafted by EcoNorthwest Consulting (2020 EOA)² **Attachment 5**, and Three Mile Lane Area Plan documents **Attachments 6** and **7**.

(a) Leland 2020 Update

The Leland 2020 Update provides current data on the supply of commercial land by analyzing all zone changes since the 2013 EOA was adopted that impacted commercially zoned land. The Leland 2020 Update concluded that the deficit of commercially zoned land has grown to 39 acres and the surplus of industrial land has also increased. The impacts of zone changes since the 2013 EOA is summarized in the following table in the Leland 2020 Update:

Table 4. Comparison of Land Demand to Supply (2013/2019-2033)

Acres by Plan Designation			
	Commercial	Industrial	Total
Vacant Land Demand			
Commercial	164.6	0.0	164.6
Industrial	0.0	145.1	145.1
Institutional	2.2	8.0	10.2
Totals	166.8	153.2	319.9
Available Land Supply			
2013 EOA	130.9	389.7	520.0
2013 Surplus/(Deficit)	(35.9)	235.9	200.1
2019 Revision	127.8	389.7	
2019 Surplus/(Deficit)	(39.0)	236.5	197.5

(b) 2020 EOA

The 2020 EOA has not been adopted, but its data provides further support for the demand for commercially zoned land to accommodate retail leakage and population growth, the lack of supply of suitable commercial land, and the surplus of industrial land.

The updated 2020 EOA demand data indicates that the commercial land deficit is projected to grow to at least 286 acres by 2041 (which includes at least **12-acres** to accommodate retail leakage), at which time there will be a surplus of 159 acres of industrial land. (2020 EOA, pg 106, Exhibit 59)

(c) Three Mile Lane Area Plan (3MLAP)

As part of the City’s long range planning efforts, it has initiated the Three Mile Lane Area Plan (3MLAP) project, which is intended to result in the adoption of an area plan for the

² All citations to the 2020 EOA are to the February 2020 track changes draft.

approximately 1,340 acre area along the Three Mile Lane corridor that will integrate land uses and a multi-modal transportation system, updating the Three Mile Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The 3MLAP is still in the planning phase and is not binding on this application, but the proposed amendments are consistent with the data, policies and goals in the most recent draft of the 3MLAP. Accordingly, the 3MLAP provides additional evidence in support of approving the proposed comprehensive plan and zoning map amendments.

The 3MLAP is intended to support the 2020 EOA by analyzing the forecasts and demand for a variety of land needs, and how they may be accommodated within the Three Mile Lane area. As part of that effort, the 3MLAP Market Analysis (April 16, 2019 Final Draft) (**Attachment 6**) conducted a detailed analysis of the incredible amount of retail leakage within certain categories, which includes:

3MLAP Market Analysis Table 8 Summary

Estimated Retail Leakage			
	Current Sales	Household Demand	Current Leakage (\$)
Underserved Sectors of Retail			
Furniture and Home Furnishings	\$9,815,869	\$25,459,215	(\$15,643,346)
Electronics and Appliance	\$10,205,468	\$25,779,334	(\$15,573,866)
Clothing and Accessories	\$5,785,467	\$39,384,538	(\$33,599,071)
Sporting Goods, Hobby, Books, Music	\$12,792,050	\$27,981,058	(\$15,189,008)
General Merchandise	\$41,383,114	\$138,540,476	(\$97,157,362)
Food Service and Drinking Places	\$53,618,658	\$83,233,240	(\$29,614,582)
Other (Cinema, Banks, Small Office)	\$91,325,675	\$92,535,592	(\$1,209,917)
Total Demand and Leakage	\$224,926,301	\$432,913,453	(\$207,987,152)

3MLAP Market Analysis, *Table 8, pg. 33.*

The above table highlights the difference in current sales in retail sales within McMinnville versus the estimated household demand. The difference in red represents the outflow of spending that is likely going to communities where space for these types of merchants are readily available. Potentially \$207,987,152 of annual consumer spending is leaving McMinnville because there is no land with necessary locational or site characteristics available. This not only deprives residents of McMinnville choices in where to shop, but further burdens many families with the economic hardship of driving great distances to purchase what they need.

The 2020 EOA and 3MLAP Market Analysis conclude that accommodating retail leakage will require 12-acres in addition to the growth-related land needs, and that in the next 10 years the Three Mile Lane area could capture 150,000 square feet of the market area’s demand for

539,000 square feet of leakage retail development. (2020 EOA, pg 47 and 102; 3MLAP Market Analysis, pg 4, Table ES-3)

B. Suitability of the Property for Conversion from Industrial to Commercial

A compact urban form is maintained when the identified commercial land deficit is addressed by converting excess industrial land to commercial. Accordingly, the 2013 EOA recommends re-designating “excess industrial or other lands to commercial uses (focused on those sites with greatest suitability for commercial development.)” (2013 EOA, pg 62) Suitability for commercial development must consider the site characteristics for the proposed use (OAR 660-009-0005(12)), which here the use is retail that can capture retail leakage and can accommodate population-related growth.

The 2013 EOA and comprehensive plan describe a property’s suitability for re-designation to commercial, each of which is responded to in the findings narrative (**Attachment 2**). The 3MLAP also details the site characteristics necessary for prospective underserved leaking retailers. Some of the suitability factors and site characteristics that are relevant include transportation access, compatibility with neighboring uses, infrastructure capacity and site size. (2013 EOA, pgs 57 and 73) Examples of the Property’s suitability for conversion from industrial to retail include:

- Visibility from and access to Highway 18. Traffic patterns are “of particular importance for retail and service businesses” which are “reliant on high traffic counts.” (2013 EOA, pg 33) Trends show increasing traffic counts on Highway 18 and shifting away from Highway 99W. “Recapture [of retail sales leakage] is dependent on the ability to identify sites that attract retailers that could serve much of the county’s population from locations readily accessible to major travel corridors.” (2013 EOA, pg 32)
- Proximity to retail leakage markets. “Sites in the McMinnville UGB offer the potential to serve a local and regional market...Centrally located [within the County] with good highway access and street visibility can be instrumental to attract commercial business that may require market areas of 50,000-100,000+ population.” (2013 EOA, pg 32)

The 3MLAP includes extensive analysis of the that area’s suitability for retail development aptly describes this Property’s suitability for commercial conversation:

“Retail prospects are relatively strong for certain retail sectors, despite relatively weak market conditions (including rent, vacancy, absorption, etc.). The Three Mile Lane study area likely checks off many site selection criteria and market characteristics typically desired by prospective retailers. While there are few retailers currently in the aera, desired physical characteristics, such as visibility, vacant developable land, and ease of

access are all present. Further, McMinnville's central location between the Oregon Coast, the Portland Metro, and Salem provides access to a wide variety of markets. Significant household growth and the burgeoning tourism industry will continue to improve retail prospects." (3MLAP Market Analysis, Pg 2).

"The Three Mile Lane project area is relatively well-positioned for retail development due to high visibility, ease of access, high traffic counts along Highway 18, and there are few alternative urban areas between McMinnville and the coast, providing opportunities to capture spending from those visiting the Oregon coast.

Additionally, as one of the few locations in the market area with large, contiguous, vacant tracts of land within city limits, Three Mile Lane should be able to capture a significant portion of market area demand over the next 10 years." (3MLAP Market Analysis, Pg 51-52)

The Project is envisioned to be a retail "town center" that is compatible with the current draft 3MLAP Land Use concept numbers one and two (**Attachment 7**):

"This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process. Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville's downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development." (3MLAP Memorandum 6, Land Use Concepts 1 and 2 pg 10-13)

The requested map amendments are the first step to fulfill the 2013 EOA deficit of commercial land and developing a project that furthers the objectives of the 3MLAP. The future discretionary PDO land use process that will apply to the Project will further ensure consistency with the 3MLAP.

C. Traffic Impacts and Circulation

Kittelsohn & Associates, Inc., prepared a transportation impact analysis (TIA) report, which analyzes the transportation impacts associated with the proposed rezone. (**Attachment 3**). The TIA's scope, methodology, findings and recommendations have been coordinated with the City

of McMinnville and the Oregon Department of Transportation (ODOT) and is intended to address City and state review criteria, including compliance with the Transportation Planning Rule (TPR). The TIA analyzed the reasonable worst-case development scenario under the proposed rezone a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. Mitigation measures that will be constructed at the time of development will include construction of the collector streets and a new intersection with SH-18. As part of the design of these roadways, sidewalks and bicycle lanes will be provided. With required improvements to occur at the time of development, the proposed rezone results in no significant impacts, in compliance with the TPR.

For the development of larger scale retail like the Project is expected to include, the Property's location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. For example, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville "feel."

As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would be minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. The Property's location on OR 18 provides easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the retail uses that could be developed in the future may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

5. Conclusion:

The application meets the requirements for a rezone based on the following:

- Complies with the applicable approval criteria in the code, Comprehensive Plan and state law, as detailed in the findings at **(Attachment 2)**.
- The 2013 EOA shows a surplus of over 235 acres of industrial land and deficit of 35.8 acres in commercial land inventory, exhibiting an economic need for retail land use within the City that can be partially met through converting excess industrial land to

commercial. Updated data in the 2020 EOA, 2020 Leland Update and 3MLAP demonstrate that the commercial land deficit is growing.

- Studies from the 3MLAP have revealed that the City loses over \$200 million annually in consumer spending to retail destinations such as Salem and SW Portland, burdening families with the cost of driving quite a distance for essential needs.
- The Property includes site characteristics that make it suitable for conversion to C-3 zoning, which will allow retail development that captures retail leakage and growth-related retail needs. Retail development on this site would be at a scale that is not suitable for downtown McMinnville or existing centers within the City. Based on the traffic analysis completed, the proposed rezone would have minimal impact on the City's existing infrastructure and would not fundamentally alter the urban fabric of the community (**Attachment 3**).
- Inclusion of a Planned Development (PD) overlay will ensure the future development project is compliant with City's long-term policies and goals, supported by municipal services and infrastructure, and subject to community input through discretionary review by the City Council.

Attachments:

- 1. Site Plan**
- 2. Required Findings for Comprehensive Plan Map and Zoning Map Amendment**
- 3. Traffic Impact Analysis, 12/18/2020 by Kittelson & Associates**
- 4. Leland Consulting's January 2020 EOA Land Supply Update**
- 5. 2020 EOA drafted by Eco-Northwest Consulting**
- 6. Three Mile Lane Area Plan Market Analysis**
- 7. Three Mile Lane Area Plan Memo 6 (Land Use Concepts)**
- 8. Proof of 11/19 Neighborhood Meeting (Noticing and Notes from Meeting)**

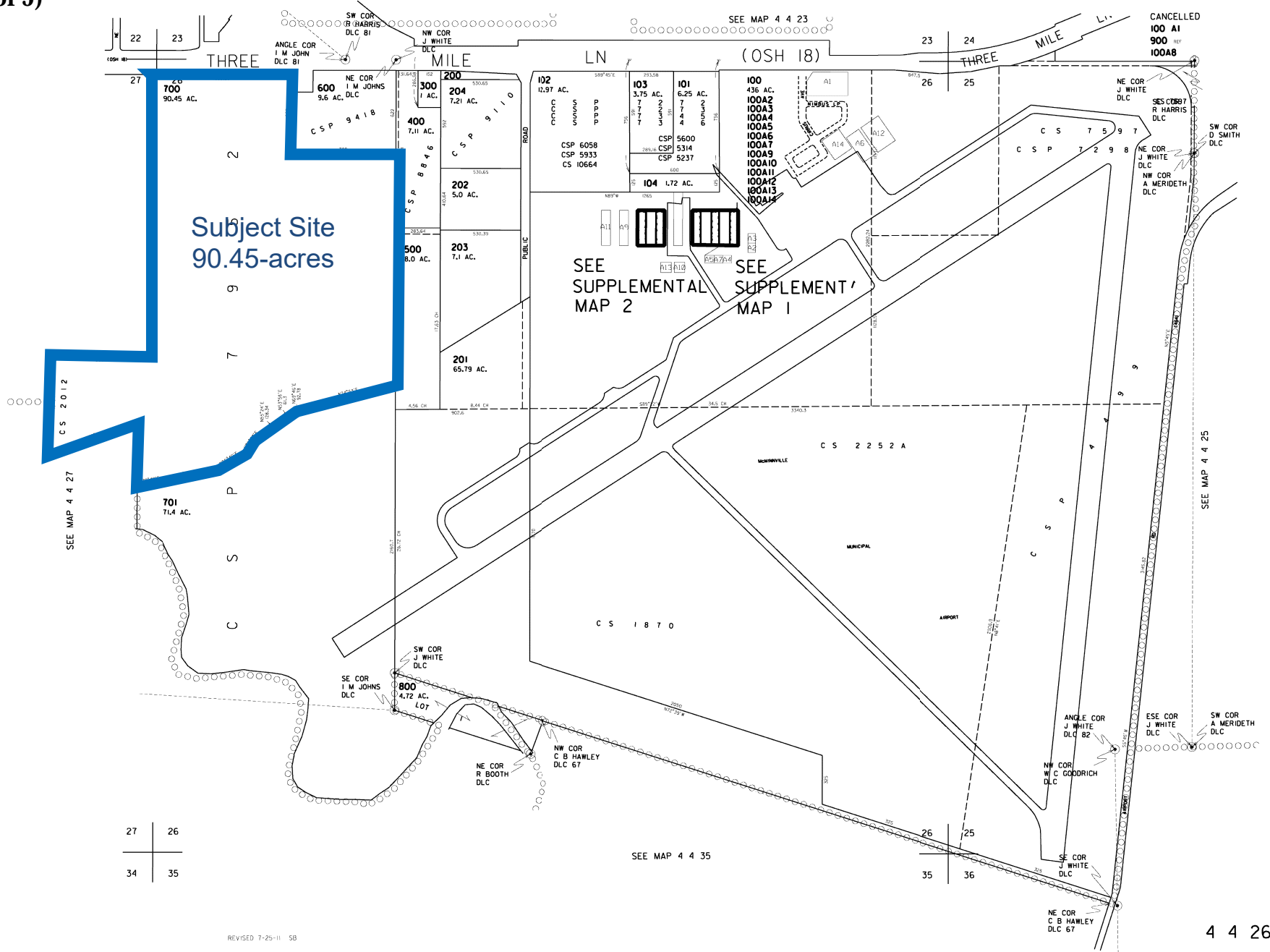
Attachment 1

Site Plan (1 of 5)

THIS MAP WAS PREPARED FOR
ASSESSMENT PURPOSE ONLY

SECTION 26 T4S R4W W.M.
YAMHILL COUNTY
1" = 400'

4 4 26



REVISED 7-29-11 58

4 4 26

Attachment 1

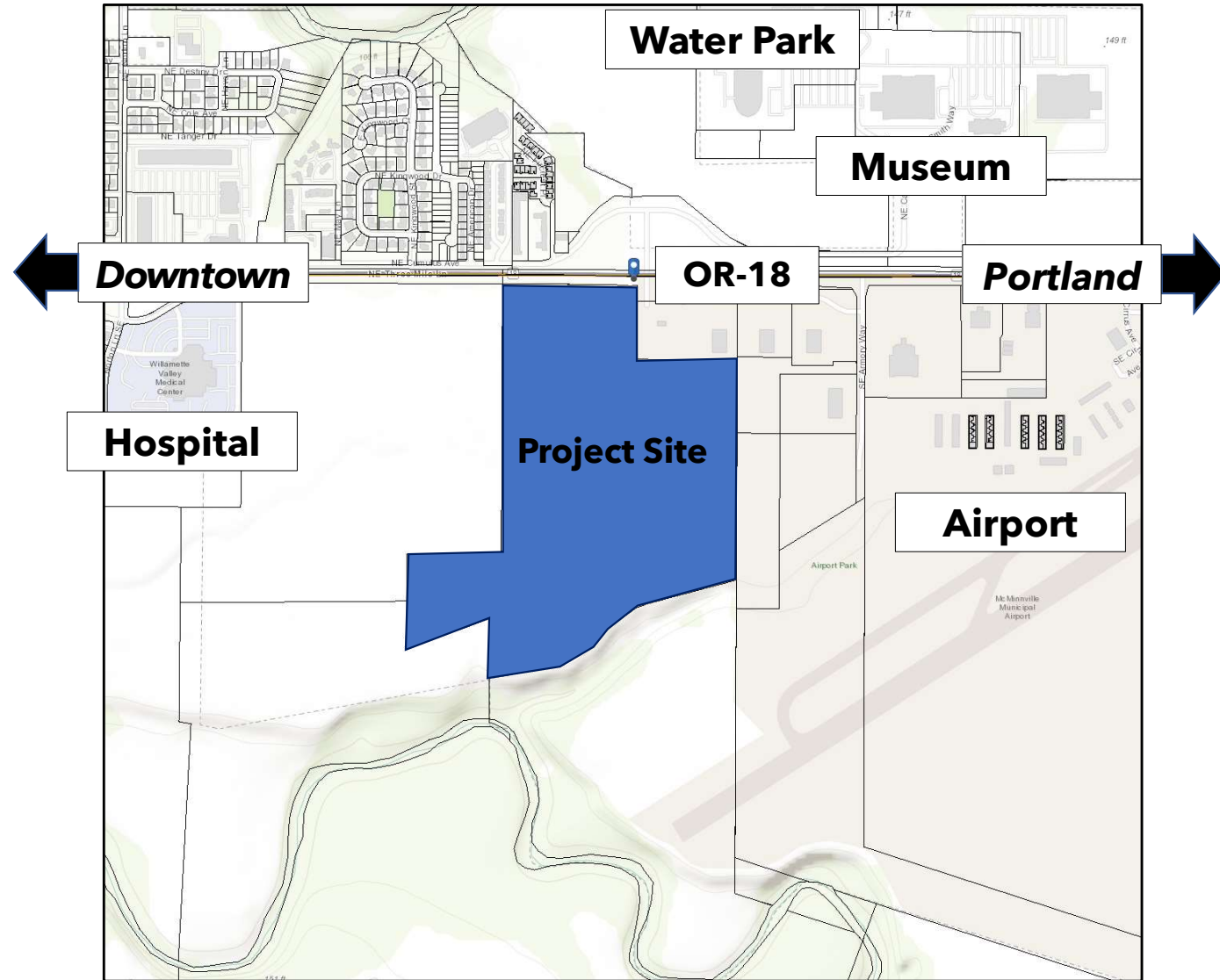
Site Plan (2 of 5)

PROJECT LOCATION

3310 SE Three Mile Lane
McMinnville, OR 97128

Tax Lot ID: R4426 00700

Lot size: 90.45 acres

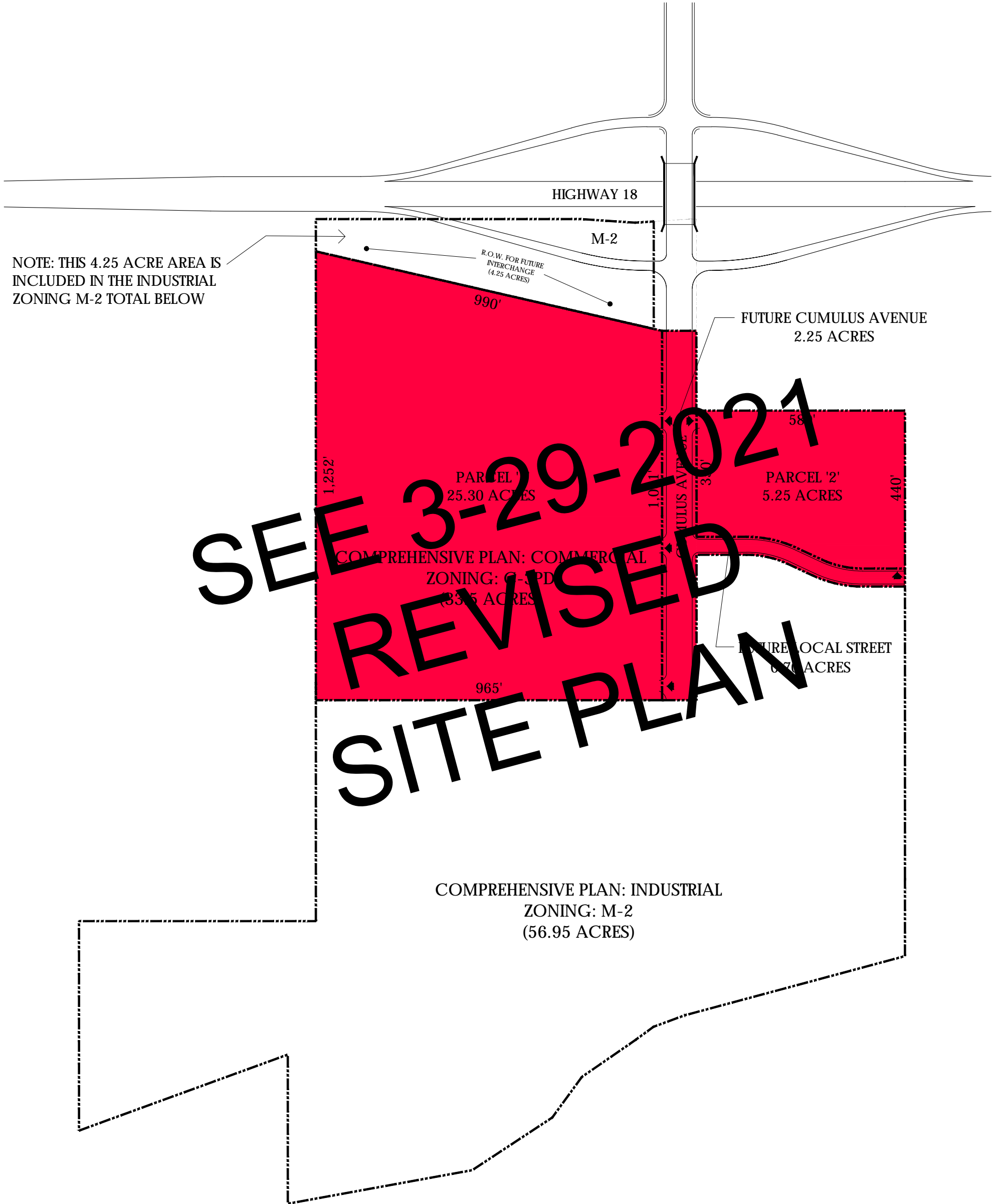


PROJECT PROPOSAL

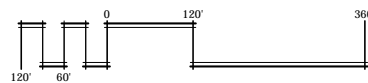
- **Comprehensive Plan Map Amendment** from **Industrial** to **Commercial**
- **Zone Change** from **General Industrial (M-2)** to **General Commercial (C-3)** with a **Planned Development Overlay (PDO)**
- Applies to **northern 33.5-acre portion** of the site along State Highway 18
- **No development** is proposed at this time.



Attachment 1
Site Plan (4 of 5)



COMPREHENSIVE PLAN MAP
 and ZONING MAP AMENDMENT



DIMENSION NOTE:
 DIMENSIONS ARE APPROXIMATE

December 10, 2020



RPS Development Company, Inc.
 Developer

3310 SE THREE MILE LANE
 APN R4426 00700 (90.45 ACRES)
 McMinnville, Oregon

BENNER
 STANGE
 ASSOCIATES
 ARCHITECTS, P.C.
 80 SE MADISON STREET
 SUITE 430
 PORTLAND, OR 97124
 (503) 670-0234
 FAX (503) 670-0235
 bsa@bsaarch.com



**Kimco McMinnville, LLC
15 Southgate Ave, Suite 201
Daly City, CA 94015**



March 29, 2021

Tom Schauer
Senior Planner
City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97218

**Re: Response to CPA 2-20 and ZC 3-20 Application Completeness Review Letter
3310 SE Three Mile Lane, Map & Tax Lot R4426 00700**

Dear Tom:

Thank you for your January 20, 2021 completeness review of the above referenced application. This packet provides the information identified as completeness items, responds to the discussion of the Planned Development Overlay in the "Background Information" section of your letter, and requests that our application be deemed complete.

Completeness Items

1. Acreage and Right-of-Way Dedication Clarifications

We request that the 4.25-acre right-of-way dedication be included as a part of our request for a Comprehensive Plan Amendment from Industrial to Commercial and a Zone Change from M-2 to C-3 PD, as depicted on the updated Exhibit 1. We also request that a condition of approval be imposed and/or findings be included that explain that this 4.25-acre area is intended to be dedicated as a public right-of-way at the time of development.

With the additional 4.25-acre area, the total land area subject to the Comprehensive Plan Amendment and Zone Change is 37.74 acres. Because the additional 4.25 acres will be used exclusively for right-of-way purposes, it is not necessary to change to the application's assumptions about the future development of approximately 33.49 acres, such as traffic impacts or satisfying the existing commercial land deficiency with surplus industrial land.

2. Conflict Between Pages 3 and 4 of Attachment 1

We have consolidated the diagrams showing our Comprehensive Plan Amendment and Zone Change request into one exhibit to eliminate any inconsistencies in our application. This should add clarity to the precise land areas within our parcel that will be redesignated and rezoned through approval of this application. Please see **Exhibit 1** attached.

3. Dimensions

To further affirm the land areas included on the diagram as shown within **Exhibit 1**, we have attached legal descriptions that lend support to the dimensions intended for each land use designation and zone area. Please see **Exhibits 2, 3, and 4** attached containing these descriptions.

Background Item: Planned Development Overlay Options and Requirements

As noted in your completeness review letter, we have proposed a Planned Development Overlay designation using the provisions in Section 17.51.010(B) of the Zoning Ordinance, which means no development plan must be submitted at this time. Instead, a development plan will be proposed once the redevelopment of the property is more certain.

The letter of incompleteness noted that additional analysis was needed to explain the unique conditions that support deferring submittal of the development plan (Subsection (B)(1)) and items that must be addressed when final plans are submitted (Subsection (B)(2)).

(B)(1) A planned development overlay may be approved under these circumstances for a property which has unique characteristics (e.g., geological, ecological, location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole. A planned development overlay initiated by the Council or the Planning Commission shall address itself to the purposes set forth herein.

The primary rationale for allowing a deferred submittal of the development plan under the proposed PD designation is to ensure that development that is proposed on the property is consistent with and implements the future Three Mile Lane Area Plan (TMLAP).

Your letter provided an excellent summary of this unique condition: "It is reasonable to conclude there are unique conditions to allow deferred submittal of a final plan to ensure consistency and coordination of the design and development standards, circulation plan, and other considerations with a future Three Mile Lane Area Plan (TMLAP) given the sale of that plan as well as the scale of the potential development on the subject property."

(B)(2) The Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.

We understand that the review process will identify areas of potential concerns and proposed conditions and standards to address those concerns that will need to be included in the development plan that is submitted.

We agree with the categories of items to be included outlined in your January 20, 2021 completeness letter (with the clarifications described below), and that the TMLAP will provide important guidance on the design and development standards that will be expected of future development on the property. However, because no development is under consideration at this time, we request that the conditions and standards identified during this process be flexible so that further refinement can occur once more is known about feasible development.

Clarification: Great Neighborhood Principles in the Comprehensive Plan. We agree that some of these principles should be incorporated into the development plan and project. We request that this process provide clarity about which principles are applicable. For example, the following are not applicable: Principles 11 and 12 are directed at housing, so are irrelevant to commercial development and Principle 10 is not applicable because the property is not located on the on the edge of the UGB.

Clarification: Land Division. We understand and agree that the portions of the property subject to the PD overlay cannot be divided or have portions sold prior to when the master plan is approved. However, the property subject to the to the proposed amendments is only a portion of a larger, undivided approximately 90.43-acre property. We anticipate that prior to when a master plan is approved, the 90.43-acre parcel may be partitioned so that the 37.74-acre commercial portion and remaining industrial areas are divided into separate lots that may be held in separate ownership. It is possible that this partition may require an access drive or street that connects the industrial parcel to SH 18. We request that the findings clarify that the land division limitation does not preclude dividing the parent parcel into a commercial lot and industrial lot(s) or related required access improvements, and that it is intended to limit divisions of the 37.74-acre area into smaller lots prior to when the master plan is approved.

Next Steps

This packet addresses each of the completeness items from the January 20, 2021 letter. We request that you deem our application complete.

We look forward to working with the City and public as our application proceeds through the public process.

Sincerely,



Michael Strahs
Authorized Agent
Kimco McMinnville, LLC

Attachments:

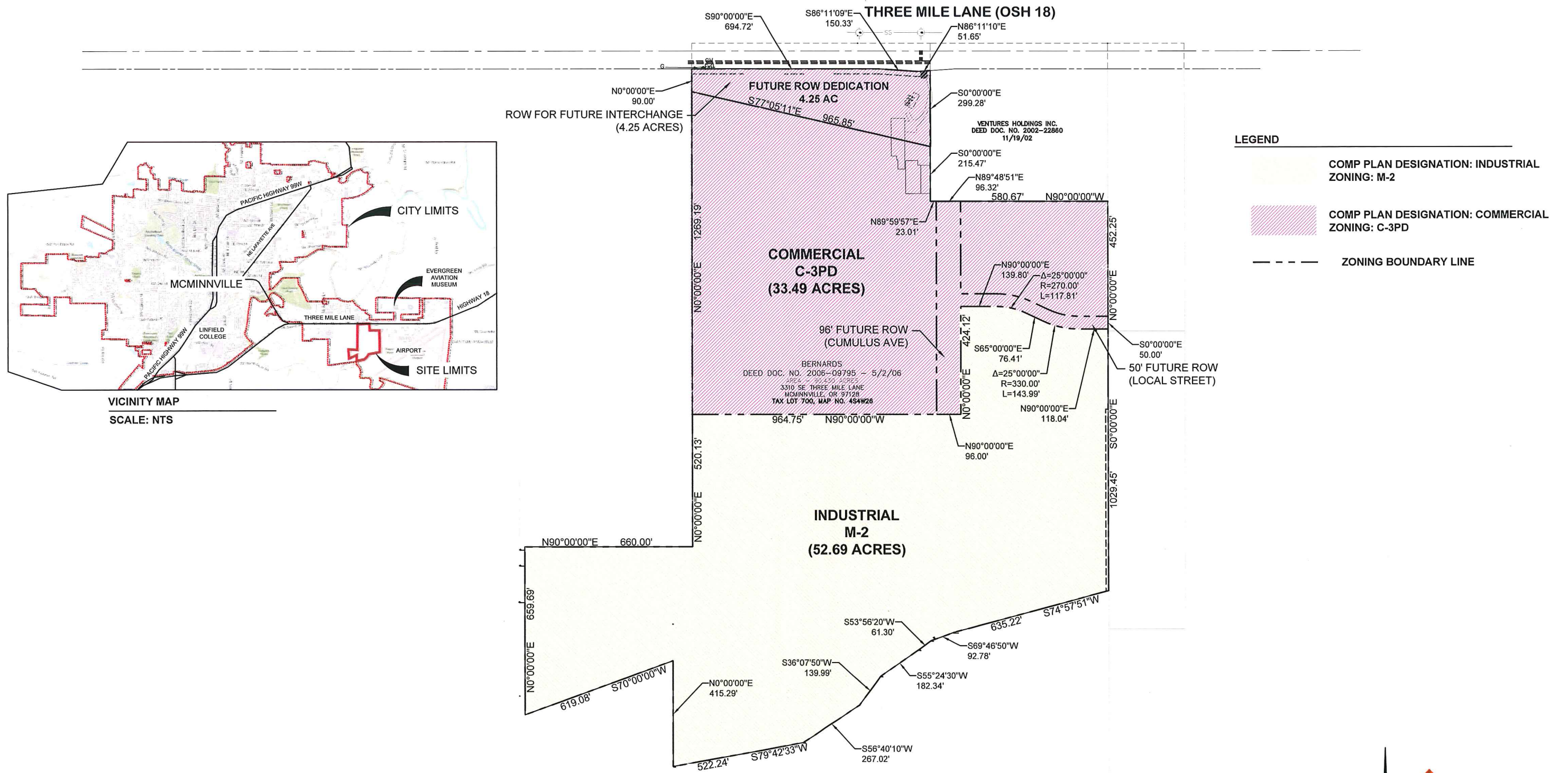
Exhibit 1: Proposed Comprehensive Plan Amendment and Zone Change

Exhibit 2: Legal Description for Commercial/C-3PD Land Area

Exhibit 3: Legal Description for Industrial/M-2 Land Area

Exhibit 4: Legal Description for future Public ROW Land Area

Exhibit 1



PROPOSED COMPREHENSIVE PLAN AMENDMENT AND ZONE CHANGE - THREE MILE LANE

Address: 3310 SE Three Mile Lane (Map & Tax Lot R4426 00700)
 Applicant: Kimco McMinnville, LLC

03/25/2021
 SCALE IN FEET

DOWL

720 SW Washington Street, #750
 Portland, Oregon 97205
 971-280-8645

Project #: 2322.14783.01
 Contact: Mike Towle, PE
 503-679-1769

McMinnville, OR

Exhibit 2

S&F Land Services

4858 SW Scholls Ferry Rd, 5te A Portland, OR 97225
(503) 345-0328 - www.sflands.com

2021-014-63
3/22/21
TLB


LEGAL DESCRIPTION COMMERCIAL ZONE

A TRACT OF LAND SITUATED IN THE NORTHWEST QUARTER OF SECTION 26 AND THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 4 SOUTH, RANGE 4 WEST OF THE WILLAMETTE MERIDIAN, CITY OF MCMINNVILLE, OREGON, BEING A PORTION OF THAT PROPERTY CONVEYED TO KIMCO MCMINNVILLE LLC., PER WARRANTY DEED DOCUMENT NUMBER 2006-67470, YAMHILL COUNTY DEED RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3" BRASS DISK MARKING THE NORTHWEST CORNER OF SAID SECTION 26; THENCE NORTH 90°00'00" WEST 45.16 FEET; THENCE SOUTH 00°00'00" EAST 100.99 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING 70.00 FEET FROM THE CENTERLINE THEREOF, WHEN MEASURED PERPENDICULAR THERETO); THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470, SOUTH 00°00'00" EAST 90.00 FEET TO THE **POINT OF BEGINNING**; THENCE CONTINUING SOUTH 00°00'00" EAST 1269.19 FEET; THENCE LEAVING SAID WESTERLY LINE, NORTH 90°00'00" EAST 1060.75 FEET; THENCE NORTH 00°00'00" EAST 424.12 FEET; THENCE NORTH 90°00'00" EAST 139.80 FEET TO THE BEGINNING OF A 270.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE ALONG SAID CURVE 117.81 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 116.88 FEET); THENCE SOUTH 65°00'00" EAST 76.41 FEET TO THE BEGINNING OF A 330.00 FOOT RADIUS CURVE TO THE LEFT; THENCE ALONG SAID CURVE 143.99 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 142.85 FEET); THENCE NORTH 90°00'00" EAST 118.04 FEET TO THE EASTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID EASTERLY LINE, NORTH 90°00'00" EAST 502.57 FEET; THENCE NORTH 90°00'00" WEST 700.00 FEET; THENCE NORTH 00°00'00" EAST 215.16 FEET; THENCE LEAVING SAID EASTERLY LINE, NORTH 77°05'11" WEST 965.85 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 1,458,887 SQUARE FEET OR 33.491 ACRES, MORE OR LESS.

REGISTERED
PROFESSIONAL
LAND SURVEYOR


Digitally signed by
Jered McGrath
Date: 2021.03.24
19:04:50 -07'00'

OREGON
JUNE 13, 2008
JERED MCGRATH
79419

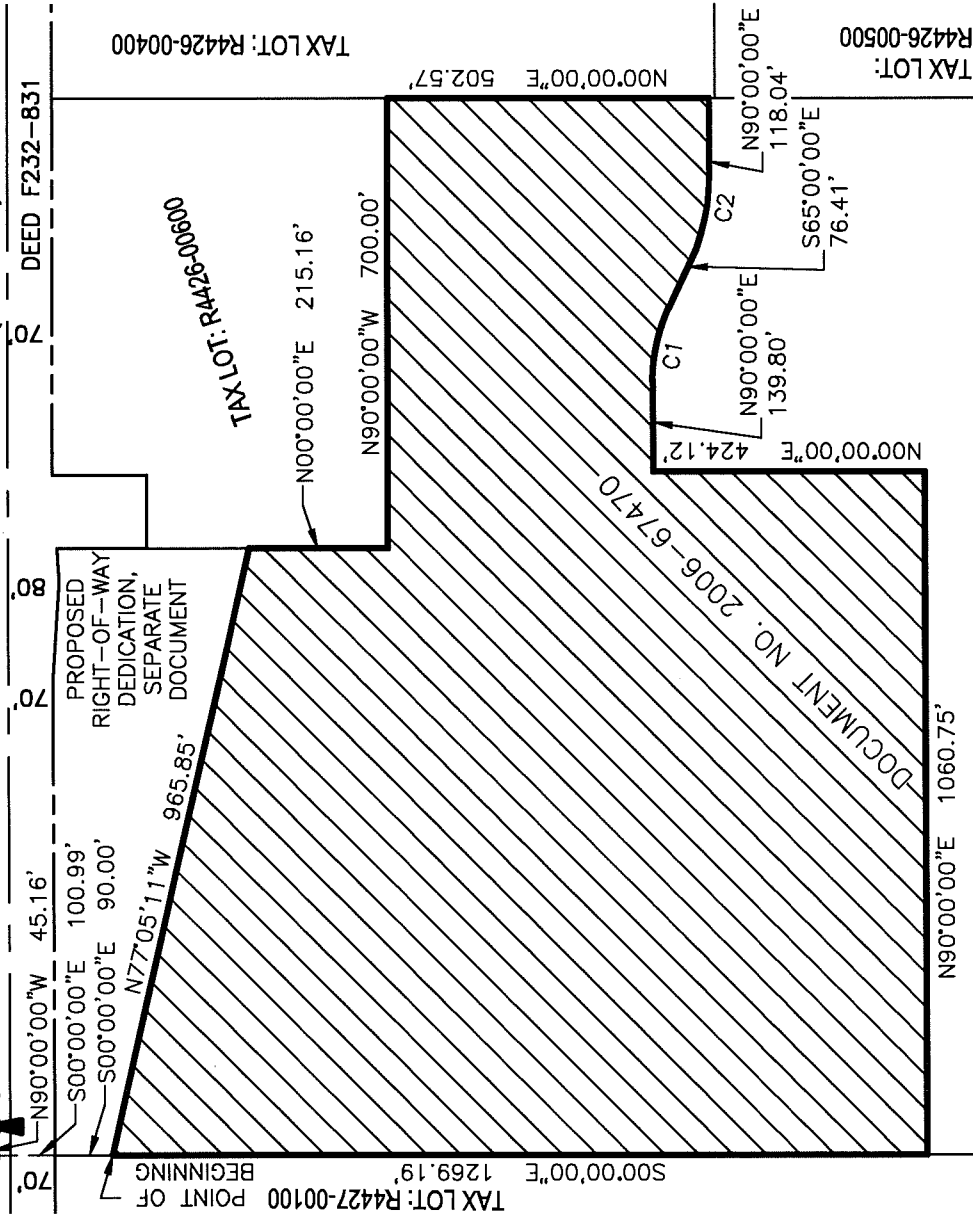
RENEWS: 12/31/2021

POINT OF COMMENCEMENT A FD. 3" BRASS DISK
IN MON. BOX INSCRIBED "YAMHILL CO. SURVEYOR
1986 22/23/27/26 T4S R4W" MARKING THE NW
CORNER OF SECTION 26, T4S, R4W - HELD

E SALMON RIVER HWY (OSH 18)

**EXHIBIT B
COMMERCIAL ZONE**

NW 1/4 SECTION 26 & NE 1/4 SECTION
27, T4S, R4W, W.M., CITY OF
MCMINNVILLE, YAMHILL COUNTY,
OREGON



1 INCH = 300 FEET

LEGEND:



AREA OF COMMERCIAL ZONE
1,458,887 SQUARE FEET OR
33.491 ACRES MORE OR LESS

CURVE TABLE					
CURVE #	DELTA	RADIUS	LENGTH	CHORD	CHORD LEN
C1	25°00'00"	270.00'	117.81'	S77°30'00"E	116.88'
C2	25°00'00"	330.00'	143.99'	S77°30'00"E	142.85'

S&F Land Services

Date: 3/22/21
Proj No: 2021-014-63
4858 SW SCHOLLS FERRY ROAD, SUITE A
PORTLAND, OR 97225
www.sflands.com
info@sflands.com
503-345-0328

Exhibit 3

S&F Land Services

4858 SW Scholls Ferry Rd, Ste A Portland, OR 97225
(503) 345-0328 - www.sflands.com

2021-014-63

3/22/21

TLB

LEGAL DESCRIPTION INDUSTRIAL ZONE

A TRACT OF LAND SITUATED IN THE WEST HALF OF SECTION 26 AND THE EAST HALF OF SECTION 27, TOWNSHIP 4 SOUTH, RANGE 4 WEST OF THE WILLAMETTE MERIDIAN, CITY OF MCMINNVILLE, OREGON, BEING A PORTION OF THAT PROPERTY CONVEYED TO KIMCO MCMINNVILLE LLC., PER WARRANTY DEED DOCUMENT NUMBER 2006-67470, YAMHILL COUNTY DEED RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3" BRASS DISK MARKING THE NORTHWEST CORNER OF SAID SECTION 26; THENCE NORTH 90°00'00" WEST 45.16 FEET; THENCE SOUTH 00°00'00" EAST 100.99 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING 70.00 FEET FROM THE CENTERLINE THEREOF, WHEN MEASURED PERPENDICULAR THERETO); THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470, SOUTH 00°00'00" EAST 1359.19 FEET TO THE **POINT OF BEGINNING**; THENCE LEAVING SAID WESTERLY LINE, NORTH 90°00'00" EAST 1060.75 FEET; THENCE NORTH 00°00'00" EAST 424.12 FEET; THENCE NORTH 90°00'00" EAST 139.80 FEET TO THE BEGINNING OF A 270.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE ALONG SAID CURVE 117.81 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 116.88 FEET); THENCE SOUTH 65°00'00" EAST 76.41 FEET TO THE BEGINNING OF A 330.00 FOOT RADIUS CURVE TO THE LEFT; THENCE ALONG SAID CURVE 143.99 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 142.85 FEET); THENCE NORTH 90°00'00" EAST 118.04 FEET TO THE EASTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID EASTERLY LINE, SOUTH 90°00'00" EAST 1029.45 FEET TO THE SOUTHERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID SOUTHERLY LINE, SOUTH 74°57'51" WEST 635.22 FEET; THENCE SOUTH 69°46'50" WEST 92.78 FEET; THENCE SOUTH 53°56'20" WEST 61.30 FEET; THENCE SOUTH 55°24'30" WEST 182.34 FEET; THENCE SOUTH 36°07'50" WEST 139.99 FEET; THENCE SOUTH 54°57'51" WEST 267.02 FEET; THENCE SOUTH 79°40'40" WEST 384.74 FEET; THENCE SOUTH 79°47'50" WEST 137.50 FEET TO THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID WESTERLY LINE, NORTH 00°00'00" EAST 415.29 FEET; THENCE SOUTH 70°00'00" WEST 619.08 FEET; THENCE NORTH 00°00'00" EAST 660.00 FEET; THENCE NORTH 90°00'00" EAST 660.00 FEET; THENCE NORTH 00°00'00" EAST 519.82 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 2,295,098 SQUARE FEET
OR 52.688 ACRES, MORE OR LESS.

REGISTERED
PROFESSIONAL
LAND SURVEYOR



Digitally signed by
Jered McGrath
Date: 2021.03.24
18:59:00 -07'00'

OREGON
JUNE 13, 2008
JERED MCGRATH
79419

RENEWS: 12/31/2021

POINT OF COMMENCEMENT
 A FD. 3" BRASS DISK IN
 MON. BOX INSCRIBED
 "YAMHILL CO. SURVEYOR
 1986 22/23/27/26 T4S
 R4W" MARKING THE NW
 CORNER OF SECTION 26,
 T4S, R4W - HELD

E SALMON RIVER HWY (OSH 18)

N90°00'00"W 45.16' R
 S00°00'00"E 100.99' PROPOSED
 S00°00'00"E 1359.19' RIGHT-OF-WAY
 DEDICATION
 N90°00'00"E 1060.75'

POINT OF BEGINNING
 N00°00'00"E 519.82'

TAX LOT: R4427-00200

N90°00'00"E 660.00'

DOCUMENT NO. 2006-67470

TAX LOT: R4426-00500

S00°00'00"E 1029.45'

1 INCH = 300 FEET



LEGEND:



AREA OF INDUSTRIAL ZONE
 2,295,098 SQUARE FEET OR
 52.688 ACRES MORE OR LESS

**EXHIBIT B
 INDUSTRIAL ZONE**

W 1/2 SECTION 26 & E 1/2 SECTION 27,
 T4S, R4W, W.M., CITY OF MCMINNVILLE,
 YAMHILL COUNTY, OREGON

TAX LOT: R4426-00701

S69°46'50"W 92.78'

S53°56'20"W 61.30'

S55°24'30"W 182.34'

S36°07'50"W 139.99'

S56°40'10"W 267.02'

S79°40'40"W 384.74'

S79°47'50"W 137.50'

S77°30'00"E 116.86'

S77°30'00"E 142.85'

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	CHORD	CHORD LEN
C1	25°00'00"	270.00'	117.81'	S77°30'00"E	116.86'
C2	25°00'00"	330.00'	143.99'	S77°30'00"E	142.85'



Date: 3/22/21
 4858 SW SCHOLLS FERRY ROAD, SUITE A www.sflands.com
 PORTLAND, OR 97225 info@sflands.com
 Proj No: 2021-014-63 503-345-0328

Exhibit 4

EASEMENT FOR RIGHT-OF-WAY PURPOSES

A TRACT OF LAND SITUATED IN THE NORTHWEST QUARTER OF SECTION 26 AND THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 4 SOUTH, RANGE 4 WEST OF THE WILLAMETTE MERIDIAN, CITY OF MCMINNVILLE, OREGON, BEING A PORTION OF THAT PROPERTY CONVEYED TO KIMCO MCMINNVILLE LLC., PER WARRANTY DEED DOCUMENT NUMBER 2006-67470, YAMHILL COUNTY DEED RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3" BRASS DISK MARKING THE NORTHWEST CORNER OF SAID SECTION 26; THENCE NORTH 90°00'00" WEST 45.16 FEET; THENCE SOUTH 00°00'00" EAST 100.99 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING 70.00 FEET FROM THE CENTERLINE THEREOF, WHEN MEASURED PERPENDICULAR THERETO), ALSO BEING THE **POINT OF BEGINNING**; THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470, SOUTH 00°00'00" EAST 90.00 FEET; THENCE LEAVING SAID WESTERLY LINE, SOUTH 77°05'11" EAST 965.85 FEET TO THE EASTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID EASTERLY LINE, NORTH 00°00'00" EAST 299.28 FEET TO SAID SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING VARIABLE IN WIDTH); THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, SOUTH 86°11'10" WEST 51.65 FEET; THENCE NORTH 86°11'09" WEST 150.33 FEET; THENCE NORTH 90°00'00" WEST 694.72 FEET; THENCE NORTH 89°59'30" WEST 45.16 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 185,147 SQUARE FEET OR 4.250 ACRES, MORE OR LESS.

REGISTERED
PROFESSIONAL
LAND SURVEYOR



Digitally signed by
Jered McGrath
Date: 2021.03.24
18:50:30 -07'00'

OREGON
JUNE 13, 2008
JERED MCGRATH
79419

RENEWS: 12/31/2022

S&F Land Services

4858 SW Scholls Ferry Rd, Ste A Portland, OR 97225
(503) 345-0328 - www.sflands.com

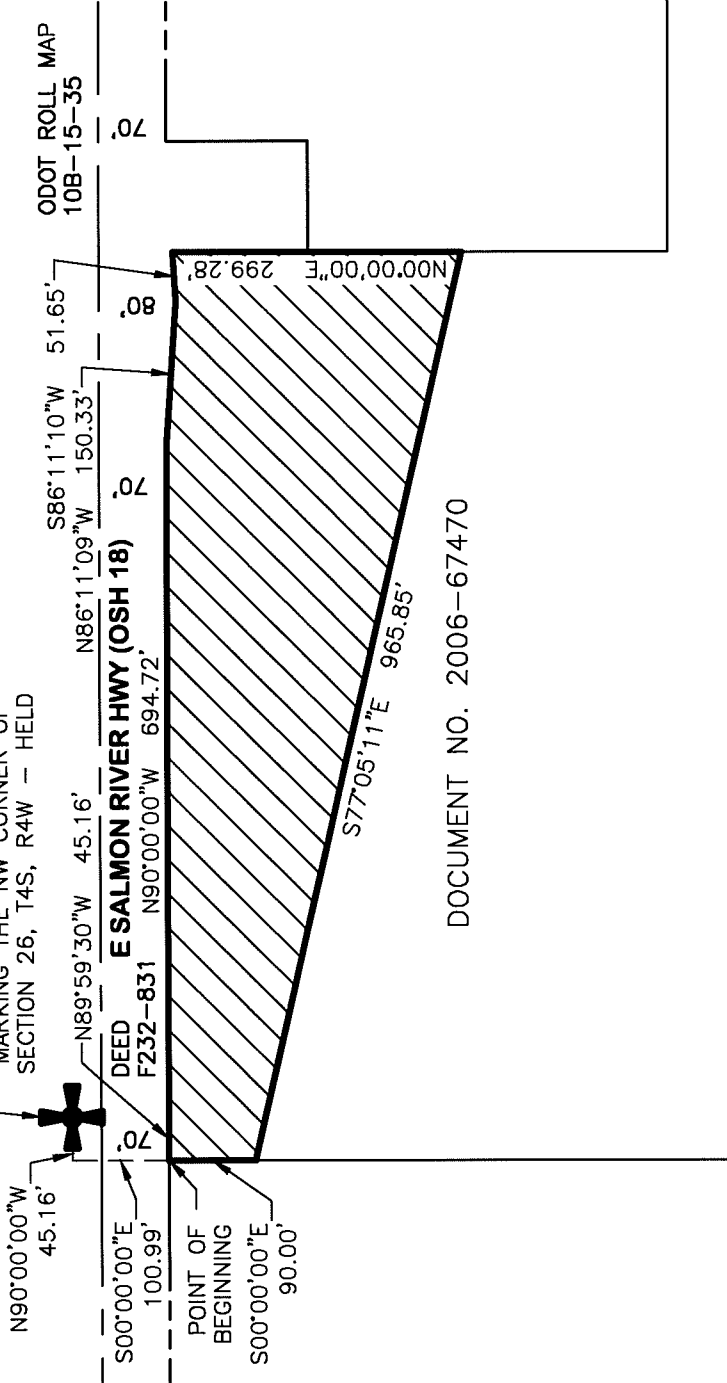
2021-014-63
3/22/21
TLB

P:\2021-014-63 Kimco McMinnville\Survey\Legal Descriptions\Word Documents\2101463_ LEGAL-ROW DED.docx

EXHIBIT B

**EASEMENT FOR RIGHT-OF-WAY PURPOSES
NW 1/4 SECTION 26 & NE 1/4 SECTION 27, T4S, R4W,
W.M., CITY OF MCMINNVILLE, YAMHILL COUNTY, OREGON**

POINT OF COMMENCEMENT A FD.
3" BRASS DISK IN MON. BOX
INSCRIBED "YAMHILL CO. SURVEYOR
1986 22/23/27/26 T4S R4W"
MARKING THE NW CORNER OF
SECTION 26, T4S, R4W - HELD



ODOT ROLL MAP
10B-15-35



1 INCH = 200 FEET

DOCUMENT NO. 2006-67470

LEGEND:

- PARCEL - 1
- AREA OF RIGHT-OF-WAY
185,147 SQUARE FEET OR
4.250 ACRES MORE OR LESS.



Date: 3/24/21
Proj No: 2021-014-63
4858 SW SCHOLLS FERRY ROAD, SUITE A
PORTLAND, OR 97225
www.sflands.com
info@sflands.com
503-345-0328

Attachment 3

Applicable Required Findings

This narrative includes Kimco's findings of compliance with the applicable Statewide Planning Goals, McMinnville Comprehensive Plan. The applicable criteria are in **bold** with the relevant applicant response following in *italics*.

These findings incorporate and are intended to supplement the summary provided in the application narrative. Terms capitalized in these findings but not specifically defined, such as Property and Project, are defined in the application summary.

Sections:

- 1. Summary of Applicable Criteria**
- 2. Statewide Planning Goals**
- 3. McMinnville Comprehensive Plan**
- 4. McMinnville Zoning Ordinance**

1. Summary of Applicable Criteria

The City of McMinnville is currently engaging in several long-range planning efforts that are at various stages of adoption, and rely upon different planning documents and assumptions. From the outset of Kimco's quasi-judicial application, it is important to clarify what are the applicable criteria, what may be relevant as supporting evidence, and what is not applicable to this application.

The applicable approval criteria include relevant provisions of the zoning ordinance and comprehensive plan that are in effect and acknowledged, and Statewide Planning Goals (including implementing statutes and administrative rules). These findings list and address only the relevant provisions of these criteria.

The comprehensive plan includes incorporated plans, such as an economic opportunities analysis. As detailed below, Goal 2 and implementing case law, as well as some of the administrative rules, provide that in order to be applicable to a quasi-judicial planning process, an incorporated study must be acknowledged. However, the data and analyses in furtherance of planning processes that are not applicable can be relied upon as evidence, which as explained in these findings, provides further support for this application. As applied here:

- Economic Opportunities Analysis:
 - The adopted and acknowledged **2013 EOA** (Ordinance No. 4976) is binding on and applicable to this application.
 - Superseded EOA's, such as the 2001 EOA (Ord. 4795) and the reversed and remanded 2003 McMinnville Growth Management and Urbanization are not applicable.
 - Draft but unadopted and unacknowledged updated EOA, such as the **draft 2020 EOA** update, is not applicable.
- 2020 UGB Expansion:
 - Amendment to McMinnville Urban Growth Boundary (the "**2020 UGB Expansion**"): Ordinance 5098, adopted December 8, 2020: amends the McMinnville Comprehensive Plan Map, McMinnville Comprehensive Plan and McMinnville Municipal Code (Chapter 17), approving the McMinnville Growth Management and Urbanization Plan (**MGMUP**) and its appendices, and expanding McMinnville's' UGB. This decision is in response to Oregon Court of Appeal's remand of the 2003 UGB

Expansion, which was based in part on the then-applicable 2001 EOA. Ordinance 5098 has not yet been acknowledged and is not applicable.

- Three Mile Lane Area Plan
 - The Three Mile Lane Area Plan (the “**3MLAP**”) is a draft that has not been adopted or acknowledged. It is not binding upon this application.

A. Summary of Goal 2 and Case Law

Oregon Statewide Planning Goal 2, Part I, requires that a local land use authority’s quasi-judicial decision must be based on “an adequate factual base.” A study or assessment constitutes an adequate factual base for purposes of Goal 2 when it is “incorporated” into the jurisdiction’s comprehensive plan or acknowledged planning documents. *1000 Friends v Dundee*, 203 Or App 207, 216 (2005). For an assessment to be “incorporated” into these authorities, it must be both adopted and effective. *1000 Friends v Dundee*, LUBA Nos. 2004-144 and 2004-145, 2006 WL 559077 (Feb. 23, 2006) (on remand, interpreting that “incorporate[ion]” requires “adopt[ion]”); *Craig Realty Group v. City of Woodburn*, 39 Or LUBA 384, 396 (Feb. 2, 2001) (affirming City’s use of then- effective housing inventory, despite that new inventory was being developed, because only the current inventory “describe[d] the . . . provisions of the comprehensive plan”).

Though these Goal 2 requirements apply to all “land use actions,” they are particularly important when an action involves “estimat[ing] the amount of needed land.” See *D. S. Parklane Development, Inc. v. Metro*, 165 Or App 1, 22-23 (2000) (holding Metro could not rely on urban growth report not yet adopted as part of the comprehensive plan because, “[u]nder Goal 2, the computation of need must be based upon the functional plan and/or Metro’s other applicable planning documents”). Nor may a jurisdiction avoid these requirements by attempting to merely “update” an assessment that was previously adopted and incorporated by reference into planning standards. See *Lengkeek v. City of Tangent*, 54 Or LUBA 160, 166 (Apr. 25, 2007) (city could not “rely on [an] updated [buildable lands inventory (“BLI”)] without first amending the [comprehensive plan] to replace the expired BLI with the updated BLI”).

The Court of Appeals has explained the purpose behind these requirements:

The comprehensive plan is the fundamental document that governs land use planning. Citizens must be able to rely on the fact that the acknowledged comprehensive plan and information integrated in that plan will serve as the basis for land use decisions, rather than running the risk of being “sandbagged” by government’s reliance on new data that is inconsistent with the information on which the comprehensive plan was based.

1000 Friends v Dundee, 203 Or App at 216.

Unadopted planning efforts, such as the draft 2020 EOA or 3MLAP, which are not adopted, effective and acknowledged do not constitute an “adequate factual base” on which the City may base its land use findings during this quasi-judicial planning process. Simply put, the draft 2020 EOA is not a valid land use criterion and cannot be the sole basis for consideration of Kimco’s application. To employ it as such would pose the very risk the *1000 Friends v. Dundee* court warned against — that stakeholders in the land use process would be “sandbagged” by having to interpret and apply information inconsistent with the information that informed the operative comprehensive plan. However, these unadopted analyses and the supporting data may be relied upon to confirm or further support approval of Kimco’s application, so long as the primary basis for the approval is the adopted and acknowledged information, such as the 2013 EOA. *McDougal Bros. Investments v. City of Veneta*, 59 Or LUBA 207 (2009); *Shamrock Homes LLC v. City of Springfield*, 68 Or LUBA 1, 12 (2013); *see also Gunderson, LLC v. City of Portland*, 62 Or LUBA 403, rev’d in part on other grounds and remanded, 243 Or App 612, 259 P3d 1007 (2011), other grounds aff’d 352 Or 648, 290 P3d 803 (2012).

In summary, so long as the acknowledged information such as the 2013 EOA provides an adequate primary basis for the City’s approval, the decision can be further supported with new unacknowledged data. The findings below comply with this mandate. The 2013 EOA and acknowledged portions of the adopted comprehensive plan support the conclusion that some of the City’s excess industrial land should be converted to satisfy the deficit of commercial land and describe conversion suitability factors. While Kimco’s analysis could stop there, the application also evaluates the data and analysis in updated but unadopted planning efforts, such as the 3MLAP, which provide further support for the application because those analyses show that the commercial deficit is growing and that the Three Mile Lane area is a suitable location for commercial development.

2. Statewide Planning Goals

A post-acknowledgement comprehensive plan amendment, such as this application, must comply with all applicable Statewide Planning Goals. The Goals that will be most relevant to this application are (A) Goals 9 and (B) 12.

A. Goal 9: Economy of the State

The state’s Goal 9 resource page can be accessed at:
<https://www.oregon.gov/lcd/OP/Pages/Goal-9.aspx>

The requirements of Goal 9 are detailed in the administrative rules in OAR Chapter 660, Division 9:
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3059>

- **Applicant Response:** *Goal 9 requires the City to “[t]o provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and*

prosperity of Oregon's citizens." See www.oregon.gov/LCD/docs/goals/goal9.pdf) and ORS 197.712(1). As relevant to this application, Goal 9 requires the City to provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for industrial and commercial uses consistent the City's comprehensive plan and the acknowledged 2013 EOA. *Shamrock Homes LLC v. City of Springfield*, 68 Or LUBA 1 (2013) (a proposed amendment must be consistent with the City's "most recent economic opportunities analysis and the parts of its acknowledged comprehensive plan" which address Goal 9).

The 2013 EOA determined that the City has a deficit of 35.8 acres of commercial land and a surplus of 235.9 acres of industrial land¹ and concludes that excess industrial land should be converted to commercial land to address the unfulfilled need. 2013 EOA, pg 56, Table 26. Goal 9's requirement for an adequate land supply requires that the land need in the 2013 EOA be met, meaning that the identified deficit of commercial land must be remedied. Goal 9 does not prohibit providing land in excess of the adopted land need. For example, hypothetically, converting 50 acres of industrial land to commercial land is consistent with Goal 9 because post-amendment, there is an adequate supply (meaning no deficit) of industrial and commercial land. Simply stated, conversion from one category of land to another can result in a surplus in one or both categories, so long as a deficit is not created in any category.

Goal 9 does not consider only the total acreage needed in a particular category. The suitability of the land to meet an identified need is also relevant. "Suitable" land is defined as "serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed use." OAR 660-009-0005(12). "Site characteristics" relate to features that a site needs to accommodate a particular use, and is defined to mean "the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes." OAR 660-009-0005(11).

As applied here, the 2013 EOA recommends to re-designate "at least" 36 acres from industrial to commercial use, which will allow retail development that captures retail leakage and growth related retail needs. The 2013 EOA (see pg. 57, 62, and 73) describes the suitability factors to consider when determining which sites to redesignate,

¹ Although not applicable, as reference, the 2001 EOA concluded that the City has a deficit of 106 acres of commercial land and the draft 2020 EOA estimates that the commercial land deficit ranges from 286 to 295 acres, with a surplus of 159 acres of industrial land.

which these findings refer to as the **“2013 EOA Conversion Suitability Factors,”** as including:

- “sites with the greatest suitability for commercial development” (2013 EOA, pg. 62)
 - The 2013 EOA lays the groundwork for subsequent and more detailed analysis of **“retail leakage”** when it notes:
 - *“Retail sales leakage occurring due to lack of major comparison retail. As described by the 2007 MEDP Strategic Plan, there is considerable retail sales leakage of an estimated \$192 million annually throughout Yamhill County – as residents travel to other counties for a significant 23% of their shopping needs. Full recapture of this sales leakage together with anticipated population growth that was anticipated through 2011 was estimated to support as much as 800,000 square feet of added commercial retail space in Yamhill County. Recapture is dependent on the ability to identify sites and attract retailers that could serve much of the county’s population from locations readily accessible to major travel corridors.”* (2013 EOA, Pg 32)
 - *“...the ability to provide a full range of commercial services in McMinnville may reduce the need for out-shopping from this trade area – with area customers at present often traveling further to more distant destinations as in the Portland Tri-County or Salem area.”* 2013 EOA, pg. 71.
 - Retail leakage, and related suitability considerations are described in detail in the 3MLAP and 2020 EOA. These studies provide evidence in support of the Property’s suitability for commercial development, particularly retail leakage:
 - *“Retail prospects are relatively strong for certain retail sectors, despite relatively weak market conditions (including rent, vacancy, absorption, etc.). The Three Mile Lane study area likely checks off many site selection criteria and market characteristics typically desired by prospective retailers. While there are few retailers currently in the area, desired physical characteristics, such as visibility, vacant developable land, and ease of access are all present. Further, McMinnville’s central location between the Oregon Coast, the Portland Metro, and Salem provides access to a wide variety of markets. Significant household growth and the burgeoning tourism industry will continue to improve retail prospects.”* 3MLAP, pg. 2.

- 3MLAP, Table ES-3 summarizes that the market area demand is for 539,200 sf of retail and estimates that the Three Mile Lane area will provide 150,000 sf of that demand, noting “the study area is well-positioned for new retail development, particularly large-format retail. Neighborhood-serving retail may be a mid-to long-term aspiration when additional residential construction occurs.” However, the plan emphasizes that “it is important to note that these numbers are not specific recommendations; rather they simply provide an indication of the potential program mix based on market strength. Changes to the mix and specific numbers are anticipated with changes to the zoning, land supply, and public interventions, among other market disrupters.” 3MLPA, 4.
 - The 2020 EOA refers back to the 3MLAP and retail leakage to conclude “an additional 539,000 square feet of retail development in the McMinnville market area over the coming decade, with 150,000 square feet (or about 28%) being captured in the Three Mile Lane area.” 2020 EOA, pg. 47.
- “transportation access” (2013 EOA, pg. 57)
- The Property’s frontage on and access to Highway 18 is an important site characteristic that contributes to its suitability for commercial development, particularly retail leakage. The 2013 EOA notes that traffic patterns are “of particular importance for retail and service businesses” which are “reliant on high traffic counts,” and that trends show increasing traffic counts on Highway 18, shifting away from Highway 99W. 2013 EOA, 33.
 - The 2013 EOA concludes that “recapture [of retail sales leakage] is dependent on the ability to identify sites that attract retailers that could serve much of the county’s population from locations readily accessible to major travel corridors.” 2013 EOA, pg. 32.
 - Moreover, “sites in the McMinnville UGB offer the potential to serve a local and regional market...Centrally located [within the County] with good highway access and street visibility can be instrument to attract commercial business that may require market area of 50,000-100,000+ population.” 2013 EOA, pg. 32.
 - The 3MLAP provide additional evidentiary support for the Property’s suitability for retail development, based upon its frontage on and access to Highway 18 when the plan concludes:

“The Three Mile Lane project area is relatively well-positioned for retail development due to high visibility, ease of access, high traffic counts along Highway 18, and there are few alternative urban areas between McMinnville and the coast, providing opportunities to capture spending from those visiting the Oregon coast.

“Additionally, as one of the few locations in the market area with large, contiguous, vacant tracts of land within city limits, Three Mile Lane should be able to capture a significant portion of market area demand over the next 10 years.” 3MLAP, pg. 51-52.

- “compatibility with neighboring uses” (2013 EOA, pg. 57)
 - *The only existing neighboring uses south of Highway 18 are the Jackson Family Winery and the US Army National Guard Armory and Recruiting Office, which are located on M-2 and M-1 land east of the Property, farming activity on the M-L zoned land to the west, and farming activity on the land zoned M-2 to the south. Given the width of Highway 18, land north of the highway is not “neighboring” the Property. Nevertheless, the uses north and north east of the Property include a senior housing development and single family development (R1 and R-4 zoning) and to the northwest is the Evergreen Aviation & Space Museum (C-3PD zoning).*
 - *The 2013 EOA supports the conclusion that industrial and commercial zoning are compatible with one another, and suggest that a new hybrid industrial-commercial zoning designation could be appropriate for areas transitioning from industrial to commercial. 2013 EOA, pg. 57.*
 - *For the development of larger scale retail like the Project is expected to include, the Property’s location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. The only potential offsite impact is traffic. As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. In comparison, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville “feel.”*

- *The Property is within the City’s Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft “includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development.” (3MLAP Memorandum 6, pg 10-13)*

- *“infrastructure capacity” (2013 EOA, pg. 57)*
 - *The 2013 EOA, pg. 66, notes that “as a general condition, no major deficiencies have been identified through this EOA update process to date with respect to adequacy of public transportation and utility facilities to serve vacant and underutilized commercial and industrial properties.”*
 - *The TIA concludes that with required improvements to occur at the time of development, the proposed rezone results in no significant impacts.*
 - *As noted above in the “compatibly with neighboring uses” section, the Property is more suitable for commercial development than some existing C-3 zoned parcels because of the lack of negative impact that the Property’s traffic mitigation measures will have to the vicinity.*

- *“site size distribution” (2013 EOA, pg. 57)*
 - *The 2013 EOA, pg. 61 notes that the commercial lands shortfalls “can be expected across a wide range of parcel sizes.”*
 - *The average parcel size of the 131 acres of commercially designated land studied in the 2013 EOA is about 2 acres, and Figure 27 indicates there is one vacant commercially designated parcels that is 11 acres, and 2 over 20 acres. 2013 EOA.*
 - *The limited supply of large, buildable, commercially designated vacant land is confirmed by the 2020 EOA, which notes that 27 acres (approximately 30% of the buildable commercial land) is subject to the Evergreen Aviation & Space Museum Planned Development, which limits uses to tourism-related uses consistent with the master plan. 2020 EOA, pg. 72. 2020 EOA, Exhibit 39 shows that there are zero vacant or partially vacant C-3 lots, and a single 12.1 acre partially vacant C-3 lot.*

- *The 2020 EOA notes that the deficit of needed site sizes for commercial land is for sites between 0.5 and 5 acres, as well as between 10 and 20 acres. 2020 EOA, pg. 102 and Exhibit 57. The Property's two parcels are approximately 25.3 acres and 5.25 acres.*

Because Kimco's application will convert over two acres of industrial land to a non-industrial use, the application must comply with one of the alternatives in OAR 660-009-0010(4), which provides:

Section 4 - OAR 660-009-0010(4): For a post-acknowledgement plan amendment under OAR chapter 660, division 18, that changes the plan designation of land in excess of two acres within an existing urban growth boundary from an industrial use designation to a non-industrial use designation, or another employment use designation to any other use designation, a city or county must address all applicable planning requirements, and:

(a) Demonstrate that the proposed amendment is consistent with its most recent economic opportunities analysis and the parts of its acknowledged comprehensive plan which address the requirements of this division; or

(b) Amend its comprehensive plan to incorporate the proposed amendment, consistent with the requirements of this division; or

(c) Adopt a combination of the above, consistent with the requirements of this division

- **Applicant Response:** *The 2013 EOA determined that the City has a deficit of 35.8 acres of commercial land and a surplus of 235.9 acres of industrial land and concludes that excess industrial land should be converted to commercial land to address the unfulfilled need. 2013 EOA, pg 56, Table 26. These findings detail how the proposal to convert 33.5 acres of industrial land to commercial land is consistent with the 2013 EOA and comprehensive plan. When the application is approved, the City will be closer to accommodating the commercial land need, and the supply of industrial land will remain adequate because it will continue to be in excess of (but closer to) the adopted industrial land need. Additionally, Figure 27 of the 2013 EOA indicates that there are 5 industrial parcels that are 20+ acres in size, so the City will continue to have an adequate supply of larger industrial parcels.*

B. Goal 12: Transportation

Goal 12 is intended to "provide and encourage a safe, convenient and economic transportation system." See www.oregon.gov/LCD/docs/goals/goal12.pdf). Goal 12 is implemented by the administrative rules in OAR chapter 660, division 12, which is known as the "Transportation Planning Rule" or "TPR."

<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3062>

- **Applicant Response:** *Kittelson & Associates Transportation Impact Analysis (TIA) includes detailed findings in response to the TPR, which are incorporated herein.*

3. McMinnville Comprehensive Plan (Volume 2: Goals and Policies)

Chapter IV: Economy of McMinnville

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Policy 21.00: Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the City. Such uses shall locate according to the goals and policies in the comprehensive plan.

- **Applicant Response:** *The 2013 EOA's conclusion about retail leakage, which is supported by the 2020 EOA and 3MLAP, is quoted above. The application summary findings in the "Property Description" and Project Background" sections and these findings describe the Property's suitability for capturing retail leakage and accommodate population-growth related retail demand. The proposed rezone will allow (upon subsequent land use reviews) which are not presently available or are underserved, to locate on the Property.*

Policy 21.01: The City shall periodically update its economic opportunities analysis to ensure that it has within its urban growth boundary (UGB) a 20-year supply of lands designated for commercial and industrial uses. The City shall provide an adequate number of suitable, serviceable sites in appropriate locations within its UGB. If it should find that it does not have an adequate supply of lands designated for commercial or industrial use it shall take corrective actions which may include, but are not limited to, re-designation of lands for such purposes, or amending the UGB to include lands appropriate for industrial or commercial use.

- **Applicant Response:** *In support of the requested land use change designation, the adopted 2013 EOA stated:*

"As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- *Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.*

- *Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.*

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56)

The proposal to rezone 33.5 excess industrial acres to commercial is consistent with Policy 21.01 and the 2013 EOA. The Property is suitable for commercial zoning, as described in the “Suitability of the Property for Conversion from Industrial to Commercial” section of the application findings and detailed throughout these findings, the Property includes site characteristics which are conducive to capturing retail leakage and accommodating population growth-related retail, such as visibility from and access to Highway 18 and proximity to retail leakage markets.

Policy 21.03: The City shall support existing businesses and industries and the establishment of locally owned, managed, or controlled small businesses.

- **Applicant Response:** *The 2013 EOA indicates that there will be an annual leakage of \$192 million in consumer spending in Yamhill County to areas outside its boundaries (Pg 32) along with a shortfall of 36 commercially designated acres through 2033 (Pg 56). Furthermore, the 2013 EOA states local businesses suffer from “Limited duration of tourism visitation & low expenditure capture. While the McMinnville area and Yamhill County can now boast some of the state’s top tourism attractions, visitor spending does not appear to match visitation. This is because visitors tend not to stay overnight (but are often day visitors) and do not appear to be making substantial expenditures while in the area. A key challenge for the future is to provide more and better value-added opportunities for visitors to spend more time and money while visiting the McMinnville area.” (2013 EOA Pg 32-33)*

The Property is suitable for capturing retail leakage documented in the 2013 EOA and further supported by the 2020 EOA and 3MLAP, as quoted above. Because the leakage sales are not being met in the market, existing businesses do not rely upon those sales, which means that satisfying the leakage will not impact existing business. Instead, existing businesses could be supported by retail development of the Property because consumers will stay within and be drawn to the market area.

Policy 21.05: Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the city. Such uses shall locate according to the goals and policies in the comprehensive plan

- **Applicant Response:** *See response to Policy 21.00.*

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future commercial lands, and discouraging strip development.

- **Applicant Response:** *The 2013 EOA concluded that utilizing existing commercially designated lands are not sufficient to accommodate the demonstrated commercial land need, and that re-designating excess industrial land is the solution.*

No specific development is proposed with this application. Once a formal project application is submitted to the City, the requested Planned Development overlay designation means that the development will be subject to the Planned Development Ordinance. The project application will be open to public comment, be reviewed by the Planning Commission, and approved at the discretion of the City Council. The project layout and design elements shall be assessed at that time.

General Policies:

Policy 22.00: The maximum and most efficient use of existing commercially designated lands will be encouraged as will the revitalization and reuse of existing commercial properties.

- **Applicant Response:** *The types of retail that is leaking from the City requires parcels that range from 5 to 20+ acres. The City's inventory of vacant and partially vacant commercially designated properties in that size range are very limited: the 2013 EOA, Figure 27 indicates there is one vacant commercially designated parcels that is 11 acres, and 2 over 20 acres, one of which is the Evergreen Aviation & Space Museum, which is encumbered with a tourism-related PUD; 2020 EOA, Exhibit 39 shows that there are zero vacant or partially vacant C-3 lot. This lack of inventory led the s, and a single 12.1 acre partially vacant C-3 lot the 2013 EOA concluded that utilizing existing commercially designated lands was not sufficient to accommodate the demonstrated commercial land need, and that re-designating excess industrial land is the solution. Therefore, the ability of existing commercial lands to be revitalized and reused will not be impacted by this amendment, because the needed retail uses that will be facilitated by this amendment cannot be accommodated on existing commercially zoned parcels.*

Policy 24.00: The cluster development of commercial uses shall be encouraged rather than auto-oriented strip development.

- **Applicant Response:** *No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance which will discourage auto-oriented strip development. The project application will be open to public*

comment, be reviewed by the Planning Commission, and approved at the discretion of the City Council. The project layout and design elements shall be assessed at that time.

Locational Policies:

Policy 24.50: The location, type, and amount of commercial activity within the urban growth boundary shall be based on community needs as identified in the Economic Opportunities Analysis.

Applicant Response: *The 2013 EOA identified a deficit of at least 36 acres of commercial land, which should be accommodated by redesignating excess industrial land. The 2013 EOA Conversion Suitability Factors (detailed above), as well as the 3MLAP and 2020 EOA, support the conclusion that the Property is suitable to accommodate retail leakage and growth-related retail uses. Among the Property's key site characteristics are site size, proximity to retail leakage markets, and visibility and access to Highway 18.*

Policy 25.00 Commercial uses will be located in areas where conflicts with adjacent land uses can be minimized and where city services commensurate with the scale of development are or can be made available prior to development.

Applicant Response: *The only existing adjacent uses south of Highway 18 are the Jackson Family Winery and the US Army National Guard Armory and Recruiting Office, which are located on M-2 and M-1 land east of the Property, farming activity on the M-L zoned land to the west, and farming activity on the land zoned M-2 to the south. Given the width of Highway 18, land north of the highway is not "adjacent" to the Property. Nevertheless, the uses north and north east of the Property include a senior housing development and single family development (R1 and R-4 zoning) and to the northwest is the Evergreen Aviation & Space Museum (C-3PD zoning).*

The Property is within the City's Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft "includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development." (3MLAP Memorandum 6, pg 10-13)

For the development of larger scale retail like the Project is expected to include, the Property's location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. The only potential offsite impact is traffic. As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with

capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. In comparison, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville “feel.”

Specifically for the Property, Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. (Attachment XX) The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address and minimize potential conflicts, if any, through revisions or conditions of approval, and any deficiencies in city services can be addressed through conditions of approval.

Policy 26.00: **The size of, scale of, and market for commercial uses shall guide their locations. Large-scale, regional shopping facilities, and heavy traffic-generating uses shall be located on arterials or in the central business district, and shall be located where sufficient land for internal traffic circulation systems is available (if warranted) and where adequate parking and service areas can be constructed.**

- **Applicant Response:** *As detailed in response to Policy 25.00 the Property is an appropriate location for commercial development. No specific development is proposed with this application. However, the type of retail that could be developed on the property that is intended to capture retail leakage would likely be considered large-scale or a regional shopping facility by Policy 26.00. The Property is a suitable location for these commercial uses based upon Policy 25.00's and 26.00's considerations. The Property is located on OR 18, which McMinnville's TSP classifies as a Major Arterial and a State Highway. The 33.5 acre Property is adequately sized to accommodate internal traffic circulation and parking. For example, the site plan at Exhibit XX includes an internal road system.*

Design Policies

Policy 29.00: New direct access to arterials by large-scale commercial developments shall be granted only after consideration is given to the land uses and traffic patterns in the area of development as well as at the specific site. Internal circulation roads, acceleration/deceleration lanes, common access collection points, signalization, and other traffic improvements shall be required wherever necessary, through the use of planned development overlays.

Policy 30.00: Access locations for commercial developments shall be placed so that excessive traffic will not be routed through residential neighborhoods and the traffic-carrying capacity of all adjacent streets will not be exceeded.

Policy 31.00: Commercial developments shall be designed in a manner which minimizes bicycle/pedestrian conflicts and provides pedestrian connections to adjacent residential development through pathways, grid street systems, or other appropriate mechanisms. (Ord.4796, October 14, 2003)

Policy 32.00: Where necessary, landscaping and/or other visual and sound barriers shall be required to screen commercial activities from residential areas.

Policy 33.00: Encourage efficient use of land for parking; small parking lots and/or parking lots that are broken up with landscaping and pervious surfaces for water quality filtration areas. Large parking lots shall be minimized where possible. All parking lots shall be interspersed with landscaping islands to provide a visual break and to provide energy savings by lowering the air temperature outside commercial structures on hot days, thereby lessening the need for inside cooling. (Ord.4796, October 14, 2003)

- **Applicant Response:** *No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address*

the Project's access, bicycle/pedestrian connections, landscaping/screening, parking, layout and design elements shall be assessed at that time.

Goal IV 4: To promote the downtown as a cultural, administrative, service, and retail center of McMinnville.

Downtown Development Policies

Policy 36.00: The City of McMinnville shall encourage a land use pattern that:

- 1. Integrates residential, commercial, and governmental activities in and around the core of the city;**
- 2. Provides expansion room for commercial establishments and allows dense residential development;**
- 3. Provides efficient use of land for adequate parking areas;**
- 4. Encourages vertical mixed commercial and residential uses; and,**
- 5. Provides for a safe and convenient auto-pedestrian traffic circulation pattern. (Ord.4796, October 14, 2003)**

- **Applicant Response:** *This application for designating additional land as "Commercial" in Comprehensive Plan under a C-3 zoning district would potentially permit additional retail development within the City that cannot be accommodated in the format of downtown merchant spaces. One fundamental goal of this land use change application is to maintain consumer spending within the City limits and will contribute to the overall vibrancy and well being of residents. Rather than cannibalizing retail dollars from the downtown district, alleviating the shortage of commercial acreage that is attributable to retail leakage could draw shoppers to McMinnville for a spectrum of needs that currently cannot be found within the City limits.*

Policy 41.00: The City of McMinnville shall encourage the expansion of retail and other commercial enterprises east of the railroad tracks and north and south of Third Street consistent with the adopted "Downtown Improvement Plan."

- **Applicant Response:** *The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville's commercial business district. Despite this land being designated "Commercial" land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the area east of the railroad tracks and north and south of Third Street.*

Policy 46.00: The City shall work to implement the recommendations of the adopted “McMinnville Downtown Improvement Plan.”

- **Applicant Response:** *The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville’s commercial business district. Despite this land being designated “Commercial” land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the McMinnville Downtown Improvement area.*

Proposals

Policy 6.00: A planned development overlay should be placed on the large cluster commercial development areas and the entrances to the City to allow for review of site design, on-site and off-site circulation, parking, and landscaping. The areas to be overlaid by this designation shall be noted on the zoning map and/or comprehensive plan map.

- **Applicant Response:** *The application requests a Planned Development overlay, consistent with Policy 6.00. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project’s site design, on-site and off-site circulation, parking, and landscaping, shall be assessed at that time.*

Policy 8.00: The City of McMinnville should encourage the development of a commercial planned development center in the southwestern portion of the city large enough in scale to serve the needs of the area’s population. The center should be in proximity of the intersection of Old Sheridan Road, U.S. Highway 99W, and Oregon Highway 18.

- **Applicant Response:** *This area is already zoned C-3, which allows large scale commercial development, and is currently undeveloped. The 2013 EOA included this area as a part of the City’s inventory of available commercial land and concluded that there is nevertheless a 35.8 acre deficit. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the southwestern portion of the city.*

Industrial Development

Goal IV 5: To continue the growth and diversification of McMinnville’s industrial base through the provision of an adequate amount of properly designated lands.

- **Applicant Response:** *In support of the requested land use change designation, the adopted 2013 EOA stated:*

“As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- *Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.*
- *Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.*

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56). Figure 27 of the 2013 EOA indicates that there are 5 industrial parcels that are 20+ acres in size, so the City will continue to have an adequate supply of larger industrial parcels if the Property is converted from Industrial to Commercial.

Goal IV 6: To ensure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

Locational Policies

Policy 49.00: The City of McMinnville shall use its zoning and other regulatory methods to prevent encroachment into industrial areas by incompatible land uses.

- **Applicant Response:** *The 2013 EOA concluded that there is an excess amount of industrial land. Converting some of that surplus land to commercial will have no impact on the uses permitted in the remaining industrial land. Further, 3MLP that is currently moving through the community and legislative review process recommends a mix of commercial and industrial uses within this area, specifically focusing commercial districts along the OR-18 frontage.*

Policy 49.01: The City shall designate an adequate supply of suitable sites to meet identified needs for a variety of different parcel sizes at locations which have direct access to an arterial or collector street without having to pass through residential neighborhoods.

Policy 49.02: The location, type, and amount of industrial activity within the Urban Growth Boundary shall be based on community needs as identified in the Economic Opportunities Analysis.

Policy 50.00: The City of McMinnville shall encourage industrial uses to locate adjacent to the airport and south of Three Mile Lane, adjacent to the existing Riverside Drive industrial area, and in existing industrial areas through proper designation of lands on the comprehensive plan and zoning maps. Comprehensive plan and/or zoning map changes to industrial designations in other areas may be granted if all the applicable goals and policies of the plan can be met.

- **Applicant Response:** *Policies 49.01, 49.02 and 50.00 are directed at the suitability of sites for industrial development. The 2013 EOA has “recommended to better match the commercial inventory to current and anticipated needs include re-designating a portion of the excess industrial inventory to commercial use including focus on needs for commercial sites across a range of size classes, increasing emphasis on redevelopment and density of development, and greater flexibility of use for mixed commercial/industrial areas. Also needed may be parcelization of some larger 20+ acre industrial sites for which there is no readily apparent demand to meet demonstrated needs for smaller industrial sites, especially in the 1-9- acre size ranges.” (2013 EOA, Pg 67).*

The 2013 EOA Conversion Suitability Factors (detailed above) confirm that the Property has site characteristics that are more appropriate for commercial development than industrial development. Redesignating the Property from Industrial to Commercial will not impact the adequacy of the supply of suitable industrial sites; the City will continue to have a surplus of over 200 acres of industrial land, including four parcels that are 20+ acres. 2013 EOA, Figure 27.

The Property is within the City’s Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft “includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development.” (3MLAP Memorandum 6, pg 10-13)

Policy 51.00: The City of McMinnville shall encourage the location of airport-related industrial uses only on the industrial land which is adjacent to the

airport. Those lands so reserved shall be designated in the planned development overlay covering this area.

- **Applicant Response:** *The Property is near the airport, but does not abut it, and is separated from the airport by a public park (Galen McBee Airport Park), the South Yamhill River, a military base and the Jackson Family Winery. The portion of the Property closest to the airport is the southerly 52.5 acres that will retain an Industrial land use designation.*

Policy 52.00: **The City of McMinnville shall create a new "limited light industrial" zone which shall be placed on the industrial areas on the south side of Three Mile Lane in those areas where residential development is expected on the north side of the road. The new zone will allow only those types of industrial uses that will not conflict with the residential uses.**

- **Applicant Response:** *Policy 52.00 is directed at the City pursuing a legislatively created new zoning designation. Policy 52.00 reflects the City's desire to minimize conflicts with residential uses north of Three Mile Lane. As detailed elsewhere in these findings, the uses allowed by the proposed C-3PD designation are more compatible with residential uses than those uses permitted allowed by the current M-3 zoning, which is consistent with Policy 52.00. Further, the City is in the process of re-evaluating the Three Mile Lane Area through the 3MLAP. That city-led long range planning process is the forum for addressing Policy 52.00.*

Chapter VI: Transportation System

Air

Policies:

Policy 115.00: **The City of McMinnville shall encourage the development of compatible land uses in the vicinity of the airport as identified in current and future airport and comprehensive plans**

- **Applicant Response:** *The Property is within .5 miles of the McMinnville Municipal Airport. While the Airport Layout Plan completed in 2004 discourages the expansion of residential use near the airport and encourages agricultural and manufacturing areas, it does not explicitly address commercial use (McMinnville Municipal Airport Layout Plan Study – December 2004, 1-9). The request to add a commercial element through the land use designation and zoning change would not run incongruent to the future sustainability and potential expansion of the airport.*

Streets

Policies:

Policy 119.00 The City of McMinnville shall encourage utilization of existing transportation corridors, wherever possible, before committing new lands.

- **Applicant Response:** *The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.*

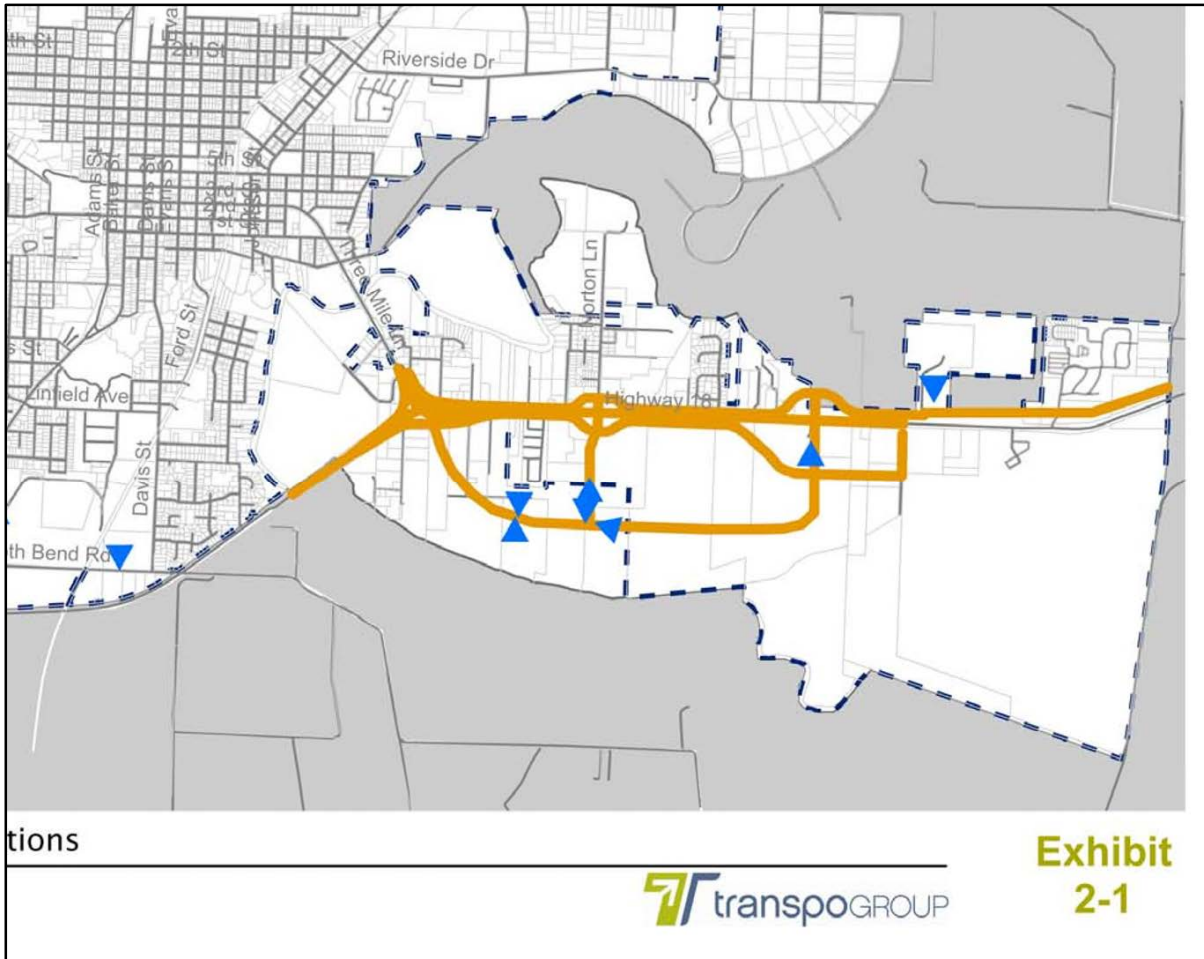
Policy 123.00: The City of McMinnville shall cooperate with other governmental agencies and private interest to insure the proper development and maintenance of the road network within the urban growth boundary.

- **Applicant Response:** *Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The scope, methodology, findings and recommendations have been coordinated with the City of McMinnville and the Oregon Department of Transportation (ODOT). In addition, at the time development is proposed on the Property in the future, the City of McMinnville will notice the ODOT, surrounding project owners, and the city at-large, issue a staff report and conduct planning commission and city council hearings to assess that proper development and maintenance of the road network is ensured.*

Connectivity and Circulation

Policy 132.26.05: New street connections, complete with appropriately planned pedestrian and bicycle features, shall be incorporated in all new developments consistent with the Local Street Connectivity map.

- **Applicant Response:** *The Local Street Connectivity (Exhibit 2-1 of the TSP) map identifies future east/west frontage road and back road connections south of OR 18, as shown in the figure below. The subsequent development of the Property under the proposed zoning will require the development of collector streets consistent with the transportation system plan and McMinnville (OR-18) Corridor Refinement Plan which require sidewalks and bicycle lane. The proposed development plan will need to show these connections as well as how pedestrians and bicyclists access the buildings on-site.*



Supportive of General Land Use Plan Designations and Development Patterns

Policy 132.27.00: The provision of transportation facilities and services shall reflect and support the land use designations and development patterns identified in the McMinnville Comprehensive Plan. The design and implementation of transportation facilities and services shall be based on serving current and future travel demand—both short-term and long-term planned uses.

- Applicant Response:** *The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed transportation facility modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan. Development will include construction of the collector streets identified in the TSP Exhibit 2-1 (frontage and back roads). As part of the design of these roadways, sidewalks and bicycle lanes will be provided.*

Growth Management

Policy 132.40.00: Mobility standards will be used to evaluate the transportation impacts of long-term growth. The City should adopt the intersection mobility standards as noted in Chapter 2 of the Transportation System Plan.

- **Applicant Response:** *The TIA study intersections within the City's jurisdiction and ODOT's jurisdiction and applied each jurisdiction's applicable mobility standard as a basis for recommending mitigation measures. See, for example, TIA Table 2 and 18.*

McMinnville TSP Implementation

Policy 132.62.00: (TSP as Legal Basis) The City of McMinnville shall use the McMinnville TSP as the legal basis and policy foundation for actions by decision-makers, advisory bodies, staff, and citizens in transportation issues. The goals, objectives, policies, implementation strategies, principles, maps, and recommended projects shall be considered in all decision-making processes that impact or are impacted by the transportation system.

- **Applicant Response:** *The proposed rezone and subsequent development of the subject property is consistent with the goals, objectives, policies, implementation strategies, principles, maps, and recommended projects within the McMinnville TSP as shown below:*

Goal: To encourage development of a transportation system that provides for the coordinated movement of people and freight in a safe and efficient manner.

The proposed rezone and subsequent commercial development work in the direction of achieving this goal by providing intersection improvements to increase the safety and traffic flow of the surrounding roadway network for all users. The proposed modifications are consistent with the implementation strategies (McMinnville (OR-18) Corridor Refinement Plan) as shown in Exhibit 4-6 (Projects and Programs) in the TSP, as well as the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plan maps set forth in the TSP.

Policies:

1. Transportation System Plan

The proposed site plan will be developed consistent with the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plans set forth in the TSP. The proposed rezoning and subsequent commercial development will fund transportation improvements which will work toward implementing the TSP.

2. Complete Streets

The traffic signals and intersection improvements identified in the TIA will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines. Site development will aim to create a pedestrian and bicycle friendly environment.

3. Multi-Modal Transportation System

The site plan review process will ensure that the proposed site is consistent with the Local Street Connectivity map and provides connections for pedestrians and bicycles.

4. Connectivity and Circulation

The Local Street Connectivity map identifies a future east/west connection south of OR 18. The site plan will be developed consistent with this plan and providing this connection. Pedestrian and bicycle facilities will be provided as appropriate for each roadway classification. Site development will preserve right-of-way for design of a future interchange at OR 18 and Cumulus Avenue.

5. Supportive of General Land Use Plan Designations and Development Patterns

The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

6. Regional Mobility

The location of the proposed site along OR 18 provides ease of access to regional centers such as downtown McMinnville, Lafayette, and Newberg. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

7. Growth Management

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area. Additionally, the improvements recommended in the TIA bring local intersections (some of which do not meet level of service standards under existing conditions) up to standard. The proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

8. Transportation System and Energy Efficiency

The location of the proposed site along OR 18 provides opportunity for transportation system and energy efficiency with easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. In addition, the proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today

9. Transportation Safety

The traffic impact analysis (TIA) recommends modifications to improve the safety of the OR 18 corridor and other intersections within the study area.

10. Public Safety

The site plan review process will ensure that emergency vehicle access is provided on the proposed site. In addition, the safety improvements identified in the TIA should result in crash reductions as a number of intersections within the study area.

11. Accessibility for Persons with Disabilities

On-site connections, as well as traffic signal and intersection improvements identified in the TIA, will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines.

12. Economic Development

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area.

13. Livability

The site plan review process will incorporate multi-modal facilities to increase the livability of the greater McMinnville area.

14. Health and Welfare

The proposed site will be accessible via many modes of transportation, including transit and active transportation (by bicycle and by foot).

15. Transportation Sustainability

The location of the proposed site along OR 18 provides easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may also

reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today. The traffic impact analysis (TIA) recommends some modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site.

16. Aesthetics and Streetscaping

The site plan review process will incorporate aesthetics and streetscaping to enhance visitor experience and livability of the greater McMinnville area.

17. Intergovernmental Coordination and Consistency

Kittelson & Associates, Inc., prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The methodology, findings and recommendations have been coordinated with the City of McMinnville and ODOT Region 2.

Chapter VII: Community Facilities and Services

Goal VII-1: *To provide necessary public and private facilities and utilities at levels commensurate with urban development, extended in a phased manner, and planned and provided in advance of or concurrent with development, in order to promote the orderly conversion of urbanizable and future urbanizable lands to urban lands within the McMinnville Urban Growth Boundary.*

- **Applicant Response:** *This Goal is targeted primarily at rural land that is included in the UGB and is transitioning to urbanizable and urban land, and directs the City to plan utilities for that transition. The Property is in the UGB, so this Goal is not applicable. Nevertheless, when development is proposed and evaluated through a public process in the future, the adequacy of public and private facilities for the development will be determined.*

Sanitary Sewer System

Policies:

Policy 138.00: **The City of McMinnville shall develop, or require development of, sewer system facilities capable of servicing the maximum levels of development envisioned in the McMinnville Comprehensive Plan**

- **Applicant Response:** *This Goal is targeted primarily at the City's facility planning. There are no known sanitary sewer deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of sewer system facilities will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.*

Storm Drainage

Policies:

Policy 142.00: The City of McMinnville shall insure that adequate storm water drainage is provided in urban developments through review and approval of storm drainage systems, and through requirements for connection to the municipal storm drainage system, or to natural drainage ways, where required.

- **Applicant Response:** *No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project's storm drainage shall be assessed at that time.*

Water and Sewer—Land Development Criteria

Policies

Policy 151.00: The City of McMinnville shall evaluate major land use decisions, including but not limited to urban growth boundary, comprehensive plan amendment, zone changes, and subdivisions using the criteria outlined below:

1. Sufficient municipal water system supply, storage and distribution facilities, as determined by McMinnville Water and Light, are available or can be made available, to fulfill peak demands and insure fire flow requirements and to meet emergency situation needs.
2. Sufficient municipal sewage system facilities, as determined by the City Public Works Department, are available, or can be made available, to collect, treat, and dispose of maximum flows of effluents.
3. Sufficient water and sewer system personnel and resources, as determined by McMinnville Water and Light and the City, respectively, are available, or can be made available, for the maintenance and operation of the water and sewer systems.
4. Federal, state, and local water and waste-water quality standards can be adhered to.
5. Applicable policies of McMinnville Water and Light and the City relating to water and sewer systems, respectively, are adhered to.

- **Applicant Response:** *There are no known water or sewage deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of water and sewer system facilities will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.*

Police and Fire Protection

Policies

Policy 155.00: **The ability of existing police and fire facilities and services to meet the needs of new service areas and populations shall be a criterion used in evaluating annexations, subdivision proposals, and other major land use decisions.**

- **Applicant Response:** *There are no known police or fire facility or service deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of these facilities and services will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.*

Chapter VIII Energy

Energy Conservation

Goal VIII 2: **To conserve all forms of energy through utilization of land use planning tools.**

- **Applicant Response:** *One of the fundamental policies backing the rationale for this land use change request is the consumer spending leakage highlighted in the 2013 EOA. By allowing more potential retail development within the City, residents will no longer be required to drive longer distances to destinations such as Salem or southwest Portland for their needs, which conserves energy.*

Policies

Policy 178.00: **The City of McMinnville shall encourage a compact urban development pattern to provide for conservation of all forms of energy.**

- **Applicant Response:** *Statewide Planning Goal 14 and its implementing statutes and rules require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need. The 2013 EOA demonstrates a need for retail and an excess of industrial land, and the proposed comp plan designation and zoning map amendments satisfy a portion of this need. Accommodating the identified land need within the UGB is consistent with Goal 14 and encourages a compact urban development pattern.*

Chapter IX: Urbanization

Goal IX 1: To provide adequate lands to service the needs of the projected population to the year 2023, and to ensure the conversion of these lands in an orderly, timely manner to urban uses.

- **Applicant Response:** *The 2013 EOA quantifies the industrial and commercial land needs for the projected population and concludes that there is a need for retail and an excess of industrial land. The proposed Comprehensive Plan land use designation and zoning map amendments accommodate a portion of the commercial land need. Converting excess industrial land to needed commercial land is consistent with Statewide Planning Goal 14 and its implementing statutes and rules, which require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need.*

Land Use Development Tools

Policies

Policy 186.00: The City of McMinnville shall place planned development overlays on areas of special significance identified in Volume I of the McMinnville Comprehensive Plan. Those overlays shall set forth the specific conditions for development of the affected properties. Areas of significance identified in the plan shall include but not be limited to:

1. Three Mile Lane (north and south).

- **Applicant Response:** *The application requests a Planned Development overlay, consistent with Policy 186.00.1. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. Those ordinances require specific conditions for development of the Property, and will be reviewed in a public process.*

Chapter X: Citizen Involvement and Plan Amendment

Goal X 2: To periodically review and amend the McMinnville Comprehensive Plan to reflect changes in community circumstances, in citizen desires, and in the statewide goals.

- **Applicant Response:** *This Goal obligates the City to periodically review its Comprehensive Plan, so is not applicable to this application. Nevertheless, the application is consistent with this Goal because the proposal to revise the comprehensive land use plan designation for the site is responsive to the oversupply of industrial and demand for retail as addressed in the 2013 EOA. While consistent with the Three Mile Line Area Plan currently moving through the*

legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.

4. McMinnville Zoning Ordinance

17.74.020 Comprehensive Plan Map Amendment and Zone Change - Review Criteria.

An amendment to the official zoning map may be authorized, provided that the proposal satisfies all relevant requirements of this ordinance, and also provided that the applicant demonstrates the following:

- A. The proposed amendment is consistent with the goals and policies of the Comprehensive Plan.**
 - **Applicant Response:** *The analysis provided in Section 3 of this attachment demonstrates the application's compliance with the City's Comprehensive Plan and other adopted policies.*

- B. The proposed amendment is orderly and timely, considering the pattern of development in the area, surrounding land uses, and any changes which may have occurred in the neighborhood or community to warrant the proposed amendment;**
 - **Applicant Response:** *Criterion B is supported by the 2013 EOA, which found that the City could benefit from a regional retail center, that recapture of retail sales leakage could be achieved by concentrating retail along major highways, and that excess industrial land should be re-designated to commercial use when opportunities arise. While consistent with the Three Mile Line Area Plan currently moving through the legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.*

- C. Utilities and services can be efficiently provided to serve the proposed uses or other potential uses in the proposed zoning district.**
 - **Applicant Response:** *There are no known utility or service deficiencies. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will demonstrate the improvements required for City utilities and services to efficiently serve the site.*

17.51 Planned Development Overlay:

17.51.010 Purpose

* * *

B. The Council, the Commission, or the property owner of a particular parcel may apply for a planned development designation to overlay an existing zone without submitting any development plans; however, no development of any kind may occur until a final plan has been submitted and approved. (The Planning Director shall note such properties and direct that no building permit be issued in respect thereto.)

1. A planned development overlay may be approved under these circumstances for a property which has unique characteristics (e.g., geological, ecological, location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole. A planned development overlay initiated by the Council or the Planning Commission shall address itself to the purposes set forth herein.

- **Applicant Response:** *Comprehensive Plan Policy 6.00 recommends placing a Planned Development overlay on large cluster commercial development areas, and other policies encourage heightened review of proposed development to ensure compatibility with nearby uses. These policies provide a basis for imposing a planned development overlay on the Property, which has the unique characteristics of accommodating needed retail uses to accommodate retail leakage and growth related demand.*

C. The Council and Planning Commission, with the assistance of the Planning Director, shall ensure that no planned development overlay granted under Section A or B above which is merely a guise to circumvent the intent of the zoning ordinance shall be approved. A denial of such a zone request based upon this principle shall be enunciated in the findings of fact adopted by the Planning Commission;

- **Applicant Response:** *No specific development is proposed at this time, so the requested Planned Development overlay is not an effort to circumvent the intent of the zoning ordinance. Instead, as noted above, the imposition of the Planned Development overlay is consistent with applicable Comprehensive Plan Policies.*

D. A planned development overlay shall be heard and approved under the public hearing procedures set forth in Chapter 17.72 (Applications and Review Process) of this ordinance. (A planned development overlay and change of the underlying zone may be processed simultaneously.)

- **Applicant Response:** *The Planned Development overlay request is being considered concurrent with the Comprehensive Plan designation and Zoning Map designating*

amendment requests, in compliance with the application and review processes in Chapter 17.72.

E. A planned development overlay proposed by the Council, the Planning Commission, or the property owner under subsection B above shall be subject to all of the hearing requirements again at such time as the final plans under Section 17.51.030 are submitted, unless those requirements have been specifically changed in the planned development approval;

- **Applicant Response:** *The property owner will comply with these requirements at the time final plans for development of the Property are submitted.*



MEMORANDUM

EXPIRES: 12/31/2021

Date: December 18, 2020

Project #: 24369

To: Jamie Fleckenstein, PLA, & Heather Richards, PCED, City of McMinnville
Dorothy Upton, PE, Keith Blair, PE, Dan Fricke, & Michael Duncan, ODOT Region 2

Cc: Michael Strahs, Kimco Realty & Alan Roodhouse, RPS Development Company

From: Kristine Connolly, PE, Marc Butorac, PE, PTOE, PMP & Alec Kauffman

Project: Three Mile Lane Rezone

Subject: Transportation Impact Analysis

Kimco McMinnville, LLC (Kimco) is proposing a rezone of approximately 33.5 acres of vacant land in McMinnville, Oregon. The proposed site is located on the southwest corner of OR-18 (Salmon River Highway) and NE Cumulus Avenue. The site is currently zoned M-2 (General Industrial). Kimco is proposing to rezone to C-3 (General Commercial). The site location and overall site vicinity are shown in Exhibit 1. This transportation impact analysis (TIA) report documents the transportation impacts associated with the rezone and a near-term reasonable worst-case development scenario under the proposed rezone. The TIA is intended to address City of McMinnville and Oregon Department of Transportation (ODOT) review criteria and evaluate compliance with the Transportation Planning Rule (TPR). The results of this study indicate that the proposed rezone can be approved assuming implementation of the identified mitigation measures that result in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060.

Exhibit 1. Site Vicinity and Proposed Study Intersections



SUMMARY OF FINDINGS

Year 2020 Existing Conditions

- Two of the nine study intersections were found to exceed the applicable review agency mobility targets:
 - NE Three Mile Lane/NE 1st Street
 - OR-18/SE Cruickshank Road
- The recent five-year crash history of one study intersection exceeds statewide 90th percentile crash rates:
 - OR-18/SE Cruickshank Road: This unsignalized intersection experienced a large proportion of angle crashes (approximately 80%) over the five-year review period, and approximately 70% of the reported crashes involved a vehicle making a northbound left-turn movement. This suggests a need to potentially restrict left-turns from SE Cruickshank Road onto OR-18 due to the insufficient number gaps in eastbound traffic.

Year 2022 Background Conditions

- The two study intersections that do not satisfy applicable mobility targets under existing conditions experience additional delay with background growth.

Proposed Development Plan

- The 33.5-acre site is currently zoned M-2 (General Industrial). Kimco is proposing to rezone to C-3 (General Commercial).
- Table 1 provides the trip generation estimates under the existing and proposed zoning:

Table 1. Trip Generation Potential Comparison – 33.5-acre Zone Change

Land Use	ITE Code	Size	Daily Trips	PM Peak Hour		
				Total	In	Out
Existing M-2 General Industrial Zone Reasonable Worst-Case Development Scenario						
Medical-Dental Office Building (10 acres at 25%)	720	108,900 SF	4,096	371	104	267
Industrial Park (23.5 acres at 40%)	130	409,464 SF	1,954	164	34	130
Net New Trips			6,050	535	138	397
Proposed C-3 General Commercial Zone Reasonable Worst-Case Development Scenario						
Shopping Center (33.5 acres at 25%) <i>Less Pass-by Trips (34%)</i>	820	364,815 SF	14,496 <i>(4,929)</i>	1,416 <i>(480)</i>	680 <i>(240)</i>	736 <i>(240)</i>
Net New Trips			9,567	936	440	496
Difference = Proposed – Existing			3,517	401	302	99

Year 2022 Total Conditions

- The two study intersections that do not satisfy applicable review agency mobility targets under 2022 background conditions experience additional delay with site development.
- Three additional intersections do not satisfy applicable mobility targets with the addition of site-generated trips:
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue

Year 2037 Background Conditions (Without Proposed Zone Change)

- Assuming the recommendations to mitigate 2022 site impacts are in place, six of the nine study intersections were found to exceed the applicable review agency mobility targets in the planning horizon year 2037, which was selected to represent fifteen years after opening per guidance in the Oregon Highway Plan (OHP, Reference 1):
 - NE 3rd Street/NE Johnson Street
 - NE Three Mile Lane/NE 1st Street
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue
 - OR-18/SE Loop Road

Year 2037 Total Conditions (With Proposed Zone Change)

- The six intersections that do not satisfy applicable review agency mobility targets under 2037 background conditions experience additional delay with site development, with the exception of the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection at which the shift in travel patterns associated with the zone change improve the operating capacity of the intersection.

RECOMMENDATIONS

The following mitigation measures are recommended for implementation in conjunction with the proposed development and to address impacts of the proposed zone change:

- NE Three Mile Lane/NE 1st Street
 - Install a traffic signal and restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - Restrict left-turns from the minor approaches onto Three Mile Lane (left-turns from Three Mile Lane can be maintained). Alternative access can be provided to the approximately ten homes south of Three Mile Lane via an improved connection to SE Mountain View Lane. North of Three Mile Lane, there is alternative access to OR-18 via SE Norton Lane.
- OR-18/SE Norton Lane
 - Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/NE Cumulus Avenue
 - Modify the existing traffic signal and construct a 275-foot exclusive eastbound right-turn lane and 500-foot northbound left-turn lane (left-turns from NE Cumulus Avenue should have permitted/protected phasing). Optimize signal timing to provide additional time to eastbound and westbound through movements. Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.
- OR-18/SE Loop Road
 - Restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway.
- OR-18/SE Cruickshank Road
 - Restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via the OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange.

The proposed rezone can be approved without creating significant impacts per OAR 660-012-0060 assuming these mitigation measures are implemented.

Regardless of the proposed rezone and subsequent development, the following intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/NE 1st Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Additional details of the study methodology, findings and recommendations are provided in the remaining sections of this report.

STUDY SCOPE & ANALYSIS METHODOLOGY

This section provides an overview of the TIA study scope, study intersections, traffic analysis time periods and scenarios, analysis methodology and applicable review agency mobility targets.

Study Scope

This study identifies the transportation-related impacts associated with the proposed rezone and was prepared in accordance with the City of McMinnville and Oregon Department of Transportation (ODOT) requirements. Details of the TIA assumptions and methodology are documented herein and reflect the outcome of the preliminary scoping meeting held with agency staff on March 19, 2020, and agency feedback on the preliminary scoping letter dated April 23, 2020.

Study Intersections

The study intersections are listed below and are identified by a numerical identification corresponding with the analysis figures in this report. Exhibit 1 illustrates the study intersection locations.

1. NE Three Mile Lane/NE 1st Street
2. NE 3rd Street/NE Johnson Street
3. NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
4. SE Norton Lane/NE Cumulus Avenue
5. OR-18/SE Norton Lane
6. OR-18/NE Cumulus Avenue
7. OR-18/SE Armory Way
8. OR-18/SE Loop Road
9. OR-18/SE Cruickshank Road

Traffic Analysis Time Periods and Scenarios

Based on historical traffic data, the weekday PM peak time period represents both the peak travel times along OR-18 and peak weekday commercial site traffic. Therefore, intersection operations were evaluated during the weekday afternoon peak hour occurring between 3:00 – 6:00 PM.

This report evaluates the following transportation scenarios:

- 2020 Existing traffic conditions;
- Forecast year 2022 background traffic conditions, without development of the subject site;
- Forecast year 2022 total traffic conditions with reasonable worst-case development of the subject site under the proposed commercial zoning;
- Horizon year 2037 background traffic conditions with development of the subject site under the existing industrial zoning; and,

- Horizon year 2037 total traffic conditions with reasonable worst-case development of the subject site under the proposed commercial zoning.

Year 2037 was selected as the planning horizon per guidance in the OHP (Reference 1), which states that the planning horizon shall be “the greater of 15 years or the planning horizon of the applicable local and regional transportation system plans for amendments to transportation plans, comprehensive plans or land use regulations.” The planning horizon of McMinnville’s currently adopted Transportation System Plan (TSP, Reference 3) is 2023.

Analysis Methodology

All intersection capacity analyses described in this report were performed in accordance with the procedures stated in the *Highway Capacity Manual, 6th Edition* (HCM, Reference 4) using PTV Vistro 2020 software in accordance with analysis guidance provided in the ODOT Analysis Procedures Manual (APM, Reference 5). Intersection V/C is the operational performance measures reported in this study. In Vistro, the shared lane volume-to-capacity (V/C) ratio is the sum of the reported V/C for each movement in the shared lane at unsignalized intersections. Overall intersection V/C is reported for signalized intersections.

To ensure that the analyses were based on a reasonable worst-case scenario, peak 15-minute flow rates were used in the evaluation of all intersection levels of service. For this reason, the analyses reflect conditions that are only likely to occur for 15 minutes out of each average peak hour.

Queueing analyses presented in this report reflect 95th percentile queues and were obtained from PTV Vistro 2020 software.

Performance Measures & Operating Standards

Study intersection operating standards adopted by the respective transportation review authorities for the facilities they operate and maintain are summarized below.

City of McMinnville Operating Standards

Four study intersections are within City of McMinnville jurisdiction (Intersections #1 through #4). According to the City’s TSP (Reference 3), a v/c ratio of 0.90 is the acceptable operating standard for these intersections.

ODOT Mobility Targets

The 1999 Oregon Highway Plan (OHP, Reference 1) defines ODOT v/c ratio mobility targets based on facility type. Mobility targets vary for intersections along OR-18 (Intersections #5 through #9).

Summary of Applicable Agency Operating Standards

Table 2 summarizes the operation standards and jurisdiction administering each study intersection.

Table 2. Study Intersection Mobility Targets

	Study Intersection	Traffic Control	Jurisdiction	Mobility Target (V/C) ¹
1	NE 3rd Street/NE Johnson Street	Signalized	City of McMinnville	0.90
2	NE Three Mile Lane/NE 1st Street	Two Way Stop Control	City of McMinnville	0.90
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	Two Way Stop Control	City of McMinnville	0.90
4	SE Norton Lane/NE Cumulus Avenue	Two Way Stop Control	City of McMinnville	0.90
5	OR-18/SE Norton Lane	Signalized	ODOT	0.80
6	OR-18/NE Cumulus Avenue	Signalized	ODOT	0.80
7	OR-18/SE Armory Way	Two Way Stop Control	ODOT	major approaches = 0.80 minor approaches = 0.95
8	OR-18/SE Loop Road	Two Way Stop Control	ODOT	major approaches = 0.80 minor approaches = 0.90
9	OR-18/SE Cruickshank Road	Two Way Stop Control	ODOT	major approaches = 0.70 minor approaches = 0.75

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

EXISTING CONDITIONS

The existing conditions analysis identifies field conditions and the current operational, traffic control, and geometric characteristics of the roadways and other transportation facilities within the study area.

Site Conditions and Adjacent Land Uses

The proposed site is currently vacant and zoned for industrial use. The land uses in the vicinity of the site include Evergreen Aviation and McMinnville Municipal Airport to the east, vacant industrial land immediately west, and a mix of industrial, commercial and residential land uses to the north, including the Evergreen Aviation and Space Museum.

Transportation Facilities

Table 3 summarizes roadways in the site vicinity that will be assessed as part of the TIA.

Table 3. Existing Transportation Facilities

Street	Functional Classification ¹	Jurisdictional Authority	Motor Vehicle Travel Lanes	Posted Speed (mph)	Sidewalks	Striped Bicycle Lanes	On-Street Parking
OR-18	Urban Statewide Expressway (Freight Route) (ODOT) Major Arterial and State Highway (McMinnville)	ODOT	4-5	45-55	No	No	No
NE Three Mile Lane/NE 3 rd Street	Major Collector	City of McMinnville	2-3	20-40	Yes	Partial ²	No
NE Johnson Street	Minor Arterial	City of McMinnville	2-3	25	Yes	Yes	No
NE 1st Street	Minor Collector	City of McMinnville	2	25	Partial ³	No	No
SE Nehemiah Lane	Local Street	City of McMinnville	2	35	Partial ⁴	No	No
NE Cumulus Avenue	Minor Collector (North) Major Collector (South)	City of McMinnville	2	35	Partial ⁵	No	No
SE Norton Lane	Minor Collector	City of McMinnville	2-3	NP	Partial ⁶	No	No
SE Armory Way	Minor Collector	City of McMinnville	2	25	No	No	No
SE Loop Road	N/A	City of McMinnville	2	35	No	No	No
SE Cruickshank Road	N/A	City of McMinnville	2	NP	No	No	No

NP = Not Posted

¹Per Oregon Highway Plan (OHP, Reference 1) and *City of McMinnville Transportation System Plan*, Exhibit 2-3 (Reference 3).

²There is a striped bicycle lane on both side from Johnson Street to 1st Street.

³There are sidewalks on the north side of 1st Street west Three Mile Lane.

⁴There are sidewalks on the north side of Nehemiah west of the intersection of Nehemiah Lane and Three Mile Lane.

⁵There are sidewalks on the north side of Cumulus (north) west of Norton Lane and on the west side of Cumulus north of OR-18.

⁶There are sidewalks on the east side of Norton north of OR-18, and on both sides of Norton south of OR-18.

Transit Facilities

Weekday bus service is currently provided by the Yamhill County Transit Area (YCTA) “East-West” Loops along Three Mile Lane between Norton Lane and west side of McMinnville at approximately 60-minute headways between 7:00 AM to 6:00 PM. Weekday headways are approximately 60 minutes.

Intersection Crash History

Reported crash history for each study intersection was reviewed in an effort to identify potential safety issues. ODOT provided crash records for the five-year period from January 1, 2013 through December 31, 2017. Table 4 summarizes the crash data. Appendix A contains the ODOT crash data. No crashes were reported at OR-18/SE Armory Way (Intersection #7).

Table 4. Intersection Crash History (January 1, 2013 through December 31, 2017)

Intersection	Collision Type					Severity			Total Crashes
	Rear End	Turning	Angle	Bike /Ped	Other	PDO ¹	Injury	Fatal	
1 NE 3rd Street/NE Johnson Street	8	4	3	0	1	9	7	0	16
2 NE Three Mile Lane/NE 1st Street	1	1	1	0	0	0	0	0	3
3 NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	4	0	3	0	1	5	3	0	8
4 SE Norton Lane/NE Cumulus Avenue	1	0	0	0	1	1	1	0	2
5 OR-18/SE Norton Lane	12	2	3	1	1	7	12	0	19
6 OR-18/NE Cumulus Avenue	0	2	0	0	0	0	2	0	2
7 OR-18/SE Armory Way	0	0	0	0	0	0	0	0	0
8 OR-18/SE Loop Road	0	0	1	0	0	0	1	0	1
9 OR-18/SE Cruickshank Road	3	2	33	0	4	14	28	0	42

¹PDO = Property Damage Only

ODOT provides an annual list of safety priority index system (SPIS) locations which are based on reported crash data. The intent of the SPIS list is to identify roadway segments exhibiting an unusually high occurrence of crashes and is used to select locations for investigation. Review of the SPIS list determined that the section of OR-18 near Loop Road and Cruickshank Road is within the top fifteen percent of intersections.

Crash rates were calculated for each of the study intersections following the analysis methodology presented in Exhibit 4-1 of the ODOT Analysis Procedures Manual, Version 2 (APM, Reference 5). The APM provides 90th percentile intersection crash rates at a variety of intersection configurations in Oregon based on the number of approaches and traffic control types. Table 5 below shows the comparison of

the five-year crash history with the 90th percentile intersection crash rates from the APM. Crash rates are reported per million entering vehicles.

Table 5. Intersection Crash Rate Assessment

	Location	Total Crashes	90 th Percentile Intersection Crash Rate	Observed Crash Rate at Intersection	Observed>90 th Percentile Crash Rate?
1	NE 3rd Street/NE Johnson Street	16	0.860	0.51	No
2	NE Three Mile Lane/NE 1st Street	3	0.408	0.08	No
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	8	0.408	0.23	No
4	SE Norton Lane/NE Cumulus Avenue	2	0.408	0.18	No
5	OR-18/SE Norton Lane	19	0.860	0.35	No
6	OR-18/NE Cumulus Avenue	2	0.860	0.04	No
7	OR-18/SE Armory Way	0	0.293	0.00	No
8	OR-18/SE Loop Road	1	0.293	0.02	No
9	OR-18/SE Cruickshank Road	42	0.293	1.03	Yes

As shown in Table 5 and the ODOT SPIS list, the intersection of OR-18/Cruickshank Road exceeds statewide 90th percentile crash rates and is in the top fifteen percent of intersections on the SPIS list. This unsignalized intersection experienced a large proportion of angle crashes (approximately 80%). Upon further review, it was found that a high proportion of the crashes reported at this intersection (approximately 70%) involved a vehicle making a northbound left-turn movement. This suggests a need to restrict the northbound left-turns from SE Cruickshank Road onto OR-18 as identified in the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2).

Existing Traffic Volumes

Given the impacted traffic patterns due to the current COVID-19 pandemic and State of Oregon stay at home order, new traffic counts were not collected for this analysis. Rather, historical and detector data was used. Weekday PM peak hour intersection turning movement counts were collected in 2012 for Intersection #3, and ODOT provided 2018 turning movement counts for intersections #2 and #4 through #9 as well as February 2020 signal detector counts at intersection #1. These traffic counts are included in Appendix B.

A 1.3% linear annual growth rate was applied to the 2018 traffic counts and a 1.5% linear annual growth rate was applied to the 2012 traffic counts to estimate year 2020 existing traffic volumes. This rate was calculated based on the average historical traffic volumes recorded at ODOTs Automatic Traffic Recorder (ATR) 36-006 located southwest of the City of McMinnville on Highway 18 and ATR 36-004 located northeast of the City of McMinnville in Newberg on Highway 99W.

A seasonal adjustment factor was calculated and applied to the 2020 traffic volumes to reflect 30th highest hour conditions, per the APM (Reference 5) using the same ATRs as noted above. This seasonal adjustment factor calculation is included in Appendix C.

Existing Traffic Operations

Existing intersection capacity was assessed using the previously described analysis methodology and compared to the respective agency operating standards. Existing lane configurations and traffic control devices at the study intersections are included in Appendix C.

Table 6 summarizes the existing 2020 traffic operations for the weekday PM peak hour. Appendix C includes the existing conditions intersection operations analysis worksheets.

Table 6. Estimated 2020 Existing Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.70
2	NE Three Mile Lane/NE 1st Street	0.90	EBR	0.98
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.74
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.21
5	OR-18/SE Norton Lane	0.80	-	0.68
6	OR-18/NE Cumulus Avenue	0.80	-	0.54
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.12
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.27
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.09

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 6, all but two study intersections were found to operate acceptably under 2020 existing conditions. The following intersections exceed the applicable performance requirement:

- NE Three Mile Lane/NE 1st Street
 - This intersection (#2) does not satisfy the City of McMinnville’s standard of a V/C ratio ≤ 0.90. Over-capacity conditions on the eastbound approach are related to the high southbound through volume on Three Mile Lane.
- OR-18/SE Cruickshank Road
 - This intersection (#9) does not satisfy ODOT’s mobility target of a V/C ratio ≤ 0.75 on the SE Cruickshank Road approach. As stated previously, the crash history at this intersection shows a high proportion of angle crashes associated with the northbound left-turn movement, which likely reflects an inefficient number of available gaps in eastbound OR-18 traffic.

TRANSPORTATION IMPACT ANALYSIS

The transportation impact analysis identifies how the study area's transportation system will operate in the future with and without development of the site under the proposed zone change.

Year 2022 Background Traffic Volumes and Conditions

Future traffic volumes were derived by applying a 2.2% annual background growth rate to the 2020 existing traffic volumes. This annual growth factor was derived from previous studies of the area surrounding the site and the City's EMME 2 model used for the City's TSP, and should thus reflect growth associated with the land use assumptions in the TSP. In addition, the City of McMinnville provided information regarding three recently completed land use actions in the vicinity of the study area. These are generally consistent with existing zoning, and therefore should be included in the 2.2% growth rate associated with the land use assumptions in the TSP.

The City's Transportation System Plan (TSP) calls for two future new interchanges at OR-18/NE Three Mile Lane and OR-18/NE Cumulus Avenue as part of the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2). These two new interchanges are intended to replace the overpass at OR-18/NE Three Mile Lane and signal at OR-18/NE Cumulus Avenue in anticipation of traffic growth. The TSP also identifies a future traffic signal at the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection. These improvements are not funded at this time and conversations with City and ODOT staff have indicated that the identified improvements cannot be relied upon to receive funding within the timeframe of this TIA.

Year 2022 Background Traffic Operations

Table 7 summarizes the 2022 background traffic conditions for the weekday PM peak hour. Appendix D includes the 2022 background conditions intersection operations analysis worksheets.

As shown in Table 7, the two study intersections that do not satisfy applicable mobility targets under existing conditions experience additional delay with background growth.

Table 7. Estimated 2022 Background Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.73
2	NE Three Mile Lane/NE 1st Street	0.90	EBR	1.08
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.84
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.22
5	OR-18/SE Norton Lane	0.80	-	0.70
6	OR-18/NE Cumulus Avenue	0.80	-	0.56
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.13
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.32
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.20

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Year 2022 Background Traffic Mitigations

The following mitigation measures are recommended to address the impacts of anticipated background growth:

- NE Three Mile Lane/NE 1st Street
 - Install a traffic signal. Preliminary ODOT traffic signal warrants are met assuming up to a 77% reduction in right-turn volumes in the shared eastbound left-through-right lane. At this location on the urban Three Mile Lane corridor, an 85% reduction (which is typically used by ODOT) is unreasonable given the unique nature of the high southbound through volumes with limited gaps for vehicles turning from the minor approaches.
- OR-18/SE Cruickshank Road
 - Restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange. Exhibit 2 illustrates these alternatives.

Exhibit 2. Reroute of Northbound Left-Turns at OR-18/SE Cruickshank Road

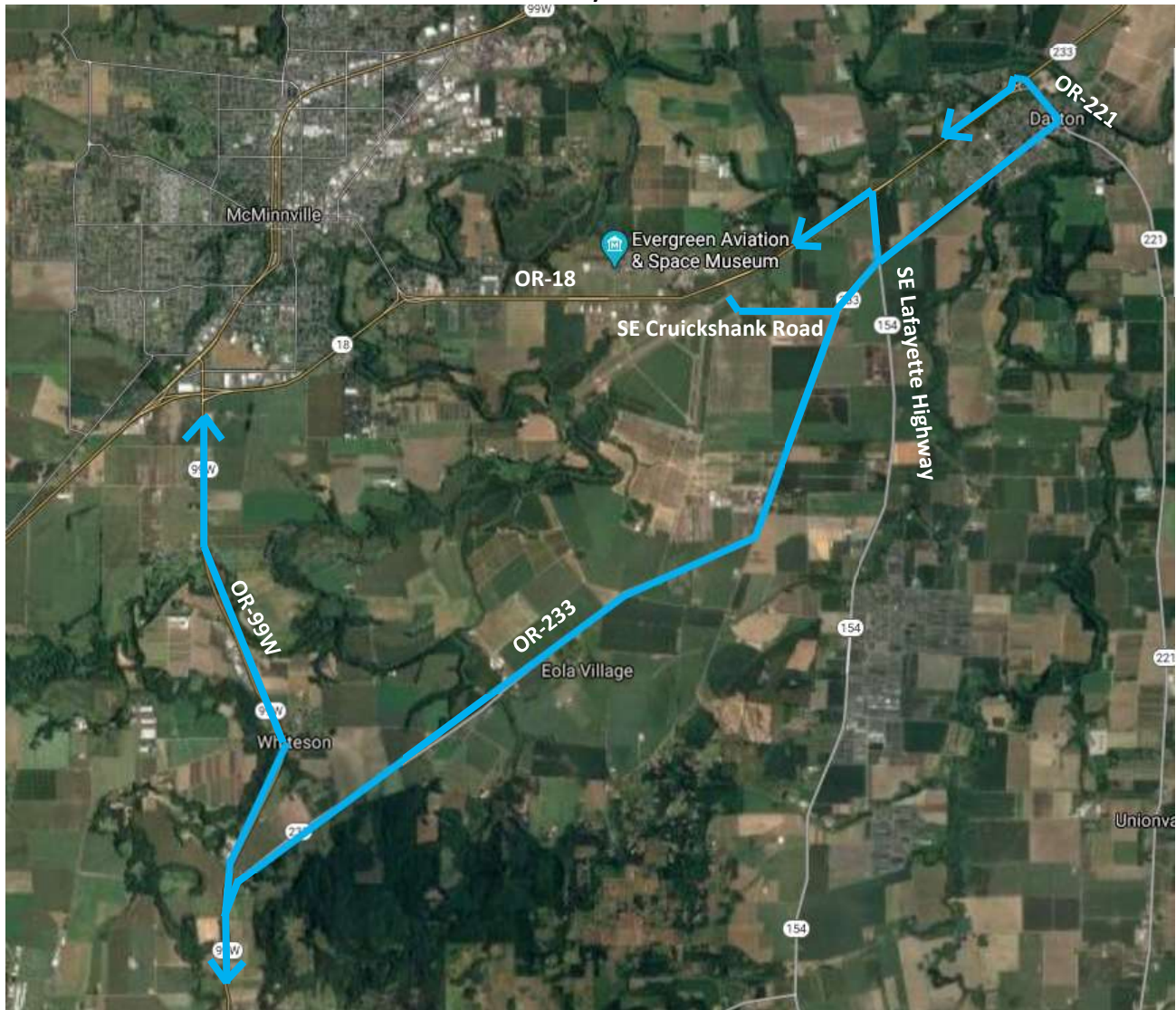


Table 8 summarizes the 2022 background traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix E includes the 2022 background conditions intersection operations analysis worksheets with mitigation.

As shown in Table 8, all study intersections were found to operate acceptably under 2022 background conditions with the identified mitigation.

Table 8. Estimated 2022 Background Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.73
2	NE Three Mile Lane/NE 1st Street	0.90	-	0.85
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.84
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.22
5	OR-18/SE Norton Lane	0.80	-	0.70
6	OR-18/NE Cumulus Avenue	0.80	-	0.56
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.13
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.32
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.04

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right
V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)
CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Trip Generation and Assignment

To provide a conservative analysis, this report assumes a reasonable worst case for the existing and proposed zoning in accordance with the City of McMinnville zoning code. Based on the allowable land uses in the code, it was determined that the reasonable worst-case scenario under the existing M-2 (General Industrial) zoning would consist of the following land uses:

- Based on the site’s close proximity to the Willamette Valley Medical Center, 10 out of the 33.5 acres is assumed to be medical office with a floor area ratio (FAR) of approximately 0.25, for a total floor area of approximately 108,900 square feet.
- The remaining 23.5 acres is assumed to be industrial park with a FAR of approximately 0.40, for a total floor area of approximately 409,464 square feet.

The reasonable worst-case scenario under the proposed C-3 (General Commercial) zoning was calculated assuming a retail development with a FAR of approximately 0.25 over the entire site area of 33.5 acres, for a total floor area of approximately 364,815 square feet.

Trip generation estimates for both scenarios were developed using data from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (Reference 6). The trip generation estimates were adjusted to reflect pass-by trips, or vehicle trips to the site already traveling along OR-18. Pass-by trips to don’t change the traffic conditions on the overall system, but do change the turning movements at the OR-18/NE Cumulus Avenue intersection. Table 9 compares the trip generation estimates under the existing and proposed zoning for the weekday PM peak hour.

Table 9. Trip Generation Potential Comparison – 33.5-acre Zone Change – Weekday PM Peak Hour

Land Use	ITE Code	Size	Daily Trips	Total	In	Out
Existing M-2 General Industrial Zone Reasonable Worst Case Development Scenario						
Medical-Dental Office Building (10 acres at 25%)	720	108,900 SF	4,096	371	104	267
Industrial Park (23.5 acres at 40%)	130	409,464 SF	1,954	164	34	130
Net New Trips			6,050	535	138	397
Proposed C-3 General Commercial Zone Reasonable Worst Case Development Scenario						
Shopping Center (33.5 acres at 25%)	820	364,815 SF	14,496	1,416	680	736
<i>Less Pass-by Trips (34%)</i>			<i>(4,929)</i>	<i>(480)</i>	<i>(240)</i>	<i>(240)</i>
Net New Trips			9,567	936	440	496
Difference = Proposed - Existing			3,517	401	302	99

As shown in Table 9, the proposed zone change would increase the trip generation potential of the site compared to the existing industrial zoning by 401 trips during the weekday PM peak hour. These new trips were assigned to the study area roadway system based on existing traffic patterns and forecast market data for the proposed development, also maintaining consistency with the scope of study for the site approved by both agencies in 2012. The site will serve local areas such as McMinnville, Dayton, and as far reaching as Newberg and in addition will also provide services to reach currently underserved locations in the Willamette Valley, and along the central northern Oregon coast. The traffic generated by the proposed development is expected to follow this trip distribution pattern:

- 35 percent to the west on OR-18 (serving southern McMinnville, the parts of the central Willamette Valley and the northern Oregon coast);
- 35 percent to the north on Three-Mile Lane (serving downtown and the majority of McMinnville); and
- 30 percent to the east via OR-18 (serving Dayton, outlying areas, and portions of Newberg).

Within the City of McMinnville, it is expected that the commercial uses under the rezoning will result in a re-allocation of trips to/from and within the downtown area. For example, many trips originating from the residential areas along OR-18 and regionally that currently travel to the downtown area today will alter their trips to visit the new commercial businesses and thus reduce trips entering the downtown areas. Conversely, a proportion of the trips already occurring in the downtown areas (e.g., trips from the residential areas to the west of OR-99W that travel to downtown and the southwest commercial areas by the college) may travel to the new commercial area creating new trips on OR-18. The proposed development and type of land uses will also result in capturing more regional trips (e.g., residents in McMinnville that currently travel to Salem or the greater Portland area to shop) that originate in McMinnville and keeping them local. These trips will be shorter in nature and will still travel within the downtown area, but won't represent new trips within that area.

With that in mind, the origins and destinations of commercial trips within McMinnville were assessed to estimate the expected re-routing of some trips at study intersections within the City of McMinnville (Intersections #1 through #3). The details of this analysis assessing the cumulative impacts of new and

re-routed trips within McMinnville are provided in Appendix F. The weekday PM peak hour site-generated trip assignment under the proposed zoning is also included in Appendix F.

Year 2022 Total Traffic Operations

The total traffic conditions analysis forecasts the operation of the study area’s transportation system with the inclusion of traffic generated by site under the proposed commercial zoning. Total traffic conditions were determined by adding the estimated site-generated trips to the year 2022 background traffic volumes for the weekday PM peak hour.

Table 10 summarizes the 2022 total traffic operations for the weekday PM peak hour. Appendix F includes the 2022 total conditions intersection operations analysis worksheets.

Table 10. Estimated 2022 Total Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.74
2	NE Three Mile Lane/NE 1st Street	0.90	EBR	1.16
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.98
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.23
5	OR-18/SE Norton Lane	0.80	-	0.82
6	OR-18/NE Cumulus Avenue	0.80	-	1.21
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.18
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.45
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.53

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right
V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)
CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 10, the two study intersections that do not satisfy applicable mobility targets under existing or 2022 background traffic conditions experience additional delay with site development. In addition, three other intersections do not satisfy applicable mobility targets with the addition of site-generated trips:

- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - The minor street approaches at this intersection (#3) do not satisfy the City of McMinnville’s standard of a V/C ratio ≤ 0.90. Over-capacity conditions on the minor approaches are related to the high through volumes on OR-18.
- OR-18/SE Norton Lane

- This intersection (#5) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 . The overall intersection capacity is reduced below the mobility target due to increased eastbound and westbound traffic through the intersection associated with site development.
- OR-18/NE Cumulus Avenue
 - This intersection (#6) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 . Additional turn lanes are needed to accommodate site-related traffic at this intersection.

Year 2022 Total Traffic Mitigations

The following mitigation measures are recommended for implementation in conjunction with the proposed development:

- NE Three Mile Lane/NE 1st Street
 - Consistent with 2022 background conditions, install a traffic signal.
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - Restrict left-turns from the minor approaches onto Three Mile Lane (left-turns from Three Mile Lane can be maintained). Alternative access can be provided to the approximately ten homes south of Three Mile Lane via an enhanced connection to SE Mountain View Lane. North of Three Mile Lane, there is alternative access to OR-18 via SE Norton Lane.
- OR-18/SE Norton Lane
 - Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/NE Cumulus Avenue
 - Modify the existing traffic signal and construct an exclusive eastbound right-turn lane and northbound left-turn lane (left-turns from NE Cumulus Avenue should have permitted/protected phasing). Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/SE Cruickshank Road
 - Consistent with 2022 background conditions and historical crash trends at the intersection, restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange (see Exhibit 2).

Table 11 summarizes the 2022 total traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix G includes the 2022 total conditions intersection operations analysis worksheets with mitigation.

Table 11. Estimated 2022 Total Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.74
2	NE Three Mile Lane/NE 1st Street	0.90	-	0.87
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.58
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.23
5	OR-18/SE Norton Lane	0.80	-	0.80
6	OR-18/NE Cumulus Avenue	0.80	-	0.79
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.18
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.45
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	0.05

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right
V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)
CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Year 2022 Total Traffic 95th Percentile Queues

Year 2022 total traffic weekday PM peak hour 95th percentile queues at the OR-18/NE Cumulus Avenue intersection with implementation of recommended mitigation measures are summarized in Table 12.

Table 12. Summary of 95th Percentile Queues, 2022 Total Traffic Conditions

Intersection	Movement	Available Queue Storage (feet)	95 th Percentile Queue (feet)	Queue Storage Adequate?
			Weekday PM Peak Hour	
6 OR-18/NE Cumulus Avenue	NBL	New	525	Yes
	NBTR	Continuous	350	Yes
	SBL	125 (Striped) Additional Storage in excess of 300	100	Yes
	SBT	Continuous	0	Yes
	SBR	125 (Exclusive) Additional Storage in excess of 300 ¹	200	Yes
	EBL	125	75	Yes
	EBT	Continuous	425	Yes
	EBR	New	200	Yes
	WBL	125 (Striped) Additional Storage in excess of 300	225	Yes
	WBT	Continuous	525	Yes
WBR	175	50	Yes	

Where: EB = eastbound, WB = westbound, NB = northbound, SB = southbound, L = left-turn, T = through, R = right-turn

Queues rounded up to the nearest vehicle length, assumed to be 25 feet

¹During occasions of peak queueing, the southbound through lane may be used for overflow storage from the southbound right-turn lane.

As shown in Table 12, all 95th percentile queues during year 2022 total mitigated traffic conditions would be accommodated by the available storage. Based on the anticipated 95th percentile queues, it is recommended that the new northbound left-turn lane be constructed with 525 feet of storage, and the new eastbound right-turn lane be constructed with at least 250 feet of storage (the storage length required for anticipated 2037 95th percentile queues, to be described in more detail later in this report).

Year 2037 Background Traffic Volumes and Conditions

Consistent with the 2022 background traffic volumes, future volumes were derived by applying a 2.2% annual background growth rate to the 2022 existing traffic volumes. However, this growth factor already accounts for development of the site under the existing industrial zoning. Therefore, the growth rate to obtain 2037 background traffic volumes was reduced to approximately 1.7% so as not to double-count site trips through the study intersections.

The 2037 background traffic conditions analysis forecasts the operation of the study area's transportation system with the inclusion of traffic generated by site under the existing industrial zoning. Background traffic conditions were determined by adding the estimated site-generated trips (under existing zoning) and additional 15 years of background growth (at 1.7%) to the year 2022 background traffic volumes for the weekday PM peak hour.

This analysis assumes the implementation of all improvements recommended to mitigate year 2022 total traffic conditions.

Year 2037 Background Operations

Table 13 summarizes the 2037 horizon year background traffic operations for the weekday PM peak hour. Appendix H includes the 2037 background conditions intersection operations analysis worksheets.

As shown in Table 13, the following intersections are expected to exceed the applicable performance requirement in 2037 with the addition of background growth:

- The NE 3rd Street/NE Johnson Street intersection (#1) does not satisfy the City of McMinnville's standard of a V/C ratio ≤ 0.90 .
- The NE Three Mile Lane/NE 1st Street intersection (#2) does not satisfy the City of McMinnville's standard of a V/C ratio ≤ 0.90 .
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street (#3) does not satisfy the City of McMinnville's standard of a V/C ratio ≤ 0.90 .
- OR-18/SE Norton Lane (#5) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 .
- OR-18/NE Cumulus Avenue (# 6) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 .
- The OR-18/SE Loop Road intersection (#8) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.90 on the SE Loop Road approach.

Table 13. Estimated 2037 Background Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.97
2	NE Three Mile Lane/NE 1st Street	0.90	-	1.04
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.98
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.32
5	OR-18/SE Norton Lane	0.80	-	0.93
6	OR-18/NE Cumulus Avenue	0.80	-	0.83
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.37
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.95
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.08

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Year 2037 Background Traffic Mitigations

The following mitigation measures are recommended to address the impacts of anticipated long-term growth:

- NE Three Mile Lane/NE 1st Street
 - Restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- OR-18/SE Loop Road
 - Restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway. Exhibit 3 illustrates these alternatives.

Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.

Exhibit 3. Reroute of Southbound Left-Turns at OR-18/SE Loop Road

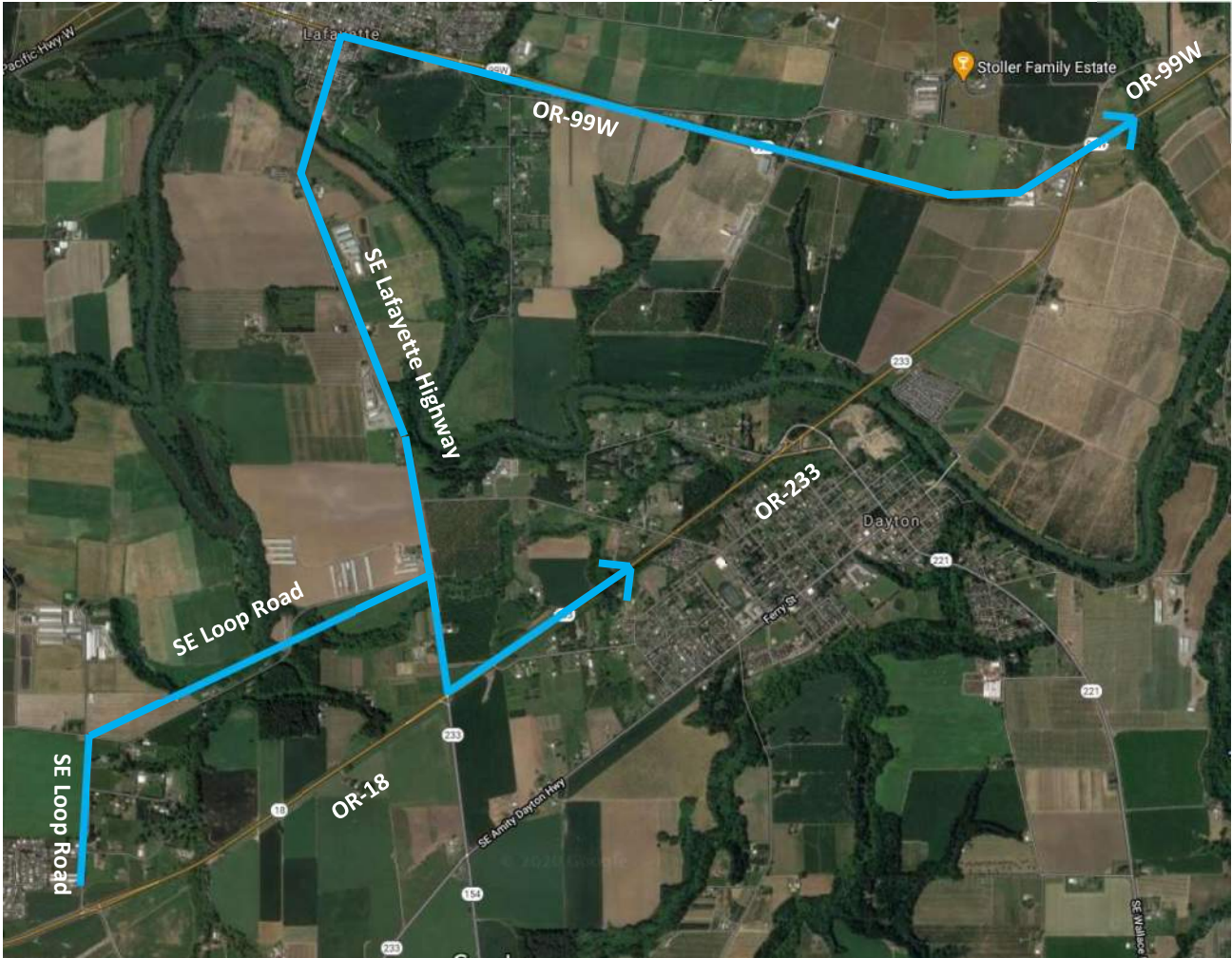


Table 14 summarizes the 2037 background traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix I includes the 2037 background conditions intersection operations analysis worksheets with mitigation.

Table 14. Estimated 2037 Background Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.97
2	NE Three Mile Lane/NE 1st Street	0.90	-	0.98
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.98
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.32
5	OR-18/SE Norton Lane	0.80	-	0.93
6	OR-18/NE Cumulus Avenue	0.80	-	0.77
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.37
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.09
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.08

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 14, with implementation of the recommended mitigation at NE Three Mile Lane/NE 1st Street, intersection operations are still anticipated to exceed the applicable performance requirement in 2037 with the addition of background growth. However, the V/C under 2037 total traffic conditions is improved from 2037 background traffic conditions (as will be demonstrated later in this report). The following three intersections are also expected to exceed the applicable performance requirement in 2037:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Regardless of the proposed rezone and subsequent development, these intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations. As will be demonstrated later in this report, the change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J). Therefore, no additional mitigation is recommended as part of this report at these four intersections which continue to exceed applicable agency mobility targets under 2037 mitigated conditions.

Year 2037 Total Traffic Volumes

The 2037 total traffic conditions analysis forecasts the operation of the study area’s transportation system with the inclusion of additional site trips associated with the proposed rezone. Total traffic conditions were determined by adding the difference in site-generated trips between the existing and proposed zoning to the year 2037 background traffic volumes for the weekday PM peak hour.

Year 2037 Total Traffic Operations

Table 15 summarizes the 2037 horizon year total traffic operations for the weekday PM peak hour. Appendix K includes the 2037 total conditions intersection operations analysis worksheets.

Table 15. Estimated 2037 Total Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	1.00
2	NE Three Mile Lane/NE 1st Street	0.90	-	1.09
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.93
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.33
5	OR-18/SE Norton Lane	0.80	-	0.96
6	OR-18/NE Cumulus Avenue	0.80	-	0.85
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.42
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	1.14
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.09

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 15, the six intersections that do not satisfy applicable review agency mobility targets under 2037 background conditions experience additional delay with the proposed rezone, with the exception of the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection at which the shift in travel patterns associated with the zone change improve the operating capacity of the intersection.

Year 2037 Total Traffic Mitigations

The following additional mitigation measures are recommended for implementation in conjunction with the proposed development to account for the long-term impact of the proposed rezone:

- NE Three Mile Lane/NE 1st Street
 - Consistent with 2037 background conditions, restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- OR-18/SE Loop Road
 - Consistent with 2037 background conditions, restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway (see Exhibit 3).

Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.

Table 16 summarizes the 2037 total traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix L includes the 2037 total conditions intersection operations analysis worksheets with mitigation.

Table 16. Estimated 2037 Total Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	1.00
2	NE Three Mile Lane/NE 1st Street	0.90	-	1.02
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.93
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.33
5	OR-18/SE Norton Lane	0.80	-	0.96
6	OR-18/NE Cumulus Avenue	0.80	-	0.79
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.42
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.09
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.09

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 16, with implementation of the recommended mitigation at NE Three Mile Lane/NE 1st Street, intersection operations are still anticipated to exceed the applicable performance requirement in 2037. However, the V/C under 2037 total traffic conditions is improved from 2037 background traffic conditions. The following three intersections are also expected to exceed the applicable performance requirement in 2037:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Regardless of the proposed rezone and subsequent development, these intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations. The change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J). Therefore, no additional mitigation is recommended as part of this report at these four intersections which continue to exceed applicable agency mobility targets under 2037 mitigated conditions.

Year 2037 Total Traffic 95th Percentile Queues

Year 2037 total traffic weekday PM peak hour 95th percentile queues at the OR-18/NE Cumulus Avenue intersection with implementation of recommended mitigation measures are summarized in Table 17.

Table 17. Summary of 95th Percentile Queues, 2037 Total Traffic Conditions

Intersection	Movement	Available Queue Storage (feet)	95 th Percentile Queue (feet)	Queue Storage Adequate?
			Weekday PM Peak Hour	
6 OR-18/NE Cumulus Avenue	NBL (Dual)	New	400	Yes
	NBTR	Continuous	600	Yes
	SBL	125 (Striped) Additional Storage in excess of 300	175	Yes
	SBT	Continuous	0	Yes
	SBR	125 (Exclusive) Additional Storage in excess of 300 ¹	300	Yes
	EBL	125	125	Yes
	EBT	Continuous	650	Yes
	EBR	New	250	Yes
	WBL	125 (Striped) Additional Storage in excess of 300	250	Yes
	WBT	Continuous	900	Yes
	WBR	175	50	Yes

Where: EB = eastbound, WB = westbound, NB = northbound, SB = southbound, L = left-turn, T = through, R = right-turn

Queues rounded up to the nearest vehicle length, assumed to be 25 feet

¹During occasions of peak queueing, the southbound through lane may be used for overflow storage from the southbound right-turn lane.

As shown in Table 17, all 95th percentile queues during year 2037 total mitigated traffic conditions would be accommodated by the available storage. Based on the anticipated 95th percentile queues, it is recommended that the second northbound left-turn lane (if appropriate given other area improvements) be constructed with 350 feet of storage, and the new eastbound right-turn lane be constructed with at least 250 feet of storage.

Traffic Operations Summary

Table 18 compares the traffic operations for all scenarios analyzed in this study.

Table 18. Traffic Operations for all Study Scenarios for Weekday PM Peak Hour

Study Intersection	Mobility Target (V/C) ¹	2020 Existing		2022 Background		2022 Background (Mitigated)		2022 Total		2022 Total (Mitigated)		Year 2022 Mitigations	2037 Background		2037 Background (Mitigated)		2037 Total		2037 Total (Mitigated)		Year 2037 Mitigations
		CM	V/C	CM	V/C	CM	V/C	CM	V/C	CM	V/C		CM	V/C	CM	V/C	CM	V/C	CM	V/C	
1 NE 3rd Street/NE Johnson Street	0.90	-	0.70	-	0.73	-	-	-	0.74	-	-	-	0.97 ²	-	-	-	1.00 ²	-	-	-	-
2 NE Three Mile Lane/NE 1st Street	0.90	EBR	0.98	EBR	1.08	-	0.85	EBR	1.16	-	0.87	Install traffic signal	-	1.04	-	0.98	-	1.09	-	1.02 ³	Add EBR
3 NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.74	WBR	0.84	-	-	WBR	0.98	WBR	0.58	Restrict EBL and WBL, provide neighborhood connection	WBR	0.98 ²	-	-	WBR	0.93 ^{2,4}	-	-	-
4 SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.21	EBL	0.22	-	-	EBL	0.23	-	-	-	EBL	0.32	-	-	EBL	0.33	-	-	-
5 OR-18/SE Norton Lane	0.80	-	0.68	-	0.70	-	-	-	0.82	-	0.80	Signal timing optimization	-	0.93 ²	-	-	-	0.96 ²	-	-	-
6 OR-18/NE Cumulus Avenue	0.80	-	0.54	-	0.56	-	-	-	1.21	-	0.79	Add NBL, signal timing optimization	-	0.83	-	0.77	-	0.85	-	0.79	Add second NBL
7 OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.12	NBL	0.13	-	-	NBL	0.18	-	-	-	NBL	0.37	-	-	NBL	0.42	-	-	-
8 OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.27	SBL	0.32	-	-	SBL	0.45	-	-	-	SBL	0.95	SBR	0.09	SBL	1.14	SBR	0.09	Restrict SBL
9 OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.09	NBL	1.20	NBR	0.04	NBL	1.53	NBR	0.05	Restrict NBL	NBR	0.08	-	-	NBR	0.09	-	-	-

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

²The change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J).

³Intersection operations with implementation of the recommended mitigation at Intersection #2 still exceed the mobility target. However, the V/C is improved from 2037 background traffic conditions.

⁴The shift in travel patterns on Three Mile Lane associated with the proposed zone change improve the operating capacity of Intersection #3 by creating more gaps for the critical WBR movement.

TRANSPORTATION PLANNING RULE ANALYSIS

The Transportation Planning Rule (TPR, Oregon Administrative Rule (OAR) 660-012-0060) analysis identifies how the study area’s transportation system would operate in the year 2037 under the existing industrial zoning of M-2 and the proposed commercial zoning of C-3 during the weekday PM peak hour. OAR 660-012-0060(1) and (2) establish a two-step process for evaluating an amendment’s impacts on roads. The first step in assessing an amendment’s potential transportation impact is to compare the trip generation potential of the site assuming a “reasonable worst-case” development scenario under the existing and proposed zoning. If the trip generation potential increases under the proposed zoning, additional operational analysis is required to assess whether the rezone will “significantly affect” the transportation system.

Summary of Applicable Oregon Administrative Rule Criteria

OAR Section 660-12-0060 of the TPR sets forth the relative criteria for evaluating plan and land use regulation amendments. Table 19 summarizes the criteria in Section 660-012-0060 and the applicability to the proposed zoning designation change application.

Table 19. Summary of Criteria in OAR 660-012-0060

Section	Criteria	Applicable?
1	Describes how to determine if a proposed land use action results in a significant effect.	Yes
2	Describes measures for complying with Criteria #1 where a significant effect is determined.	Yes
3	Describes measures for complying with Criteria #1 and #2 without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility.	Yes
4	Determinations under Criteria #1, #2, and #3 are coordinated with other local agencies.	Yes
5	Indicates that the presence of a transportation facility shall not be the basis for an exception to allow development on rural lands.	No
6	Indicates that local agencies should credit developments that provide a reduction in trips.	No
7	Outlines requirements for a local street plan, access management plan, or future street plan.	No
8	Defines a mixed-use, pedestrian-friendly neighborhood.	No
9	A significant effect may not occur if the rezone is identified on the City’s Comprehensive Plan and assumed in the adopted Transportation System Plan.	No
10	Agencies may consider measures other than vehicular capacity if within an identified multimodal mixed-use area (MMA).	No
11	Allows agencies to override the finding of a significant effect if the application meets the balancing test.	No

As shown in Table 19, there are eleven criteria that apply to Plan and Land Use Regulation Amendments. Of these, only Criteria #1 through #4 are applicable to the proposed land use action. These criteria are provided below in italics with our response shown in standard font.

OAR 660-12-0060(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10)

of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: As demonstrated in the transportation impact analysis detailed in this report, the impact of the 401 additional site-generated trips associated with reasonable worst-case development for the proposed commercial rezoning during the weekday PM peak hour (See Table 8) is expected to have a “significant effect” under year 2037 conditions.

OR 660-12-0060(2) If a local government determines that there would be a significant effect, then the local government must ensure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility measured at the end of the planning period identified in the adopted TSP through one or a combination of the remedies listed in (a) through (e) below, unless the amendment meets the balancing test in subsection (2)(e) of this section or qualifies for partial mitigation in section (11) of this rule. A local government using subsection (2)(e), section (3), section (10) or section (11) to approve an amendment recognizes that additional motor vehicle traffic congestion may result and that other facility providers would not be expected to provide additional capacity for motor vehicles in response to this congestion.

(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.

(c) Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

(d) Providing other measures as a condition of development or through a development agreement or similar funding method, including, but not limited to, transportation system management measures or minor transportation improvements. Local governments shall, as part of the amendment, specify when measures or improvements provided pursuant to this subsection will be provided.

(e) Providing improvements that would benefit modes other than the significantly affected mode, improvements to facilities other than the significantly affected facility, or improvements at other locations, if:

(A) The provider of the significantly affected facility provides a written statement that the system-wide benefits are sufficient to balance the significant effect, even though the improvements would not result in consistency for all performance standards;

(B) The providers of facilities being improved at other locations provide written statements of approval; and

(C) The local jurisdictions where facilities are being improved provide written statements of approval

Response: As demonstrated in the transportation impact analysis detailed in this report, there are two intersections anticipated to exceed mobility targets at which the proposed rezone has a “significant effect” on intersection operations under year 2037 conditions:

1. NE Three Mile Lane/NE 1st Street
2. OR-18/SE Loop Road

The impact of site-generated trips associated with the proposed rezone can be mitigated by implementing the mitigation measures recommended in the prior sections of this report.

OAR 660-12-0060 (3) Notwithstanding sections (1) and (2) of this rule, a local government may approve an amendment that would significantly affect an existing transportation facility without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility where:

(a) In the absence of the amendment, planned transportation facilities, improvements and services as set forth in section (4) of this rule would not be adequate to achieve consistency with the identified function, capacity or performance standard for that facility by the end of the planning period identified in the adopted TSP;

(b) Development resulting from the amendment will, at a minimum, mitigate the impacts of the amendment in a manner that avoids further degradation to the performance of the facility by the time of the development through one or a combination of transportation improvements or measures;

(c) The amendment does not involve property located in an interchange area as defined in paragraph (4)(d)(C); and

(d) For affected state highways, ODOT provides a written statement that the proposed funding and timing for the identified mitigation improvements or measures are, at a minimum, sufficient to avoid further degradation to the performance of the affected state highway. However, if a local government provides the appropriate ODOT regional office with written notice of a proposed amendment in a manner that provides ODOT reasonable opportunity to submit a written statement into the record of the local government proceeding, and ODOT does not provide a written statement, then the local government may proceed with applying subsections (a) through (c) of this section.

Response: As demonstrated in the prior sections of this report, there are three intersections anticipated to exceed mobility targets at which the proposed rezone does not have a “significant effect” on intersection operations under year 2037 conditions:

1. NE 3rd Street/NE Johnson Street
2. NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
3. OR-18/SE Norton Lane

While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations. The change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J). Therefore, no additional mitigation is recommended as part of this report at these three intersections which continue to exceed applicable agency mobility targets under 2037 mitigated conditions.

OAR 660-12-0060 (4) Determinations under sections (1)–(3) of this rule shall be coordinated with affected transportation facility and service providers and other affected local governments.

Response: The transportation impact study and TPR analysis for this project have been coordinated with the City of McMinnville and ODOT Region 2.

SUMMARY OF FINDINGS

Year 2020 Existing Conditions

- Two of the nine study intersections were found to exceed the applicable review agency mobility targets:
 - NE Three Mile Lane/NE 1st Street
 - OR-18/SE Cruickshank Road
- The recent five-year crash history of one study intersection exceeds statewide 90th percentile crash rates:
 - OR-18/SE Cruickshank Road: This unsignalized intersection experienced a large proportion of angle crashes (approximately 80%) over the five-year review period, and approximately 70% of the reported crashes involved a vehicle making a northbound left-turn movement. This suggests a need to potentially restrict left-turns from SE Cruickshank Road onto OR-18 due to the insufficient number gaps in eastbound traffic.

Year 2022 Background Conditions

- The two study intersections that do not satisfy applicable mobility targets under existing conditions experience additional delay with background growth.

Proposed Development Plan

- The 33.5-acre site is currently zoned M-2 (General Industrial). Kimco is proposing to rezone to C-3 (General Commercial).
- Table 20 provides the trip generation estimates under the existing and proposed zoning:

Table 20. Trip Generation Potential Comparison – 33.5-acre Zone Change

Land Use	ITE Code	Size	Daily Trips	PM Peak Hour		
				Total	In	Out
Existing M-2 General Industrial Zone Reasonable Worst-Case Development Scenario						
Medical-Dental Office Building (10 acres at 25%)	720	108,900 SF	4,096	371	104	267
Industrial Park (23.5 acres at 40%)	130	409,464 SF	1,954	164	34	130
Net New Trips			6,050	535	138	397
Proposed C-3 General Commercial Zone Reasonable Worst-Case Development Scenario						
Shopping Center (33.5 acres at 25%) <i>Less Pass-by Trips (34%)</i>	820	364,815 SF	14,496 <i>(4,929)</i>	1,416 <i>(480)</i>	680 <i>(240)</i>	736 <i>(240)</i>
Net New Trips			9,567	936	440	496
Difference = Proposed – Existing			3,517	401	302	99

Year 2022 Total Conditions

- The two study intersections that do not satisfy applicable review agency mobility targets under 2022 background conditions experience additional delay with site development.
- Three additional intersections do not satisfy applicable mobility targets with the addition of site-generated trips:
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue

Year 2037 Background Conditions (Without Proposed Zone Change)

- Assuming the recommendations to mitigate 2022 site impacts are in place, six of the nine study intersections were found to exceed the applicable review agency mobility targets in the planning horizon year 2037, which was selected to represent fifteen years after opening per guidance in the Oregon Highway Plan (OHP, Reference 1):
 - NE 3rd Street/NE Johnson Street
 - NE Three Mile Lane/NE 1st Street
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue
 - OR-18/SE Loop Road

Year 2037 Total Conditions (With Proposed Zone Change)

- The six intersections that do not satisfy applicable review agency mobility targets under 2037 background conditions experience additional delay with site development, with the exception of the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection at which the shift in travel patterns associated with the zone change improve the operating capacity of the intersection.

RECOMMENDATIONS

The following mitigation measures are recommended for implementation in conjunction with the proposed development and to address impacts of the proposed zone change:

- NE Three Mile Lane/NE 1st Street
 - Install a traffic signal and restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - Restrict left-turns from the minor approaches onto Three Mile Lane (left-turns from Three Mile Lane can be maintained). Alternative access can be provided to the approximately ten homes south of Three Mile Lane via an improved connection to SE Mountain View Lane. North of Three Mile Lane, there is alternative access to OR-18 via SE Norton Lane.
- OR-18/SE Norton Lane
 - Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/NE Cumulus Avenue
 - Modify the existing traffic signal and construct a 275-foot exclusive eastbound right-turn lane and 500-foot northbound left-turn lane (left-turns from NE Cumulus Avenue should have permitted/protected phasing). Optimize signal timing to provide additional time to eastbound and westbound through movements. Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.
- OR-18/SE Loop Road
 - Restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway.
- OR-18/SE Cruickshank Road
 - Restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via the OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange.

The proposed rezone can be approved without creating significant impacts per OAR 660-012-0060 assuming these mitigation measures are implemented.

Regardless of the proposed subsequent development, the following intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/NE 1st Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Please contact us if you need any additional information regarding our analyses.

REFERENCES

- 1.) Oregon Department of Transportation. *1999 Oregon Highway Plan*. May 2015 Update
- 2.) City of McMinnville. *McMinnville Corridor Refinement Plan*. February 1996
- 3.) City of McMinnville. *City of McMinnville Transportation System Plan*. 2010
- 4.) Transportation Research Board. *Highway Capacity Manual 6th Edition*. 2016
- 5.) Oregon Department of Transportation. *Analysis Procedures Manual Version 2*. March 2020 Update
- 6.) Institute of Transportation Engineers. *Trip Generation Manual, 10th Edition*. 2017

APPENDICES

Appendix A – Crash Data

Appendix B – Traffic Count Data

Appendix C – 2020 Existing Traffic Volumes and Analysis

Appendix D – 2022 Background Traffic Volumes and Analysis

Appendix E – 2022 Mitigated Background Traffic Analysis

Appendix F – 2022 Total Traffic Volumes and Analysis

Appendix G – 2022 Mitigated Total Traffic Analysis

Appendix H – 2037 Background Traffic Volumes and Analysis

Appendix I – 2037 Mitigated Background Traffic Analysis

Appendix J – Oregon Highway Plan Policy Intent Statements

Appendix K – 2037 Total Traffic Volumes and Analysis

Appendix L – 2037 Mitigated Total Traffic Analysis

Appendix A Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Third Sst & Johnson St
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
REAR-END	0	0	1	1	0	0	1	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	1	1	1	1	1	2	0	0
2017 TOTAL	0	1	2	3	0	1	2	2	1	2	1	3	0	0
YEAR: 2016														
REAR-END	0	0	2	2	0	0	0	1	1	1	1	2	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	0	1	0	2	2	0	0
2016 TOTAL	0	1	3	4	0	1	0	1	2	1	3	4	0	0
YEAR: 2015														
REAR-END	0	1	0	1	0	1	0	0	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	2	0	0	1	0	1	1	0	0
2015 TOTAL	0	2	0	2	0	3	0	0	1	1	1	2	0	0
YEAR: 2014														
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
SIDESWIPE - MEETING	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2014 TOTAL	0	1	1	2	0	1	0	2	0	2	0	2	0	0
YEAR: 2013														
ANGLE	0	1	1	2	0	2	0	2	0	2	0	2	0	0
REAR-END	0	1	2	3	0	1	0	2	0	3	0	3	0	0
2013 TOTAL	0	2	3	5	0	3	0	4	0	5	0	5	0	0
FINAL TOTAL	0	7	9	16	0	9	2	9	4	11	5	16	0	0

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING

CITY OF MCMINNVILLE, YAMHILL COUNTY

Intersectional Crashes at Third Sst & Johnson St
 January 1, 2013 through December 31, 2017

SER#	P	G	S	W	DATE	FC	CITY STREET FIRST STREET SECOND STREET INTERSECTION SEQ #	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CONTRL	OFF-RD RDNBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	SPCL USE TRLR QTY V#	MOVE FROM TO	A	S	LICNS	PED LOC	ERROR	ACTN	EVENT	CAUSE		
																								PRTC	INJ
														02	NONE PRVTE	0	STOP E N						013	00	
															PSNGR CAR		01	DRVR	INJC	49	M	OR-Y OR<25	000	000	00
01183	N	N	N		10/08/2016	14	JOHNSON ST	INTER	CROSS	N		N CLR	S-OTHER	01	NONE	9	TURN-R							29	
NONE				N	Sat	8P	3RD ST	NE		YIELD		N WET	REAR		N/A		E N						000	00	
No	45	12	36.10		-123 11 19.15		1	09		1		N DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
														02	NONE	9	TURN-R							006	00
															N/A		E N						000	00	
															PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
01391	N	N	N		11/09/2016	14	JOHNSON ST	INTER	CROSS	N		N CLR	S-1STOP	01	NONE	9	STRGHT							27	
NONE				N	Wed	4P	3RD ST	E		TRF SIGNAL		N DRY	REAR		N/A		E W						000	00	
No	45	12	36.10		-123 11 19.15		1	06		1		N DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
														02	NONE	9	STOP							011	00
															N/A		E W						000	00	
															PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
01226	N	N	N	N	11/03/2017	14	JOHNSON ST	INTER	CROSS	N		N CLD	S-1STOP	01	NONE	9	STRGHT							07,29	
CITY				N	Fri	9A	3RD ST	E		TRF SIGNAL		N DRY	REAR		N/A		E W						000	00	
No	45	12	36.10		-123 11 19.15		1	06		1		N DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
														02	NONE	9	STOP							011	00
															N/A		E W						000	00	
															TRUCK		01	DRVR	NONE	00	U	UNK UNK	000	000	00
01370	N	N	N		12/13/2017	14	JOHNSON ST	INTER	CROSS	N		N CLR	ANGL-STP	01	NONE	9	TURN-L							08	
NONE				N	Wed	1P	3RD ST	E		L-GRN-SIG		N DRY	TURN		N/A		N E						000	00	
No	45	12	36.10		-123 11 19.15		1	06		0		N DAY	PDO		SEMI TOW		01	DRVR	NONE	00	U	UNK UNK	000	000	00
														02	NONE	9	STOP							012	00
															N/A		E W						000	00	
															PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK	000	000	00
00849	N	N	N	N	08/05/2014	14	JOHNSON ST	INTER	CROSS	N		N CLR	O-STRGHT	01	NONE	0	STRGHT							05	
CITY				N	Tue	2P	3RD ST	W		TRF SIGNAL		N DRY	SS-M		NONE	0	PRVTE E W						000	00	
No	45	12	36.07		-123 11 19.14		1	06		0		N DAY	PDO		PSNGR CAR		01	DRVR	NONE	39	M	OR-Y OR<25	039	000	05

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF MCMINNVILLE, YAMHILL COUNTY

Intersectional Crashes at Third Sst & Johnson St
January 1, 2013 through December 31, 2017

Table with columns: SER#, INVEST, UNLOC?, P, G, S, W, E, A, /, C, O, DATE, FC, CITY STREET, RD CHAR, INT-TYP, INT-REL, OFF-RD, WTHR, CRASH TYP, SPCL USE, MOVE, A, S, LICNS, PED, ACTN, EVENT, CAUSE. Rows include crash data for Johnson St 3rd St intersection with details on date, time, location, and crash type.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Three Mile Ln & First St
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2016														
REAR-END	0	0	1	1	0	0	1	1	0	1	0	1	0	0
2016 TOTAL	0	0	1	1	0	0	1	1	0	1	0	1	0	0
YEAR: 2014														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2014 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR: 2013														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	0	3	3	0	0	1	3	0	3	0	3	0	0

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Three Mile Ln, McMinnville Spur (483) & Nehemiah Ln / Cumulus Ave
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	1	1	1	1	2	0	0
2017 TOTAL	0	2	2	4	0	2	0	3	1	3	1	4	0	0
YEAR: 2014														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	0	1	1	0	1
REAR-END	0	1	1	2	0	4	0	2	0	2	0	2	0	0
2014 TOTAL	0	1	2	3	0	4	0	3	0	2	1	3	0	1
YEAR: 2013														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	3	5	8	0	6	0	7	1	6	2	8	0	1

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

483 MCMINNVILLE SPUR
 D
 R
 S
 U

Intersectional Crashes at Three Mile Ln, McMinnville Spur (483) & Nehemiah Ln / Cumulus Ave
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	MOVE	A S	P E	LICNS	PED	ACTN	EVENT	CAUSE
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	MILEPNT	FIRST STREET	RD CHAR	TRLR QTY	OWNER	FROM	G E	RES	LOC	ERROR		
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	LRs		SECOND STREET	DIRECT	V#	VEH TYPE	TO	E X					
00534	N N N	05/21/2014	YAMHILL	1	14		INTER	01 NONE	0	STRGHT					013	07
NONE	N	Wed 3P		MN	0		UN	PRVTE	N S					000	00	00
			MCMINVL UA	46.48			06	PSNGR CAR			01	DRVR	NONE	53	F	OR-Y
No	45 12	8.44 -123 10	46.21	048300100S00												07
																OR<25
00314	N N N N N	03/30/2017	YAMHILL	1	14		INTER	02 NONE	0	STOP					011	013
CITY	N	Thu 9A		MN	0		N	PRVTE	N S					000	00	00
			MCMINVL UA	46.48			06	PSNGR CAR			01	DRVR	NONE	25	F	OR-Y
No	45 12	8.44 -123 10	46.21	048300100S00										000	000	00
																OR<25
																00
																00
																00
																00
00022	Y N N N N	01/07/2017	YAMHILL	1	14		INTER	03 NONE	0	STOP					011	
CITY	N	Sat 1P		MN	0		E	PRVTE	S E					000	124	01,08
			MCMINVL UA	46.48			06	PSNGR CAR			01	DRVR	NONE	19	F	OR-Y
No	45 12	8.44 -123 10	46.21	048300100S00										047,001,007	017	01,08
																OR<25
00275	N N N N N	03/17/2014	YAMHILL	1	14		INTER	02 NONE	0	STOP					012	
CITY	N	Mon 12P		MN	0		S	PRVTE	S N					000	00	00
			MCMINVL UA	46.48			06	PSNGR CAR			01	DRVR	NONE	39	F	OR-Y
No	45 12	8.44 -123 10	46.21	048300100S00										026	000	07
																OR<25
																00
																00
																00
																00

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

483 MCMINNVILLE SPUR

Intersectional Crashes at Three Mile Ln, McMinnville Spur (483) & Nehemiah Ln / Cumulus Ave
January 1, 2013 through December 31, 2017

Table with columns: SER#, INVEST, UNLOC?, E A / C O DATE, COUNTY, RD#, FC, CONN #, INT-TYP, RD CHAR, INT-REL, OFFRD WTHR, CRASH TYP, SPCL USE, MOVE, P# TYPE SVRTRY, A S, LICNS, PED, ACTN EVENT, CAUSE. Rows include crash data for 01039, 01098, 00989, and 00640.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Norton Ln & Cumulus Ave
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2014														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	1	0	1
2014 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	1
YEAR: 2013														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	1	1	2	0	1	0	2	0	2	0	2	0	1

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
 D
 R
 S
 U
 P G S W

Intersectional Crashes at Norton Ln & Cumulus Ave
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE																						
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	FIRST	STREET	RD CHAR	TRLR QTY	MOVE	A	S																			
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	MILEPNT	SECOND	STREET	DIRECT	OWNER	FROM	P	R	T	C	I	N	J	G	E	L	I	C	N	S	P	E	D				
				LRS	INTERSECTION	SEQ#	LOCTN	(#LANES)	CNTL	DRVWY	LIGHT	SVRTY	V#	VEH TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACTN	EVENT	CAUSE				
00068	N N N	01/29/2013	YAMHILL	1	14		INTER	01 NONE	0																				07	
CITY	N	Tue 12P	MCMINNVILLE	FR	0	NE CUMULUS AVE	W	PRVTE	W E																				00	
			MCMINVL UA	47.16		NE NORTON LN	06																						07	
No	45 12	5.75 -123	9 59.70	0039AT100S00			1																							
								02 NONE	0																					
								PRVTE	W E																					00
								PSNGR CAR																						00

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING

CITY OF MCMINNVILLE, YAMHILL COUNTY

Intersectional Crashes at Norton Ln & Cumulus Ave
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	FC	CITY STREET FIRST STREET	RD CHAR	INT-TYP (MEDIAN)	INT-REL	OFF-RD	WTHR	CRASH TYP	SPCL USE	MOVE	A S	G E LICNS		PED	ACTN	EVENT	CAUSE					
														DAY/TIME	DISTNC					SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT
UNLOC?	D C J L K	LAT/LONG		INTERSECTION SEQ #	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	OWNER	TO	P#	TYPE	SVRTY	E X RES	LOC	ERROR	ACTN	EVENT	CAUSE		
00232	N N N N N	03/04/2014	14	NE CUMULUS AVE	INTER	3-LEG	N		Y CLD	FIX OBJ	01	NONE	0	STRGHT								059,062,121	17	
CITY	N	Tue 4P	0	NE NORTON LN	N				N DRY	FIX		PRVTE	S N									000	059,062,121	00
No	45 12	5.76 -123 9 59.70		1	06	0			N DAY	INJ		PSNGR CAR		01	DRVR	INJB	55 M	OR-Y	081			000		17
																								OR<25

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
TURNING MOVEMENTS	0	2	0	2	0	3	0	2	0	1	1	2	0	0
2017 TOTAL	0	2	0	2	0	3	0	2	0	1	1	2	0	0
YEAR: 2016														
ANGLE	0	1	0	1	0	3	0	1	0	1	0	1	0	0
PEDESTRIAN	0	1	0	1	0	1	0	0	1	0	1	1	0	0
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	1	1	2	0	3	0	1	1	2	0	2	0	0
2016 TOTAL	0	4	2	6	0	8	0	4	2	5	1	6	0	0
YEAR: 2015														
REAR-END	0	1	0	1	0	3	0	1	0	1	0	1	0	0
2015 TOTAL	0	1	0	1	0	3	0	1	0	1	0	1	0	0
YEAR: 2014														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	1	1	0	1	0	1
REAR-END	0	2	2	4	0	2	0	0	3	4	0	4	0	0
2014 TOTAL	0	2	3	5	0	2	0	0	4	5	0	5	0	1
YEAR: 2013														
REAR-END	0	3	2	5	0	4	0	3	2	4	1	5	0	0
2013 TOTAL	0	3	2	5	0	4	0	3	2	4	1	5	0	0
FINAL TOTAL	0	12	7	19	0	20	0	10	8	16	3	19	0	1

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
D
R
S
U
P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln
January 1, 2013 through December 31, 2017

Table with columns: SER#, INVEST, UNLOC?, E, A, L, M, H, R, D, C, J, L, K, DATE, COUNTY, CITY, URBAN AREA, RD#, FC, CONN #, CMPT/MLG, FIRST, SECOND, INTERSECTION, STREET, SEQ#, RD CHAR, DIRECT, LOCTN, INT-TYP, (MEDIAN), INT-REL, TRAF-CNTL, OFFRD, RNDT, SURF, DRVWY, WTHR, LIGHT, CRASH TYP, COLL TYP, SVRTY, SPCL USE, OWNER, V#, VEH TYPE, MOVE, FROM, TO, PRTC, INJ, SVRTY, A, S, G, E, LICNS, PED, RES, LOC, ERROR, ACTN, EVENT, CAUSE.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER															Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln January 1, 2013 through December 31, 2017																		
SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	RD CHAR	INT-REL	OFFRD	WTHR	CRASH TYP	MOVE	A S	PRTC	INJ	G E	LICNS	PED	ACTN	EVENT	CAUSE										
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	CMPT/MLG	FIRST STREET	RD CHAR	(MEDIAN)	TRLR QTY	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL TYP	OWNER	FROM	P#	TYPE	SVRTY	E X	RES	LOC	ERROR										
00513	N N N	06/19/2013	YAMHILL	1	14		INTER		W	CROSS	N	N CLR	S-1STOP	01	NONE	0	STRGHT																
CITY	N	Wed 12P	MCMINNVILLE	MN	0	NE NORTON LN						N DRY	REAR		PRVTE	W E						000		07,27 00									
No	45 12	3.32 -123	9 59.63	003900100S00		SALMON RIVER HY	06			0		N DAY	INJ		PSNGR CAR		01	DRVR	NONE	34	M	OR-Y	026	000	07								
																									OR<25								
																									011	00							
																										000	00						
																											000	00					
																												000	00				
																												000	00				
00742	N N N	08/26/2013	YAMHILL	1	14		INTER		W	CROSS	N	N CLD	S-1STOP	01	NONE	0	STRGHT																
NONE	N	Mon 3P	MCMINNVILLE	MN	0	NE NORTON LN						N WET	REAR		PRVTE	W E						000		07 00									
No	45 12	3.32 -123	9 59.63	003900100S00		SALMON RIVER HY	06			0		N DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK	026	000	07								
																														UNK			
																														011	00		
																														000	00		
																														000	00		
																														000	00		
																														000	00		
00848	N N N N N	09/27/2013	YAMHILL	1	14		INTER		W	CROSS	N	N RAIN	S-1STOP	01	NONE	0	STRGHT																
STATE	N	Fri 7P	MCMINNVILLE	MN	0	NE NORTON LN						N WET	REAR		PRVTE	W E						000		07 00									
No	45 12	3.32 -123	9 59.63	003900100S00		SALMON RIVER HY	06			0		N DUSK	INJ		PSNGR CAR		01	DRVR	INJB	18	F	OR-Y	026	000	07								
																															OR<25		
																															011	00	
																															000	00	
																															000	00	
																															000	00	
																															000	00	
00143	N N N N N	02/07/2014	YAMHILL	1	14		INTER		W	CROSS	N	N SNOW	S-1STOP	01	NONE	0	STRGHT																
CITY	N	Fri 1P	MCMINNVILLE	MN	0	NE NORTON LN						N ICE	REAR		PRVTE	W E						000		07 00									
No	45 12	3.32 -123	9 59.63	003900100S00		SALMON RIVER HY	06			0		N DAY	INJ		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y	026	000	07								
																																OR<25	
																																011	00
																																000	00
																																000	00
																																000	00
00212	N N N	02/27/2014	YAMHILL	1	14		INTER		W	CROSS	N	N SNOW	S-1STOP	01	NONE	0	STRGHT																
NONE	N	Thu 9A	MCMINNVILLE	MN	0	NE NORTON LN						N SNO	REAR		PRVTE	W E						000		07 00									
No	45 12	3.32 -123	9 59.63	003900100S00		SALMON RIVER HY	06			0		N DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	M	UNK	026	000	07								
																																UNK	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER										Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln January 1, 2013 through December 31, 2017																
SER#	E A / C O DATE	COUNTY	RD# FC	CONN #	INT-TYP	SPCL USE	MOVE	A S																		
INVEST	E L M H R DAY/TIME	CITY	CMPT/MLG	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD WTHR	CRASH TYP	TRLR QTY	MOVE	OWNER	FROM	PRTC	INJ	G E	LICNS	PED								
UNLOC?	D C J L K LAT/LONG	URBAN AREA	MILEPNT	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT SURF	COLL TYP	VEH TYPE	TO			P#	TYPE	SVRTY	E X	RES	LOC	ERROR						
			LRS	INTERSECTION SEQ#	LOCTN	(#LANES)	CNTL	DRVWY LIGHT	SVRTY	V#																
										02	NONE	0	STOP													
										PRVTE	W E									011	00					
										PSNGR	CAR			01	DRVR	INJC	55	M	OR-Y	000	000	00				
																						OR<25				
00640	N N N 06/09/2014	YAMHILL	1 14		INTER	CROSS	N	N UNK	S-1STOP	01	NONE	0	STRGHT									07				
NONE	N Mon 8A	MCMINNVILLE	MN 0	NE NORTON LN	W			TRF SIGNAL	N UNK REAR		PRVTE	W E										000	00			
No	45 12 3.32 -123	9 59.63	46.69	SALMON RIVER HY	06	0		N DAY	PDO		PSNGR	CAR		01	DRVR	NONE	29	M	OR-Y	026	000	07				
																							OR<25			
										02	NONE	0	STOP										011	00		
										PRVTE	W E												000	00		
										PSNGR	CAR			01	DRVR	NONE	51	F	OR-Y	000	000	00		00		
																								OR<25		
00263	N N N N N 03/15/2015	YAMHILL	1 14		INTER	CROSS	N	N CLD	S-STRGHT	01	NONE	0	STRGHT										33,29			
STATE	N Sun 1P	MCMINNVILLE	MN 0	NE NORTON LN	W			TRF SIGNAL	N DRY REAR		PRVTE	W E											000	00		
No	45 12 3.32 -123	9 59.72	46.69	SALMON RIVER HY	06	0		N DAY	INJ		PSNGR	CAR		01	DRVR	NONE	23	F	OR-Y	051,043	000	33,29				
																								OR<25		
										02	NONE	0	STRGHT											006	00	
										PRVTE	W E												000	00		
										PSNGR	CAR			01	DRVR	NONE	56	M	OR-Y	000	000	00		00		
																								OR>25		
														02	PSNG	INJC	45	F		000	000	00		00		
														03	PSNG	INJC	55	F		000	000	00		00		
														04	PSNG	INJB	03	M		000	000	00		00		
														05	PSNG	NO<5	01	M		000	000	00		00		
01309	N N N 11/01/2016	YAMHILL	1 14		INTER	CROSS	N	N CLR	O-OTHER	01	NONE	9	TURN-L											04,02,08		
NONE	N Tue 10A	MCMINNVILLE	MN 0	NE NORTON LN	CN			TRF SIGNAL	N DRY TURN		N/A	S W											000	00		
No	45 12 3.32 -123	9 59.72	46.69	SALMON RIVER HY	01	0		N DAY	PDO		PSNGR	CAR		01	DRVR	NONE	00	U	UNK	000	000	00		00		
																									UNK	
										02	NONE	9	TURN-R												000	00
										N/A	N W													000	00	
										PSNGR	CAR			01	DRVR	NONE	00	U	UNK	000	000	00		00		
																									UNK	
01163	N N N N N 10/23/2017	YAMHILL	1 14		INTER	CROSS	N	N CLR	ANGL-OTH	01	NONE	0	STRGHT											003,013	04	
CITY	N Mon 10A	MCMINNVILLE	MN 0	NE NORTON LN	CN			TRF SIGNAL	N DRY TURN		PRVTE	E W											000	00		
No	45 12 3.32 -123	9 59.72	46.69	SALMON RIVER HY	01	0		N DAY	INJ		PSNGR	CAR		01	DRVR	INJB	17	M	OR-Y	020	000	003	04			
																									OR<25	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln
January 1, 2013 through December 31, 2017

Table with columns: SER#, INVEST, UNLOC?, E, L, M, H, R, A, C, O, DATE, COUNTY, CITY, URBAN AREA, RD#, FC, CONN #, CMPT/MLG, FIRST STREET, MILEPNT, SECOND STREET, LRS, INTERSECTION SEQ#, INT-TYP, INT-REL, OFFRD, WTHR, CRASH TYP, RD CHAR, DIRECT, LEGS, TRAF-, RND, SURF, COLL TYP, LOCTN, (#LANES), CNTL, DRVWY, LIGHT, SVRTY, SPCL USE, TRLR QTY, MOVE, OWNER, FROM, PRTC, INJ, G, E, LICNS, PED, A, S, X, RES, LOC, ERROR, ACTN, EVENT, CAUSE.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
D
R
S U
P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln
January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	TRLR QTY	MOVE	A	S	INVEST	E L M H R	DAY/TIME	CITY	MILEPNT	SECOND STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH TYP	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED	ACTN	EVENT	CAUSE				
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	LRS	INTERSECTION SEQ#	LOCTN	(#LANES)	V#	VEH TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR																					
								02	NONE	0		TURN-L																											
									PRVTE	S	W																								000	00			
									PSNGR	CAR			01	DRVR	INJC	76	F	OR-Y																	020	000	04		
00432	N N N	05/27/2013	YAMHILL	1	14		INTER																																
NO RPT	N	Mon 10A	MCMINNVILLE	FR	0	NE NORTON LN	N																																
			MCMINVL UA		47.20	SALMON RIVER HY	06		0																														
No	45 12	3.32 -123	9 59.63	0039AT100S00																																			
								02	NONE	0		STOP																											
									PRVTE	N	S																										011	00	
									PSNGR	CAR			01	DRVR	NONE	65	M	OR-Y																			000	000	00

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cumulus Ave
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2016														
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
2016 TOTAL	0	1	0	1	0	1	0	0	1	1	0	1	0	0
YEAR: 2013														
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
2013 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	0
FINAL TOTAL	0	2	0	2	0	2	0	1	1	2	0	2	0	0

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Armory Way
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Loop Rd
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2016														
TURNING MOVEMENTS	0	1	0	1	0	4	0	1	0	0	1	1	0	0
2016 TOTAL	0	1	0	1	0	4	0	1	0	0	1	1	0	0
FINAL TOTAL	0	1	0	1	0	4	0	1	0	0	1	1	0	0

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
 D
 R
 S
 U
 P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Loop Rd
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	TRLR QTY	MOVE	A S					ACTN	EVENT	CAUSE								
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	FIRST	STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH TYP	OWNER	FROM	PRTC	INJ	G E	LICNS	PED							
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	MILEPNT	SECOND	STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL TYP	VEH TYPE	TO	P#	TYPE	SVRITY	E X	RES	LOC	ERROR					
01604	N N N N N	12/30/2016	YAMHILL	1	14		INTER	3-LEG	N		N CLR	ANGL-OTH	01	NONE	0	STRGHT									02	
STATE	N	Fri 5P	MCMINNVILLE	MN	0	SE LOOP RD	CN		STOP SIGN	N DRY	TURN		PRVTE	E W											00	
			MCMINVL UA	48.53		SALMON RIVER HY	01	1		N DLIT	INJ		PSNGR	CAR	01	DRVR	INJC	19	F	OR-Y		000		000	00	
No	45	12 8.79 -123	7 44.80	003900100S00																OR<25		000		000	00	
															02	PSNG	INJC	49	F			000		000	00	
													02	NONE	0	TURN-L										
													PRVTE	N E											015	00
													PSNGR	CAR	01	DRVR	INJC	68	F	OR-Y		028		000	02	
																				OR<25						
															02	PSNG	INJC	68	M			000		000	00	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
TURNING MOVEMENTS	0	6	2	8	0	15	1	4	4	7	1	8	0	0
2017 TOTAL	0	6	2	8	0	15	1	4	4	7	1	8	0	0
YEAR: 2016														
TURNING MOVEMENTS	0	4	1	5	0	9	0	4	1	4	1	5	0	0
2016 TOTAL	0	4	1	5	0	9	0	4	1	4	1	5	0	0
YEAR: 2015														
ANGLE	0	0	1	1	0	0	0	0	1	0	1	1	0	0
REAR-END	0	0	1	1	0	0	0	1	0	0	1	1	0	0
SIDESWIPE - MEETING	0	0	1	1	0	0	1	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	9	3	12	0	24	0	10	2	10	2	12	0	0
2015 TOTAL	0	9	6	15	0	24	1	12	3	11	4	15	0	0
YEAR: 2014														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	0	1	0	1	0	1
REAR-END	0	0	1	1	0	0	0	1	0	0	1	1	0	0
TURNING MOVEMENTS	0	2	1	3	0	2	0	1	2	2	1	3	0	0
2014 TOTAL	0	2	4	6	0	2	0	3	2	4	2	6	0	1
YEAR: 2013														
BACKING	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	1	0	1
REAR-END	0	1	0	1	0	1	0	0	1	0	1	1	0	0
TURNING MOVEMENTS	0	5	0	5	0	9	0	4	1	5	0	5	0	0
2013 TOTAL	0	7	1	8	0	11	0	6	2	7	1	8	0	1
FINAL TOTAL	0	28	14	42	0	61	2	29	12	33	9	42	0	2

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	MOVE	A S	PED	ACTN	EVENT	CAUSE					
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	MILEPNT	FIRST STREET	RD CHAR	TRLR QTY	OWNER	FROM	INJ								
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	LRS	INTERSECTION SEQ#	LOCTN	(#LANES)	VEH TYPE	TO	P#	TYPE	SVR	TY	RES	LOC	ERROR			
								02 NONE	0	TURN-L									
								PRVTE		E S				000				00	
								PSNGR CAR			01	DRVR	NONE	53	M	OR-Y	000	000	00
																			OR>25
00990	Y Y N N N	08/23/2016	YAMHILL	1	14		INTER	01 NONE	9	STRGHT									33,03,01
STATE	N	Tue 11A		MN	0		CN	N/A		E W									000
No	45 12	9.91 -123	7 40.92				01	PSNGR CAR			01	DRVR	NONE	00	U	UNK	000	000	00
																			UNK
								02 NONE	9	TURN-L									
								N/A		S W									029
											01	DRVR	NONE	00	U	UNK	000	000	00
																			UNK
01150	N N N N N	10/25/2014	YAMHILL	1	02		INTER	01 NONE	0	TURN-L									02
STATE	N	Sat 4P		MN	0		CN	PRVTE		S W									000
No	45 12	9.91 -123	7 40.92				02	PSNGR CAR			01	DRVR	NONE	18	F	OR-Y	028	000	02
																			OR<25
								02 NONE	0	STRGHT									
								PRVTE		E W									000
											01	DRVR	NONE	42	M	OR-Y	000	000	00
																			OR<25
01329	N N N N N	12/08/2014	YAMHILL	1	02		INTER	01 NONE		TURN-L									02
STATE	N	Mon 4P		MN	0		CN	PRVTE		S W									015
No	45 12	9.91 -123	7 40.92				02	PSNGR CAR			01	DRVR	NONE	20	F	OR-Y	028	000	02
																			OR<25
								02 NONE		TURN-L									
								PRVTE		E S									000
											01	DRVR	INJC	37	F	OR-Y	000	000	00
																			OR<25
00225	N N N N N	03/05/2015	YAMHILL	1	14		INTER	01 NONE	0	STRGHT									044,092
STATE	N	Thu 7A		MN	0		CN	PRVTE		W E									029
																			092,044
No	45 12	9.91 -123	7 40.92				02	PSNGR CAR			01	DRVR	NONE	21	F	OR-Y	083,080	000	00
																			OR<25
								02 NONE	1	STRGHT									
								PRVTE		E W									000
											01	DRVR	NONE	31	M	OR-Y	000	000	00
								SEMI TOW											OR<25

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
 D
 R
 S U
 P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE															
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH TYP	TRLR QTY	MOVE	A S									
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	MILEPNT	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL TYP	OWNER	FROM	PRTC	INJ	G E	LICNS	PED	ACTN	EVENT	CAUSE		
				LRS	INTERSECTION SEQ#	LOCTN	(#LANES)	CNTL	DRVWY	LIGHT	SVRTY	V#	VEH TYPE	TO	P#	TYPE	SVRTY	E X	RES	LOC	ERROR		
01335	N N N N N	12/04/2017	YAMHILL	1	14	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE	9	TURN-L							03	
STATE	N	Mon		MN	0	CN		STOP SIGN	N	DRY	TURN	N/A	S W								000	00	
			MCMINVL UA		48.59	04	1		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000	00
No	45	12	9.91 -123	7	40.92	003900100S00																UNK	
												02	NONE	9	STRGHT								
												N/A	W E									000	00
													PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000	00
																						UNK	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 COUNTY ROAD CRASH LISTING

YAMHILL COUNTY
 D
 R
 S U
 P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
 January 1, 2013 through December 31, 2017

SER#	E A / C O DATE	MILEPNT	COUNTY ROADS	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SPCL	MOVE	A S	ACTN	EVENT	CAUSE
INVEST	E L M H R DAY/TIME	DIST FROM	FIRST STREET	DIRECT	(MEDIAN)	TRAF-	RNDBT	SURF	COLL TYP	USE	FROM	G E LICNS PED			
UNLOC?	D C J L K LAT/LONG	INTERSECT	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	TRLR QTY	TO	PRTC INJ G E LICNS PED			
			INTERSECTION SEQ #							V# OWNER		E X RES LOC ERROR			
01102	N N N 11/14/2013	3.89	CRUIKSHANK RD	INTER	3-LEG	N	N	RAIN	S-1STOP	01 NONE	0 STRGHT				07
NO RPT	N Thu 9P			S		STOP SIGN	N	WET	REAR	PRVTE	S N		000		00
No	45 12 9.91 -123 7 40.92			06	1		N	DARK	INJ	PSNGR CAR		01 DRVR NONE 49 F OR-Y	026	000	07
												OR<25			
										02 NONE	0 STOP		011		00
										PRVTE	S N		000		00
										PSNGR CAR		01 DRVR NONE 44 F OR-Y	000	000	00
												OR<25			
												02 PSNG INJC 51 M	000	000	00
01000	N N N 9/27/2015	3.89	CRUIKSHANK RD	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE	0 STRGHT				29
NONE	N Sun 8P			S		STOP SIGN	N	DRY	REAR	PRVTE	S N		000		00
No	45 12 9.91 -123 7 40.92			06	1		N	DARK	PDO	PSNGR CAR		01 DRVR NONE 00 M UNK	026	000	29
												OR<25			
										02 NONE	0 STOP		012		00
										PRVTE	S N		000		00
										PSNGR CAR		01 DRVR NONE 52 F OR-Y	000	000	00
												OR>25			

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN, ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNEED FROM WRONG LANE
007	TO WRONG	TURNEED INTO WRONG LANE
008	ILLEG U	U-TURNEED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHICLE)
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL OCC	INJURED OCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUplet
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYAL
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN (
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFGR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS
099	UNKNOWN	UNKNOWN OR NOT DEFINITE

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

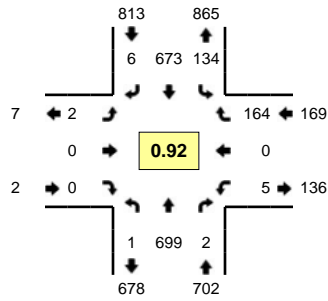
WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

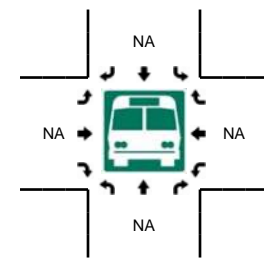
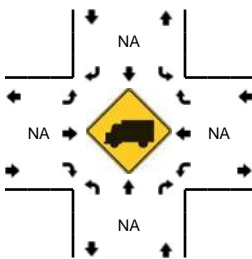
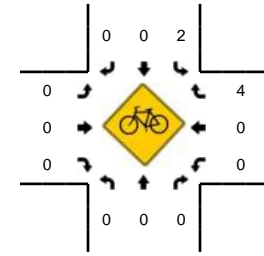
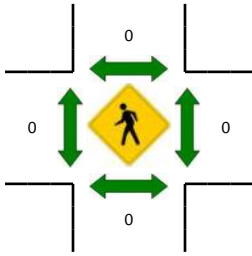
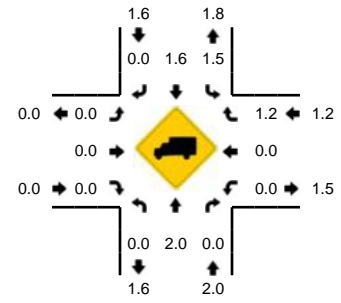
Appendix B Intersection Turning Movement Count Data

LOCATION: NE 3 Mile Ln -- NE Cumulus Ave/SE Nehemiah Ln
CITY/STATE: McMinnville, OR

QC JOB #: 10766601
DATE: Wed, May 23 2012



Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	NE 3 Mile Ln (Northbound)				NE 3 Mile Ln (Southbound)				NE Cumulus Ave/SE Nehemiah Ln (Eastbound)				NE Cumulus Ave/SE Nehemiah Ln (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
4:00 PM	0	43	0	0	4	49	1	0	0	0	0	0	0	0	0	10	0	107	
4:05 PM	0	36	0	0	7	44	0	0	1	0	0	0	1	0	18	0	107		
4:10 PM	0	53	1	0	11	43	0	0	0	0	1	0	1	0	18	0	128		
4:15 PM	1	60	0	0	9	43	1	0	0	0	0	0	0	0	15	0	129		
4:20 PM	0	46	0	0	9	46	0	0	0	0	0	0	0	0	7	0	108		
4:25 PM	0	54	0	0	7	43	1	0	0	0	0	0	1	0	13	0	119		
4:30 PM	0	60	0	0	18	47	0	0	0	0	0	0	1	0	21	0	147		
4:35 PM	0	46	0	0	4	67	0	0	0	0	0	0	0	0	13	0	130		
4:40 PM	1	53	0	0	9	58	0	0	0	0	0	0	0	0	15	0	136		
4:45 PM	0	55	0	0	13	43	0	0	0	0	0	0	0	0	8	0	119		
4:50 PM	0	51	0	0	13	62	1	0	0	0	0	0	0	0	16	0	143		
4:55 PM	0	49	0	0	11	55	0	0	0	0	0	0	0	0	12	0	127	1500	
5:00 PM	0	58	1	0	10	66	1	0	1	0	0	0	1	0	17	0	155	1548	
5:05 PM	0	53	0	0	18	68	0	0	0	0	0	0	1	0	12	0	152	1593	
5:10 PM	0	59	0	0	15	60	0	0	0	0	0	0	0	0	13	0	147	1612	
5:15 PM	0	82	1	0	12	51	0	0	1	0	0	0	1	0	9	0	157	1640	
5:20 PM	0	62	0	0	4	39	1	0	0	0	0	0	0	0	13	0	119	1651	
5:25 PM	0	71	0	0	7	57	3	0	0	0	0	0	1	0	15	0	154	1686	
5:30 PM	0	36	0	0	13	55	1	0	0	0	0	0	1	1	6	0	113	1652	
5:35 PM	0	44	0	0	12	48	0	0	0	0	0	0	0	0	10	0	114	1636	
5:40 PM	0	45	0	0	10	40	0	0	0	0	1	0	1	0	12	0	109	1609	
5:45 PM	0	46	1	0	14	35	0	0	0	0	0	0	0	0	9	0	105	1595	
5:50 PM	0	37	0	0	14	33	1	0	0	0	0	0	1	0	14	0	100	1552	
5:55 PM	0	31	1	0	7	39	0	0	0	0	0	0	1	0	13	0	92	1517	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	0	776	4	0	180	716	0	0	4	0	0	0	8	0	136	0	1824		
Heavy Trucks	0	12	0	0	0	8	0	0	0	0	0	0	0	0	8	0	28		
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		
Railroad																			
Stopped Buses																			

Comments:

**Summary of Traffic Count
Transportation Development Division**

Site: 48445
County: Yamhill
City: McMinnville

Date: 4/3/2018
Hours: 6:00 AM-10:00 PM
Highway #: 039
SALMON RIVER HIGHWAY NO. 39
Location: (OR18) at Norton Ln (483 AB)
Weather:

Milepoint: 46.69
Count Number: 1.00

Time of Day	Summary By Movements													Entering Volumes				
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	North	East	South	West	
6:00	10	0	2	8	6	51	0	2	5	11	129	8	232	12	65	7	148	
6:15	10	0	8	6	7	66	0	5	9	10	143	17	281	18	79	14	170	
6:30	15	1	4	5	13	80	1	10	12	12	169	18	340	20	98	23	199	
6:45	16	3	10	18	17	106	4	6	8	11	175	52	426	29	141	18	238	
7:00	17	1	5	17	9	124	3	3	17	8	189	21	414	23	150	23	218	
7:15	11	2	13	26	14	165	1	2	18	21	161	34	468	26	205	21	216	
7:30	9	2	18	29	17	192	4	6	23	25	164	28	517	29	238	33	217	
7:45	14	2	16	38	22	221	4	6	25	26	178	60	612	32	281	35	264	
8:00	9	2	13	45	12	162	6	5	10	52	160	58	534	24	219	21	270	
8:15	28	4	13	51	12	157	4	7	21	47	151	41	536	45	220	32	239	
8:30	19	6	14	34	9	142	5	7	20	41	148	30	475	39	185	32	219	
8:45	16	3	9	34	10	139	8	10	22	31	133	34	449	28	183	40	198	
9:00	14	4	17	14	12	130	3	7	30	22	129	29	411	35	156	40	180	
9:15	13	1	14	22	10	111	9	7	33	19	124	25	388	28	143	49	168	
9:30	19	1	18	15	13	127	5	5	29	23	143	37	435	38	155	39	203	
9:45	15	8	27	22	10	133	6	9	41	29	143	34	477	50	165	56	206	
10:00	24	2	27	21	9	121	7	11	36	28	140	20	446	53	151	54	188	
10:15	25	4	21	19	6	158	5	11	31	34	145	33	492	50	183	47	212	
10:30	15	7	21	28	9	161	8	13	39	27	145	27	500	43	198	60	199	
10:45	27	4	24	27	9	140	9	11	34	19	125	41	470	55	176	54	185	
11:00	27	6	27	22	7	123	8	7	40	31	127	24	449	60	152	55	182	
11:15	19	3	21	24	6	177	8	10	41	16	133	27	485	43	207	59	176	
11:30	41	11	30	17	14	156	7	8	41	24	141	23	513	82	187	56	188	
11:45	28	8	46	21	13	159	11	10	48	31	148	19	542	82	193	69	198	
12:00	36	7	39	19	14	171	14	12	48	35	151	29	575	82	204	74	215	
12:15	22	5	27	35	11	144	7	9	44	28	132	24	488	54	190	60	184	
12:30	24	5	37	30	4	162	10	10	32	29	160	25	528	66	196	52	214	
12:45	21	4	20	15	7	152	3	13	23	21	159	32	470	45	174	39	212	
13:00	14	4	20	23	8	135	4	15	27	20	173	24	467	38	166	46	217	
13:15	32	2	29	20	7	132	6	10	33	23	137	39	470	63	159	49	199	
13:30	27	4	20	30	11	135	4	11	33	23	136	36	470	51	176	48	195	
13:45	21	3	30	20	7	172	3	15	42	18	138	28	497	54	199	60	184	
14:00	15	1	29	21	6	190	6	11	48	24	130	25	506	45	217	65	179	
14:15	19	3	19	23	6	166	5	11	45	19	148	28	492	41	195	61	195	
14:30	33	2	25	16	7	167	5	10	39	20	157	33	514	60	190	54	210	
14:45	19	0	23	25	7	164	6	10	59	28	176	30	547	42	196	75	234	
15:00	26	4	19	19	5	208	3	6	37	17	183	19	546	49	232	46	219	
15:15	17	1	31	25	12	175	3	11	36	22	167	27	527	49	212	50	216	
15:30	23	4	36	21	10	183	5	13	45	20	206	23	589	63	214	63	249	
15:45	23	4	20	26	6	198	5	9	47	17	201	23	579	47	230	61	241	
16:00	15	2	29	35	15	236	4	21	67	28	216	20	688	46	286	92	264	
16:15	19	1	27	24	14	250	4	8	37	20	199	17	620	47	288	49	236	
16:30	28	2	29	27	9	246	6	15	48	18	196	13	637	59	282	69	227	
16:45	18	2	36	21	8	260	4	14	47	23	200	18	651	56	289	65	241	
17:00	39	2	40	16	5	237	5	9	64	20	209	25	671	81	258	78	254	
17:15	26	2	30	19	11	237	1	12	37	26	203	17	621	58	267	50	246	
17:30	22	3	18	18	6	209	2	13	50	9	169	20	539	43	233	65	198	
17:45	15	3	19	13	8	236	3	4	29	17	132	20	499	37	257	36	169	
18:00	12	2	11	15	7	166	7	6	27	12	127	14	406	25	188	40	153	
18:15	14	3	14	20	7	184	2	4	19	17	149	12	445	31	211	25	178	
18:30	10	3	16	11	9	137	5	8	23	17	134	20	393	29	157	36	171	
18:45	11	0	8	22	9	125	0	7	18	9	122	17	348	19	156	25	148	
19:00	7	1	7	16	1	139	2	2	27	10	134	10	356	15	156	31	154	
19:15	16	0	14	10	2	102	0	13	32	10	116	13	328	30	114	45	139	
19:30	9	1	18	9	3	86	3	3	28	8	109	9	286	28	98	34	126	
19:45	8	1	8	7	1	83	3	9	11	7	89	12	239	17	91	23	108	
20:00	10	3	8	2	2	82	0	2	12	8	91	5	225	21	86	14	104	
20:15	9	0	11	5	1	92	0	3	7	14	71	14	227	20	98	10	99	
20:30	13	2	15	7	4	88	0	6	6	7	92	10	250	30	99	12	109	
20:45	11	1	10	6	2	68	1	3	8	3	56	2	171	22	76	12	61	
21:00	6	0	3	4	1	64	0	0	6	5	51	2	142	9	69	6	58	
21:15	15	2	4	6	0	54	3	1	5	5	63	4	162	21	60	9	72	
21:30	5	0	5	7	0	45	0	2	6	1	51	8	130	10	52	8	60	
21:45	5	1	3	3	2	59	2	2	3	4	40	3	127	9	64	7	47	
Total Count	1156	175	1225	1254	521	9440	272	521	1888	1260	9116	1490	28318	2556	11215	2681	11866	
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
24hr Volume	1272	193	1348	1380	574	10384	300	574	2077	1386	10028	1639	31150	2812	12337	2950	13053	

**Summary of Traffic Count
Transportation Development Division**

Site: 48446	Date: 4/3/2018
County: Yamhill	Hours: 6:00 AM-10:00 PM
City: McMinnville	Highway #: 039
Milepoint: 47.39	SALMON RIVER HIGHWAY
Count Number: 1.00	Location: NO. 39 at Cumulus Ave
	Weather:

Time of Day	Summary By Movements							Entering Volumes			
	N-E	N-W	E-N	E-W	W-N	W-E	TOTAL	North	East	West	
6:00	4	15	2	54	4	139	218	19	56	143	
6:15	7	8	1	69	4	148	237	15	70	152	
6:30	7	12	0	89	9	186	303	19	89	195	
6:45	9	14	5	138	8	196	370	23	143	204	
7:00	3	14	4	134	3	187	345	17	138	190	
7:15	6	16	7	180	8	180	397	22	187	188	
7:30	3	15	6	230	9	175	438	18	236	184	
7:45	3	32	22	260	25	169	511	35	282	194	
8:00	3	12	10	201	25	150	401	15	211	175	
8:15	2	15	6	206	27	158	414	17	212	185	
8:30	1	15	10	158	20	150	354	16	168	170	
8:45	3	15	9	173	22	139	361	18	182	161	
9:00	1	14	10	153	15	135	328	15	163	150	
9:15	2	15	10	125	20	128	300	17	135	148	
9:30	3	24	7	120	21	149	324	27	127	170	
9:45	5	17	10	159	25	132	348	22	169	157	
10:00	5	14	8	151	19	142	339	19	159	161	
10:15	5	21	11	147	22	173	379	26	158	195	
10:30	7	28	6	165	20	154	380	35	171	174	
10:45	3	16	7	163	33	128	350	19	170	161	
11:00	6	12	7	142	30	140	337	18	149	170	
11:15	6	16	21	195	25	130	393	22	216	155	
11:30	7	34	19	154	24	162	400	41	173	186	
11:45	0	28	15	164	32	158	397	28	179	190	
12:00	7	24	14	165	28	168	406	31	179	196	
12:15	4	31	11	168	35	132	381	35	179	167	
12:30	10	27	16	169	29	162	413	37	185	191	
12:45	8	22	16	156	35	157	394	30	172	192	
13:00	10	26	11	136	27	161	371	36	147	188	
13:15	9	23	12	134	19	182	379	32	146	201	
13:30	4	27	9	147	30	135	352	31	156	165	
13:45	2	31	16	179	32	156	416	33	195	188	
14:00	13	46	6	167	18	139	389	59	173	157	
14:15	9	29	8	160	22	149	377	38	168	171	
14:30	7	21	6	169	34	179	416	28	175	213	
14:45	11	28	14	179	29	175	436	39	193	204	
15:00	17	36	7	184	28	175	447	53	191	203	
15:15	9	21	12	191	28	170	431	30	203	198	
15:30	11	36	7	182	43	199	478	47	189	242	
15:45	15	30	13	211	34	205	508	45	224	239	
16:00	20	27	9	245	28	211	540	47	254	239	
16:15	17	32	7	259	34	204	553	49	266	238	
16:30	18	36	9	253	25	207	548	54	262	232	
16:45	13	35	11	241	16	212	528	48	252	228	
17:00	29	26	9	244	24	239	571	55	253	263	
17:15	16	43	15	225	31	220	550	59	240	251	
17:30	12	28	11	212	30	163	456	40	223	193	
17:45	9	38	7	204	14	146	418	47	211	160	
18:00	8	36	5	153	13	130	345	44	158	143	
18:15	13	32	7	179	22	144	397	45	186	166	
18:30	10	17	2	138	26	129	322	27	140	155	
18:45	13	22	5	139	19	121	319	35	144	140	
19:00	11	22	11	128	15	122	309	33	139	137	
19:15	9	31	3	82	17	132	274	40	85	149	
19:30	5	12	5	87	12	106	227	17	92	118	
19:45	2	6	1	85	15	98	207	8	86	113	
20:00	3	10	1	74	17	84	189	13	75	101	
20:15	0	9	2	96	12	78	197	9	98	90	
20:30	1	9	0	83	12	87	192	10	83	99	
20:45	4	10	1	69	13	69	166	14	70	82	
21:00	3	12	3	52	5	41	116	15	55	46	
21:15	0	8	1	55	14	70	148	8	56	84	
21:30	2	2	2	49	5	59	119	4	51	64	
21:45	2	9	0	53	6	41	111	11	53	47	
Total Count	467	1392	518	9832	1346	9465	23020	1859	10350	10811	
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
24hr Volume	514	1532	570	10816	1481	10412	25322	2045	11385	11893	

Summary of Traffic Count Transportation Development Division

Site: 49196	Date: 4/3/2018
County: Yamhill	Hours: 2:00 PM-6:00 PM
City: McMinnville	Highway #: 039
	HIGHWAY NO. 39 (OR18)
Milepoint: 47.67	Location: at Armory Way
Count Number: 1.00	Weather:

Time of Day	Summary By Movements							Entering Volumes		
	E-S	E-W	S-E	S-W	W-E	W-S	TOTAL	East	South	West
14:00	0	167	1	0	150	0	318	167	1	150
14:15	0	173	1	1	165	0	340	173	2	165
14:30	0	169	0	2	183	1	355	169	2	184
14:45	1	193	0	0	177	2	373	194	0	179
15:00	1	201	1	0	190	1	394	202	1	191
15:15	2	189	1	2	186	2	382	191	3	188
15:30	1	190	0	2	202	1	396	191	2	203
15:45	1	222	1	4	220	0	448	223	5	220
16:00	1	258	3	1	230	2	495	259	4	232
16:15	0	268	2	1	212	1	484	268	3	213
16:30	0	248	3	6	229	0	486	248	9	229
16:45	0	262	1	0	236	0	499	262	1	236
17:00	0	249	1	0	260	1	511	249	1	261
17:15	0	236	2	0	228	0	466	236	2	228
17:30	0	221	0	0	183	1	405	221	0	184
17:45	0	213	0	1	157	1	372	213	1	158
Total Count	7	3459	17	20	3208	13	6724	3466	37	3221
24hr Factor	1	1	1	1	1	1	1	1	1	1
24hr Volume	7	3459	17	20	3208	13	6724	3466	37	3221

**Summary of Traffic Count
Transportation Development Division**

Site: 48441 Date: 4/13/2018
 County: Yamhill Hours: 2:00 PM-6:00 PM
 City: McMinnville Highway #: 039

Milepoint: 48.53 Location: SALMON RIVER HIGHWAY
 NO. 39 at SE Loop Rd (local)
 Count Number: 1.00 Weather:

Time of Day	Summary By Movements							Entering Volumes		
	N-E	N-W	E-N	E-W	W-N	W-E	TOTAL	North	East	West
14:00	2	11	3	156	3	141	316	13	159	144
14:15	0	2	1	156	5	149	313	2	157	154
14:30	2	9	1	155	5	157	329	11	156	162
14:45	3	2	1	177	6	179	368	5	178	185
15:00	2	7	4	190	5	180	388	9	194	185
15:15	4	4	1	176	3	174	362	8	177	177
15:30	1	5	2	173	4	181	366	6	175	185
15:45	1	5	0	223	4	206	439	6	223	210
16:00	1	4	0	241	3	226	475	5	241	229
16:15	2	5	0	261	1	205	474	7	261	206
16:30	2	4	2	241	3	228	480	6	243	231
16:45	4	5	1	247	2	220	479	9	248	222
17:00	3	4	0	236	1	257	501	7	236	258
17:15	0	5	1	215	1	226	448	5	216	227
17:30	1	5	0	213	1	181	401	6	213	182
17:45	3	1	3	207	3	146	363	4	210	149
Total Count	31	78	20	3267	50	3056	6502	109	3287	3106
24hr Factor	1	1	1	1	1	1	1	1	1	1
24hr Volume	31	78	20	3267	50	3056	6502	109	3287	3106

**Summary of Traffic Count
Transportation Development Division**

Site: 48447 Date: 4/3/2018
 County: Yamhill Hours: 6:00 AM-10:00 PM
 City: Highway #: 039
 Milepoint: 48.59 SALMON RIVER HIGHWAY
 Location: NO. 39 at SE Cruickshank Rd
 Count Number: 1.00 Weather:

Time of Day	Summary By Movements						Entering Volumes			
	E-S	E-W	S-E	S-W	W-E	W-S	TOTAL	East	South	West
6:00	2	48	7	11	126	19	213	50	18	145
6:15	2	48	7	14	141	23	235	50	21	164
6:30	1	64	1	27	144	44	281	65	28	188
6:45	3	102	1	36	137	56	335	105	37	193
7:00	1	109	9	34	146	46	345	110	43	192
7:15	3	133	6	61	148	46	397	136	67	194
7:30	2	151	8	77	143	30	411	153	85	173
7:45	2	204	6	91	138	25	466	206	97	163
8:00	0	133	3	48	112	32	328	133	51	144
8:15	1	175	3	55	114	28	376	176	58	142
8:30	1	127	2	35	134	29	328	128	37	163
8:45	2	140	2	50	115	24	333	142	52	139
9:00	1	92	2	40	101	22	258	93	42	123
9:15	1	101	0	31	95	31	259	102	31	126
9:30	1	105	0	27	114	32	279	106	27	146
9:45	3	118	2	33	111	22	289	121	35	133
10:00	0	126	1	33	99	33	292	126	34	132
10:15	0	114	1	24	134	28	301	114	25	162
10:30	2	130	2	25	112	26	297	132	27	138
10:45	0	117	1	42	100	32	292	117	43	132
11:00	3	121	0	21	100	26	271	124	21	126
11:15	0	133	1	43	102	27	306	133	44	129
11:30	1	117	2	35	136	23	314	118	37	159
11:45	2	148	4	30	116	25	325	150	34	141
12:00	1	133	3	34	125	36	332	134	37	161
12:15	3	119	2	30	86	20	260	122	32	106
12:30	3	143	3	27	131	26	333	146	30	157
12:45	1	131	1	23	124	25	305	132	24	149
13:00	1	105	3	32	132	37	310	106	35	169
13:15	1	118	2	31	132	38	322	119	33	170
13:30	2	118	1	24	98	35	278	120	25	133
13:45	0	135	4	43	114	30	326	135	47	144
14:00	1	125	0	32	118	25	301	126	32	143
14:15	3	124	2	36	125	24	314	127	38	149
14:30	2	117	4	36	141	18	318	119	40	159
14:45	2	140	0	38	145	37	362	142	38	182
15:00	2	151	0	45	150	32	380	153	45	182
15:15	3	130	4	46	133	43	359	133	50	176
15:30	1	143	6	32	141	46	369	144	38	187
15:45	2	178	1	46	167	44	438	180	47	211
16:00	8	179	2	61	171	55	476	187	63	226
16:15	5	197	3	64	168	39	476	202	67	207
16:30	5	184	1	58	183	49	480	189	59	232
16:45	7	184	3	64	171	51	480	191	67	222
17:00	4	168	3	67	203	64	509	172	70	267
17:15	4	156	4	61	171	55	451	160	65	226
17:30	4	166	7	47	128	53	405	170	54	181
17:45	3	164	2	47	121	27	364	167	49	148
18:00	4	110	1	31	113	17	276	114	32	130
18:15	2	134	0	36	108	31	311	136	36	139
18:30	0	114	2	33	119	22	290	114	35	141
18:45	0	100	1	32	107	23	263	100	33	130
19:00	1	102	0	20	106	32	261	103	20	138
19:15	3	57	1	23	95	32	211	60	24	127
19:30	1	68	1	17	83	30	200	69	18	113
19:45	3	62	1	17	70	20	173	65	18	90
20:00	3	63	1	25	65	15	172	66	26	80
20:15	0	66	2	12	58	15	153	66	14	73
20:30	2	65	0	13	65	13	158	67	13	78
20:45	1	57	1	14	67	9	149	58	15	76
21:00	1	43	0	9	30	14	97	44	9	44
21:15	0	41	0	9	49	13	112	41	9	62
21:30	0	47	0	10	43	13	113	47	10	56
21:45	2	35	0	14	30	7	88	37	14	37
Total Count	125	7528	143	2262	7504	1944	19506	7653	2405	9448
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
24hr Volume	138	8281	158	2489	8255	2139	21457	8419	2646	10393

**Summary of Traffic Count
Transportation Development Division**

Site: 48443	Date: 4/3/2018
County: Yamhill	Hours: 2:00 PM-6:00 PM
City: McMinnville	Highway #: 483
Milepoint: 47.16	HIGHWAY NO. 483 E.
Count Number: 1.00	Location: MCMINNVILLE FRONTAGE RD
	Weather:

Time of Day	Summary By Movements							Entering Volumes			
	N-S	N-W	S-N	S-W	W-N	W-S		TOTAL	North	South	West
14:00	39	12	35	16	16	5		123	51	51	21
14:15	32	16	32	14	14	9		117	48	46	23
14:30	50	19	26	14	13	13		135	69	40	26
14:45	31	16	38	20	14	10		129	47	58	24
15:00	38	10	20	16	11	13		108	48	36	24
15:15	35	18	33	17	12	13		128	53	50	25
15:30	46	14	32	14	16	14		136	60	46	30
15:45	37	22	28	19	17	12		135	59	47	29
16:00	41	16	39	28	9	9		142	57	67	18
16:15	34	13	26	21	7	8		109	47	47	15
16:30	41	6	31	20	10	18		126	47	51	28
16:45	46	9	31	17	9	12		124	55	48	21
17:00	54	20	33	8	13	26		154	74	41	39
17:15	39	7	26	20	10	17		119	46	46	27
17:30	26	5	21	8	10	16		86	31	29	26
17:45	21	8	21	11	8	14		83	29	32	22
Total Count	610	211	472	263	189	209		1954	821	735	398
24hr Factor	1	1	1	1	1	1		1	1	1	1
24hr Volume	610	211	472	263	189	209		1954	821	735	398

**Summary of Traffic Count
Transportation Development Division**

Site: 48444
County: Yamhill
City: McMinnville

Date: 4/3/2018
Hours: 6:00 AM-10:00 PM
Highway #: 7077

Milepoint: 46.99
Count Number: 1.00

Location: 3 Mile Ln at First St
Weather:

Time of Day	Summary By Movements													TOTAL	Entering Volumes			
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	North		East	South	West	
6:00	0	49	0	1	0	0	29	0	11	0	1	31	122	49	1	40	32	
6:15	1	53	1	0	0	0	33	0	7	1	0	33	129	55	0	40	34	
6:30	0	91	0	0	0	1	40	0	11	0	0	46	189	91	1	51	46	
6:45	1	102	2	1	0	1	71	0	15	0	0	55	248	105	2	86	55	
7:00	0	89	0	1	0	0	63	0	17	1	0	47	218	89	1	80	48	
7:15	0	96	0	0	1	0	95	0	31	1	0	53	277	96	1	126	54	
7:30	0	90	1	0	0	0	115	0	40	0	0	45	291	91	0	155	45	
7:45	0	130	6	1	0	0	167	0	58	1	0	62	425	136	1	225	63	
8:00	1	151	0	2	0	0	119	0	27	0	0	61	361	152	2	146	61	
8:15	1	145	2	0	0	0	81	0	29	1	0	52	311	148	0	110	53	
8:30	0	90	0	0	0	0	99	0	26	0	0	48	263	90	0	125	48	
8:45	0	108	0	0	0	0	112	0	30	1	0	36	287	108	0	142	37	
9:00	0	95	1	2	0	0	103	1	30	0	0	38	270	96	2	134	38	
9:15	0	112	0	1	0	0	109	1	28	0	0	29	280	112	1	138	29	
9:30	1	110	0	1	0	0	83	1	31	0	0	30	257	111	1	115	30	
9:45	3	95	1	2	1	0	113	1	36	1	0	28	281	99	3	150	29	
10:00	0	116	1	0	0	0	119	0	26	2	0	47	311	117	0	145	49	
10:15	0	123	0	0	1	0	106	2	40	1	0	46	319	123	1	148	47	
10:30	0	107	0	1	0	0	123	0	34	1	0	38	304	107	1	157	39	
10:45	0	106	1	1	0	0	105	0	32	0	0	38	283	107	1	137	38	
11:00	0	109	0	0	0	0	112	1	22	1	0	33	278	109	0	135	34	
11:15	1	88	0	1	0	0	123	0	36	2	0	40	291	89	1	159	42	
11:30	0	114	0	0	0	0	129	0	39	0	0	37	319	114	0	168	37	
11:45	1	107	1	0	0	0	134	1	38	1	0	23	306	109	0	173	24	
12:00	0	143	3	0	0	0	131	0	46	1	0	42	366	146	0	177	43	
12:15	1	112	1	0	0	0	121	0	44	1	1	42	323	114	0	165	44	
12:30	0	114	1	0	1	0	112	0	24	2	0	38	292	115	1	136	40	
12:45	1	103	3	0	0	0	120	0	33	1	0	49	310	107	0	153	50	
13:00	1	115	1	0	0	0	96	1	30	0	0	37	281	117	0	127	37	
13:15	1	126	1	1	0	0	110	0	26	0	1	56	322	128	1	136	57	
13:30	1	99	0	2	0	0	104	0	28	1	0	51	286	100	2	132	52	
13:45	0	109	0	0	0	0	127	0	37	3	0	26	302	109	0	164	29	
14:00	0	119	0	0	0	0	158	2	33	0	0	43	355	119	0	193	43	
14:15	0	129	1	1	0	0	119	0	36	0	0	42	328	130	1	155	42	
14:30	1	144	0	2	0	0	142	0	38	1	0	39	367	145	2	180	40	
14:45	2	123	7	0	0	0	138	0	57	1	0	56	384	132	0	195	57	
15:00	1	138	2	0	0	0	143	0	38	0	0	48	370	141	0	181	48	
15:15	0	141	0	0	1	0	135	0	38	0	0	42	357	141	1	173	42	
15:30	3	184	0	0	0	1	140	1	43	0	0	43	415	187	1	184	43	
15:45	0	165	0	0	2	0	112	0	39	1	0	44	363	165	2	151	45	
16:00	0	151	0	1	0	0	184	1	53	0	0	49	439	151	1	238	49	
16:15	1	170	1	0	0	0	159	0	65	0	0	42	438	172	0	224	42	
16:30	1	157	2	2	1	0	149	2	58	0	0	64	436	160	3	209	64	
16:45	2	196	2	0	0	0	138	0	55	2	0	74	469	200	0	193	76	
17:00	0	219	0	0	0	0	170	1	59	2	0	60	511	219	0	230	62	
17:15	2	184	0	1	0	0	158	2	65	2	0	61	475	186	1	225	63	
17:30	1	147	0	0	0	0	146	0	50	0	0	42	386	148	0	196	42	
17:45	1	128	1	0	0	0	140	0	60	1	0	37	368	130	0	200	38	
18:00	3	98	0	0	0	0	153	0	71	0	0	41	366	101	0	224	41	
18:15	1	121	1	0	0	0	120	1	42	0	0	42	328	123	0	163	42	
18:30	0	132	0	0	0	0	96	1	42	1	0	37	309	132	0	139	38	
18:45	0	109	2	2	0	0	63	1	36	0	1	37	251	111	2	100	38	
19:00	3	106	0	0	0	0	83	0	24	0	1	27	244	109	0	107	28	
19:15	0	81	0	0	0	0	89	0	33	1	0	31	235	81	0	122	32	
19:30	3	88	0	1	0	0	70	0	29	0	0	16	207	91	1	99	16	
19:45	1	68	0	2	0	0	48	0	21	1	0	26	167	69	2	69	27	
20:00	1	79	0	1	0	0	48	1	23	0	0	18	171	80	1	72	18	
20:15	0	69	0	0	0	0	57	0	14	0	0	12	152	69	0	71	12	
20:30	1	44	0	1	0	0	43	0	23	0	0	25	137	45	1	66	25	
20:45	2	43	0	0	0	0	53	0	21	2	0	14	135	45	0	74	16	
21:00	0	30	0	0	0	0	29	0	16	0	0	7	82	30	0	45	7	
21:15	2	41	0	0	0	0	39	0	15	1	0	11	109	43	0	54	12	
21:30	0	33	0	1	0	0	26	0	12	0	0	14	86	33	1	38	14	
21:45	0	25	0	0	0	0	24	0	12	0	0	15	76	25	0	36	15	
Total Count	47	7059	46	33	8	3	6676	22	2183	40	5	2496	18618	7152	44	8881	2541	
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
24hr Volume	52	7765	51	37	9	4	7344	25	2402	44	6	2746	20480	7868	49	9770	2796	

3rd St at Johnson St (McMinnville)

Time	Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph7	Ph8
15:15	24	84		264	56	116	360	256
15:30	16	192		304	56	124	548	244
Peak Hour 15:45	8	120		352	32	136	512	352
17:00 16:00	20	120		304	56	120	400	228
18:00 16:15	20	92		300	44	152	376	184
16:30	32	128		340	60	156	516	232
16:45	28	132		332	24	200	532	292
17:00	36	236		400	28	180	516	312
17:15	28	160		424	48	180	508	272
17:30	16	92		272	40	112	440	196
17:45	28	76		288	28	104	324	176
18:00	20	96		212	64	132	360	172
18:15	12	60		296	28	140	316	124
18:30	4	124		276	36	124	348	240
18:45	16	108		308	48	104	280	132
19:00	0	56		212	24	76	232	108
19:15	4	40		140	16	72	196	88
19:30	16	76		144	16	40	228	92
19:45	4	84		140	40	36	116	100
20:00	20	48		132	28	56	168	224
20:15	4	76		120	40	56	128	132
20:30	0	40		128	4	52	116	76
20:45	4	60		68	28	52	108	88
21:00	8	36		76	20	32	96	84
21:15	0	20		92	24	48	84	36
21:30	0	36		108	16	32	80	60
21:45	12	16		44	8	40	56	44
22:00	12	24		68	0	40	68	32
22:15	0	12		52	4	12	32	44
22:30	4	24		48	16	24	48	20
22:45	0	20		24	4	24	32	12
23:00	0	12		24	4	20	28	12

TOTAL COUNTS: 214 1495 3653 624 1872 5027 3389
PEAK HOUR VOLUME: 44 236 424 80 200 548 436
PEAK HOUR TIME: 12:00 17:00 17:15 13:15 12:00 15:30 7:45

Col= 21 22 23 24 25 26 27 28 29
Col Letter= U V W X Y Z AA AB AC

PED Total

1160	5404	32
1484	5412	24
1512	5392	8
1248	5420	8
1168	5880	8
1464	6332	4
1540	6036	12
1708	5520	16
1620	4868	8
1168	4224	8
1024	4208	8
1056	4180	0
976	3832	4
1152	3412	8
996	2872	4
708	2396	4
556	2364	4
612	2364	4
520	2168	0
676	2056	4
556	1732	8
416	1480	0
408	1396	4
352	1208	0
304	1100	0
332	952	0
220	804	4
244	700	0
156	556	4
184		0
116		4
100		0

158

1708 6332

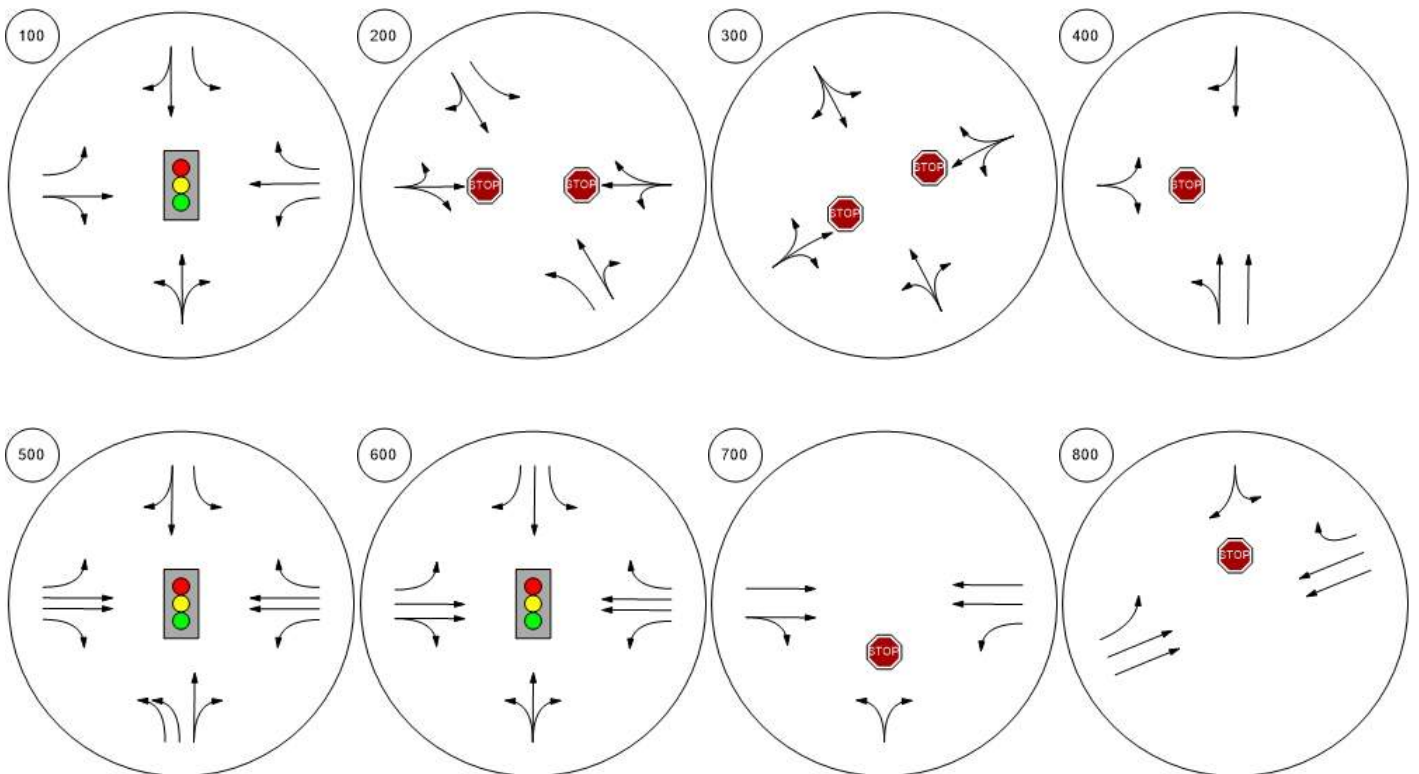
32

15:15

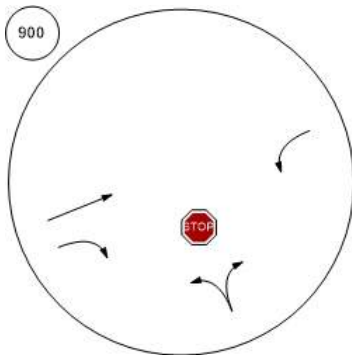
30 31 32 33 34 35 36
AD AE AF AG AH AI AJ

Appendix C 2020 Existing Traffic Volumes and Analysis

Lane Configuration and Traffic Control



Lane Configuration and Traffic Control



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Season Adjustment Factor Calcs

Date: June 4, 2020

36-004

	2015	2016	2017	2018	2019
Peak Month (August)	107%	108%	105%	105%	108%
Count Date (April 3 rd)	99%*	101%*	100%*	100%*	101%*

XXX% Outliers *Interpolated due to count date

Avg **Peak Month** (August) is: $(108\%+107\%+105\%)/3 = 106.7\%$

Avg **Count Date** (April 3rd) is: $(100\%+100\%+101\%)/3 = 100.3\%$

Seasonal adjustment for **Count Date** = $106.7\%/100.3\% = 1.064$

36-006

	2015	2016	2017	2018	2019
Peak Month (August)	114%	117%	116%	117%	118%
Count Date (April 3 rd)	98%*	99%*	100%*	97%*	99%*

XXX% Outliers *Interpolated due to count date

Avg **Peak Month** (August) is: $(117\%+116\%+117\%)/3 = 116.7\%$

Avg **Count Date** (April 3rd) is: $(98\%+99\%+99\%)/3 = 98.7\%$

Seasonal adjustment for **Count Date** = $116.7\%/98.7\% = 1.182$

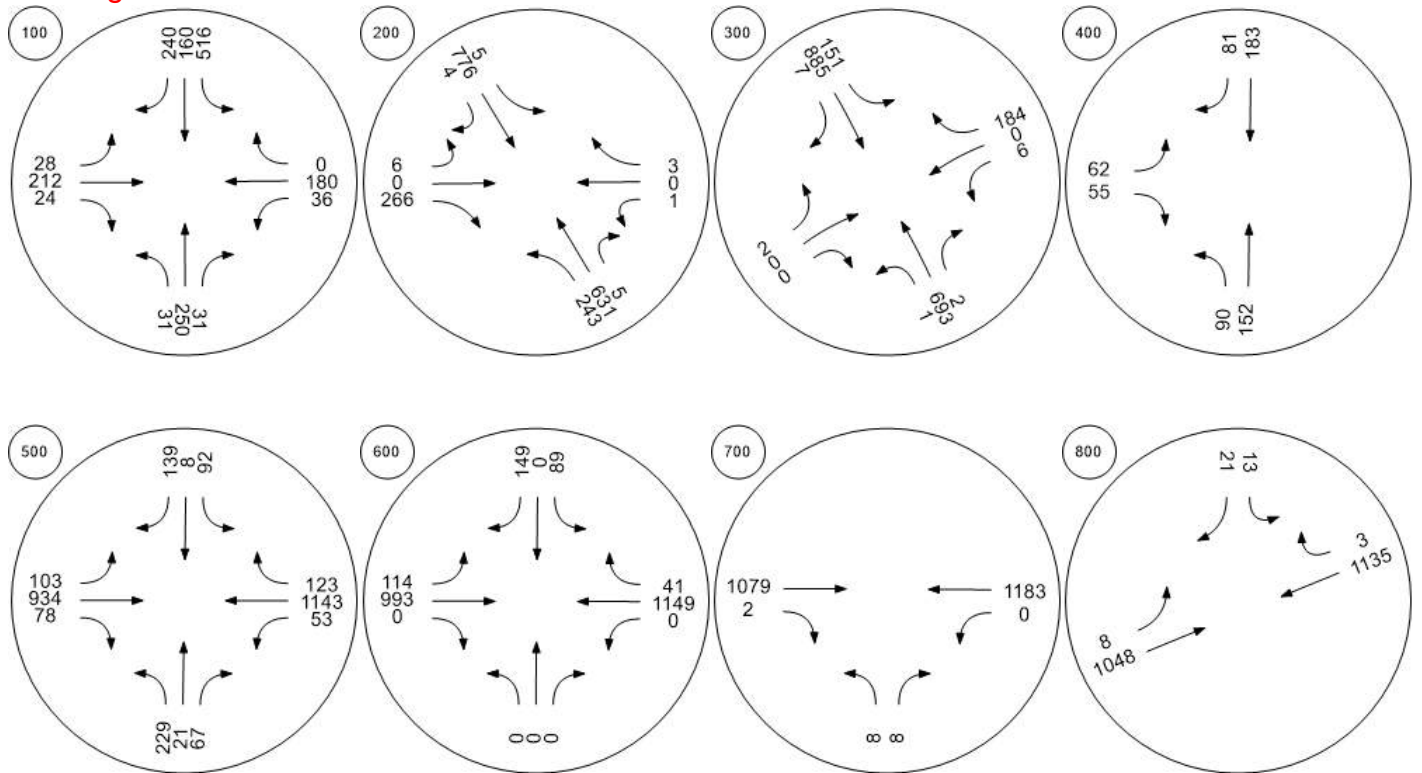
Average:

Seasonal adjustment for **Count Date** = 1.123

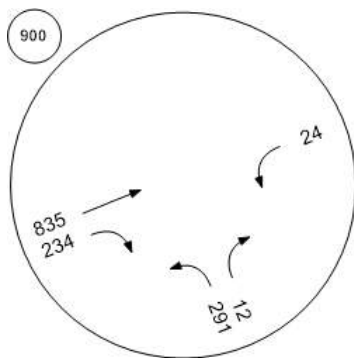
Traffic Volume - Base Volume



Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Base Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	36.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	63	8	129	40	60	7	53	6	9	45	0
Total Analysis Volume [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	102	102	102	102	102	102	102
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	35	63	2	17	11	26
g / C, Green / Cycle	0.23	0.34	0.61	0.02	0.16	0.11	0.25
(v / s)_i Volume / Saturation Flow Rate	0.21	0.32	0.26	0.02	0.14	0.02	0.11
s, saturation flow rate [veh/h]	1514	1603	1522	1603	1653	1603	1683
c, Capacity [veh/h]	391	545	931	33	272	70	422
d1, Uniform Delay [s]	33.90	27.17	4.38	49.73	38.98	40.17	28.43
k, delay calibration	0.27	0.34	0.17	0.08	0.22	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.79	21.34	0.50	32.73	15.20	5.69	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.95	0.43	0.85	0.87	0.51	0.43
d, Delay for Lane Group [s/veh]	42.69	48.51	4.88	82.46	54.18	45.85	29.11
Lane Group LOS	D	D	A	F	D	D	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.74	13.82	1.90	1.01	6.50	0.91	3.34
50th-Percentile Queue Length [ft/ln]	193.57	345.60	47.47	25.19	162.60	22.67	83.49
95th-Percentile Queue Length [veh/ln]	12.31	19.92	3.42	1.81	10.69	1.63	6.01
95th-Percentile Queue Length [ft/ln]	307.65	498.04	85.45	45.34	267.17	40.81	150.28

Movement, Approach, & Intersection Results

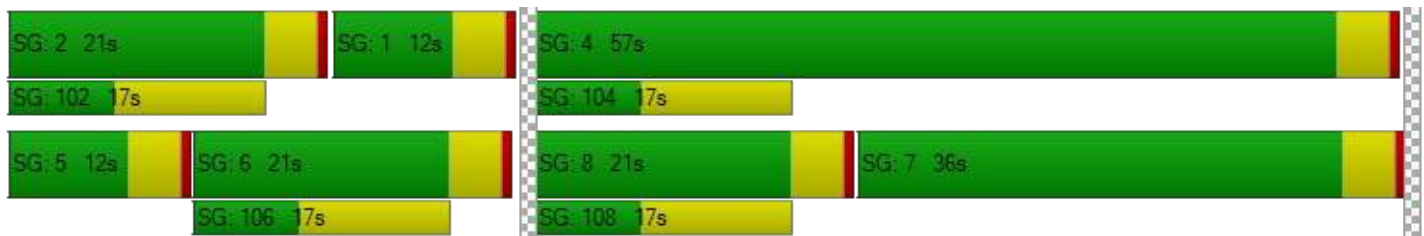
d_M, Delay for Movement [s/veh]	42.69	42.69	42.69	48.51	4.88	4.88	82.46	54.18	54.18	45.85	29.11	0.00
Movement LOS	D	D	D	D	A	A	F	D	D	D	C	
d_A, Approach Delay [s/veh]	42.69			29.45			57.18			31.90		
Approach LOS	D			C			E			C		
d_I, Intersection Delay [s/veh]	36.47											
Intersection LOS	D											
Intersection V/C	0.698											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.974	2.328	2.216	2.368
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.074	3.071	1.995	1.916
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Two-way stop	Delay (sec / veh):	696.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	170	1	1	209	1	2	0	72	0	0	1
Total Analysis Volume [veh/h]	261	678	5	5	834	4	6	0	286	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.01	0.00	0.01	0.01	0.00	0.20	0.00	0.78	0.18	0.00	0.01
d_M, Delay for Movement [s/veh]	11.71	0.00	0.00	9.36	0.00	0.00	188.40	166.88	80.95	696.66	136.61	48.90
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	E
95th-Percentile Queue Length [veh/ln]	1.43	0.00	0.00	0.02	0.00	0.00	9.94	9.94	9.94	0.55	0.55	0.55
95th-Percentile Queue Length [ft/ln]	35.80	0.00	0.00	0.45	0.00	0.00	248.48	248.48	248.48	13.87	13.87	13.87
d_A, Approach Delay [s/veh]	3.24			0.06			83.15			210.84		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	13.55											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.164

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	188	1	41	240	2	1	0	0	2	0	50
Total Analysis Volume [veh/h]	1	753	2	164	962	8	2	0	0	7	0	200
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			Yes	Yes
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.19	0.01	0.00	0.16	0.00	0.00	0.25	0.00	0.49
d_M, Delay for Movement [s/veh]	10.02	0.00	0.00	10.20	0.00	0.00	10000.0	10000.0	10000.0	162.16	144.12	42.57
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.71	0.71	0.71	1.00	1.00	1.00	5.32	5.32	5.32
95th-Percentile Queue Length [ft/ln]	0.10	0.10	0.10	17.64	17.64	17.64	25.00	25.00	25.00	133.09	133.09	133.09
d_A, Approach Delay [s/veh]	0.01			1.48			10000.00			46.61		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	14.93											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇂		⇨	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	152	183	81	62	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	40	48	21	16	14
Total Analysis Volume [veh/h]	95	160	193	85	65	58
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.14	0.07
d_M, Delay for Movement [s/veh]	8.09	0.00	0.00	0.00	13.47	9.87
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.24	0.12	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	6.10	3.05	0.00	0.00	12.23	12.23
d_A, Approach Delay [s/veh]	3.01		0.00		11.77	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.38					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	6	18	24	2	37	27	248	21	14	304	33
Total Analysis Volume [veh/h]	244	22	71	98	9	148	110	994	83	56	1216	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	60	0	20	60	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	11	22	9	20	64	55	55	64	53	53
g / C, Green / Cycle	0.10	0.20	0.08	0.18	0.57	0.49	0.49	0.57	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.06	0.11	0.19	0.31	0.06	0.09	0.38	0.09
s, saturation flow rate [veh/h]	3138	1376	1590	1466	586	3179	1396	629	3179	1408
c, Capacity [veh/h]	313	269	131	261	291	1544	678	334	1496	662
d1, Uniform Delay [s]	49.49	39.10	50.56	42.63	19.42	21.67	15.84	14.19	25.56	17.40
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.08	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.15	0.57	6.27	1.66	1.90	1.07	0.19	0.17	2.59	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.35	0.75	0.60	0.38	0.64	0.12	0.17	0.81	0.20
d, Delay for Lane Group [s/veh]	52.63	39.66	56.83	44.29	21.32	22.74	16.03	14.37	28.15	17.75
Lane Group LOS	D	D	E	D	C	C	B	B	C	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.48	2.26	2.92	4.13	1.31	9.27	1.14	0.59	13.31	1.94
50th-Percentile Queue Length [ft/ln]	86.90	56.54	73.03	103.24	32.86	231.76	28.47	14.67	332.83	48.42
95th-Percentile Queue Length [veh/ln]	6.26	4.07	5.26	7.43	2.37	14.26	2.05	1.06	19.30	3.49
95th-Percentile Queue Length [ft/ln]	156.42	101.78	131.45	185.82	59.14	356.60	51.25	26.40	482.43	87.16

Movement, Approach, & Intersection Results

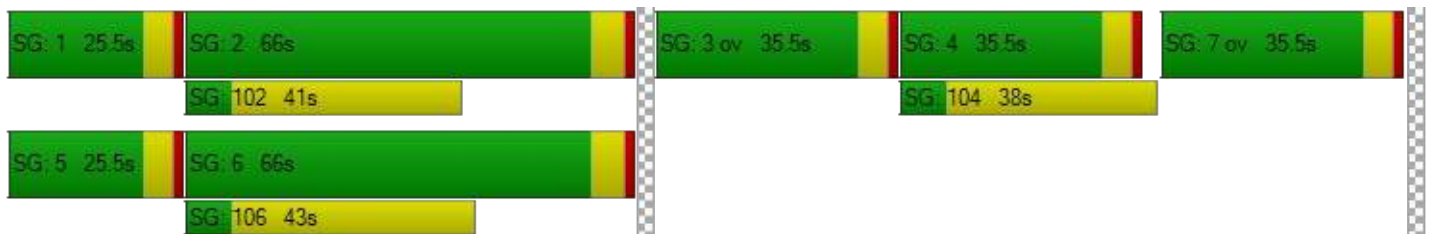
d_M, Delay for Movement [s/veh]	52.63	39.66	39.66	56.83	44.29	44.29	21.32	22.74	16.03	14.37	28.15	17.75
Movement LOS	D	D	D	E	D	D	C	C	B	B	C	B
d_A, Approach Delay [s/veh]	49.05			49.11			22.14			26.63		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	29.13											
Intersection LOS	C											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.289			2.333			3.134			3.078		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1456			1511			1333			1333		
d_b, Bicycle Delay [s]	3.33			2.69			5.00			5.00		
I_b,int, Bicycle LOS Score for Intersection	2.116			1.980			2.539			2.717		
Bicycle LOS	B			A			B			B		

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	23	0	39	30	259	0	0	299	11
Total Analysis Volume [veh/h]	0	0	0	93	0	155	119	1034	0	0	1197	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	5	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	5	5	10	0	5	10	0
Maximum Green [s]	0	20	0	0	30	20	20	60	0	20	60	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	4.5	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	2.5	2.5	4.0	0.0	2.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	3.5	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall		No			No	No	No	Yes		No	Yes	
Maximum Recall		No			No	No	No	No		No	No	
Pedestrian Recall		No			No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	68	68	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	10	10	10	23	46	41	41	46	33	33
g / C, Green / Cycle	0.15	0.15	0.15	0.34	0.68	0.60	0.60	0.68	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.00	0.07	0.00	0.11	0.18	0.31	0.31	0.00	0.38	0.03
s, saturation flow rate [veh/h]	1710	1265	1710	1408	675	1669	1669	584	3179	1454
c, Capacity [veh/h]	308	258	255	476	487	1003	1003	464	1567	716
d1, Uniform Delay [s]	0.00	26.65	0.00	16.75	8.22	7.85	7.85	0.00	14.03	9.02
k, delay calibration	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.08	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.63	0.00	0.29	0.37	0.59	0.59	0.00	1.13	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.36	0.00	0.33	0.24	0.52	0.52	0.00	0.76	0.06
d, Delay for Lane Group [s/veh]	0.00	27.29	0.00	17.04	8.58	8.43	8.43	0.00	15.17	9.07
Lane Group LOS	A	C	A	B	A	A	A	A	B	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	1.37	0.00	1.71	0.45	3.65	3.65	0.00	6.67	0.31
50th-Percentile Queue Length [ft/ln]	0.00	34.26	0.00	42.81	11.32	91.25	91.25	0.00	166.78	7.66
95th-Percentile Queue Length [veh/ln]	0.00	2.47	0.00	3.08	0.82	6.57	6.57	0.00	10.91	0.55
95th-Percentile Queue Length [ft/ln]	0.00	61.66	0.00	77.07	20.38	164.26	164.26	0.00	272.68	13.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.29	0.00	17.04	8.58	8.43	8.43	0.00	15.17	9.07
Movement LOS	A	A	A	C	A	B	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	0.00			20.88			8.45			14.96		
Approach LOS	A			C			A			B		
d_I, Intersection Delay [s/veh]	12.67											
Intersection LOS	B											
Intersection V/C	0.540											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.714	2.319	2.788	2.969
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	667	1333	1333
d_b, Bicycle Delay [s]	27.22	20.00	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	1.560	1.969	2.511	2.583
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	52.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.098

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	8	1079	2	0	1183
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	278	1	0	305
Total Analysis Volume [veh/h]	8	8	1112	2	0	1220
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	52.30	15.82	0.00	0.00	10.67	0.00
Movement LOS	F	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.38	0.38	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.46	9.46	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	34.06		0.00		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	74.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.216

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	21	8	1048	1135	3
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	2	270	293	1
Total Analysis Volume [veh/h]	13	22	8	1080	1170	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.05	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	74.45	23.02	11.91	0.00	0.00	0.00
Movement LOS	F	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	1.01	1.01	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	25.17	25.17	1.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	42.12		0.09		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.68					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	116.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.045

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔		↕↔		↖	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	291	12	835	234	24	844
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	3	217	61	6	220
Total Analysis Volume [veh/h]	303	13	870	244	25	879
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

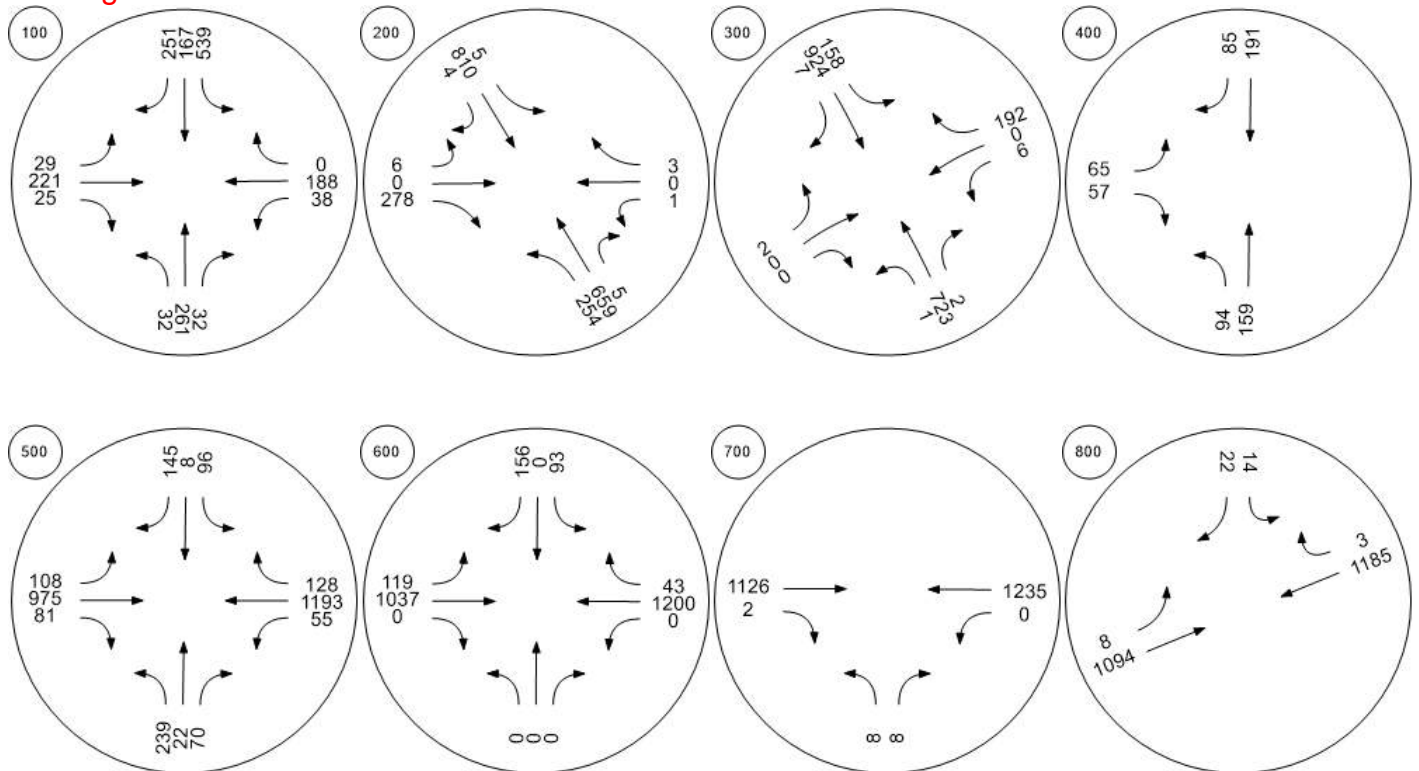
V/C, Movement V/C Ratio	1.05	0.04	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	115.99	114.18	0.00	0.00	9.75	0.00
Movement LOS	F	F	A	A	A	
95th-Percentile Queue Length [veh/ln]	12.51	12.51	0.00	0.00	0.10	0.00
95th-Percentile Queue Length [ft/ln]	312.79	312.79	0.00	0.00	2.47	0.00
d_A, Approach Delay [s/veh]	115.91		0.00		9.75	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	25.34					
Intersection LOS	F					

Appendix D 2022 Background Traffic
Volumes and Analysis

Traffic Volume - Future Total Volume



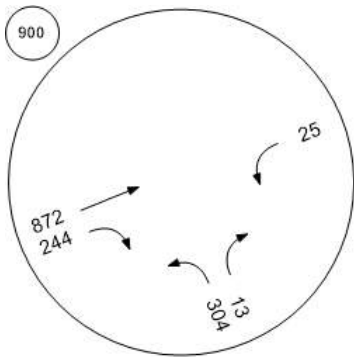
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	261	32	539	167	251	29	221	25	38	188	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	65	8	135	42	63	7	55	6	10	47	0
Total Analysis Volume [veh/h]	32	261	32	539	167	251	29	221	25	38	188	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	113	113	113	113	113	113	113
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	39	70	2	19	12	28
g / C, Green / Cycle	0.24	0.35	0.62	0.02	0.17	0.11	0.25
(v / s)_i Volume / Saturation Flow Rate	0.22	0.34	0.27	0.02	0.15	0.02	0.11
s, saturation flow rate [veh/h]	1506	1603	1522	1603	1653	1603	1683
c, Capacity [veh/h]	391	558	943	35	278	64	424
d1, Uniform Delay [s]	37.39	29.54	4.45	54.54	42.66	44.40	31.29
k, delay calibration	0.33	0.43	0.20	0.08	0.30	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.03	27.70	0.61	29.02	21.05	8.56	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.97	0.44	0.83	0.88	0.60	0.44
d, Delay for Lane Group [s/veh]	50.41	57.24	5.06	83.56	63.71	52.95	32.02
Lane Group LOS	D	E	A	F	E	D	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.44	16.93	2.12	1.09	7.90	1.09	3.89
50th-Percentile Queue Length [ft/ln]	236.05	423.28	52.99	27.37	197.47	27.25	97.27
95th-Percentile Queue Length [veh/ln]	14.48	23.68	3.82	1.97	12.51	1.96	7.00
95th-Percentile Queue Length [ft/ln]	362.04	591.98	95.38	49.27	312.70	49.06	175.08

Movement, Approach, & Intersection Results

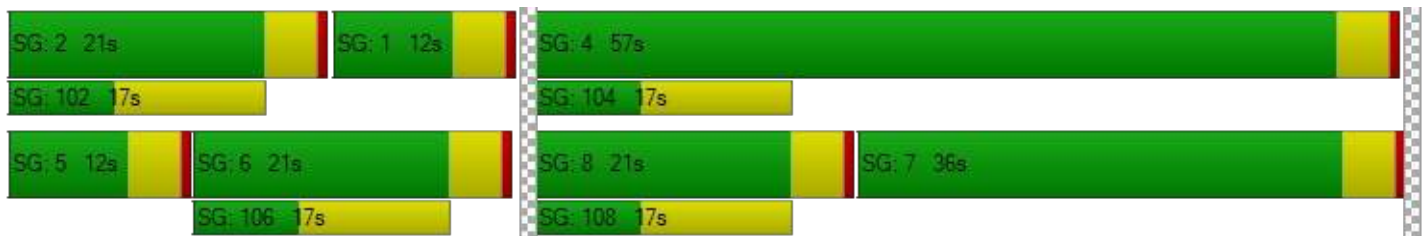
d_M, Delay for Movement [s/veh]	50.41	50.41	50.41	57.24	5.06	5.06	83.56	63.71	63.71	52.95	32.02	0.00
Movement LOS	D	D	D	E	A	A	F	E	E	D	C	
d_A, Approach Delay [s/veh]	50.41			34.45			65.81			35.54		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	42.33											
Intersection LOS	D											
Intersection V/C	0.727											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
l_p,int, Pedestrian LOS Score for Intersection	1.985			2.345			2.228			2.379		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	378			1178			378			378		
d_b, Bicycle Delay [s]	29.61			7.61			29.61			29.61		
l_b,int, Bicycle LOS Score for Intersection	2.096			3.139			2.013			1.933		
Bicycle LOS	B			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Two-way stop	Delay (sec / veh):	1,320.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.334

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔			↔			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	659	5	5	810	4	6	0	278	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	177	1	1	218	1	2	0	75	0	0	1
Total Analysis Volume [veh/h]	273	709	5	5	871	4	6	0	299	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.35	0.01	0.00	0.01	0.01	0.00	0.23	0.00	0.85	0.33	0.00	0.01
d_M, Delay for Movement [s/veh]	12.20	0.00	0.00	9.48	0.00	0.00	246.08	219.59	116.02	1320.74	233.05	127.57
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	1.60	0.00	0.00	0.02	0.00	0.00	12.31	12.31	12.31	0.83	0.83	0.83
95th-Percentile Queue Length [ft/ln]	40.05	0.00	0.00	0.47	0.00	0.00	307.67	307.67	307.67	20.82	20.82	20.82
d_A, Approach Delay [s/veh]	3.37			0.05			118.58			425.86		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	18.96											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.225

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	723	2	158	924	7	2	0	0	6	0	192
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	196	1	43	251	2	1	0	0	2	0	52
Total Analysis Volume [veh/h]	1	786	2	172	1004	8	2	0	0	7	0	209
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			Yes	Yes
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.21	0.01	0.00	0.23	0.00	0.00	0.31	0.00	0.53
d_M, Delay for Movement [s/veh]	10.20	0.00	0.00	10.46	0.00	0.00	10000.0	10000.0	10000.0	210.76	190.20	59.86
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.78	0.78	0.78	1.00	1.00	1.00	6.83	6.83	6.83
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.11	19.38	19.38	19.38	25.00	25.00	25.00	170.64	170.64	170.64
d_A, Approach Delay [s/veh]	0.01			1.52			10000.00			64.75		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	16.34											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.153

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇂		⇈	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	159	191	85	65	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	42	50	22	17	15
Total Analysis Volume [veh/h]	99	167	201	89	68	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.15	0.07
d_M, Delay for Movement [s/veh]	8.14	0.00	0.00	0.00	13.86	10.00
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.26	0.13	0.00	0.00	0.54	0.54
95th-Percentile Queue Length [ft/ln]	6.45	3.23	0.00	0.00	13.43	13.43
d_A, Approach Delay [s/veh]	3.03		0.00		12.05	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.43					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	22	70	96	8	145	108	975	81	55	1193	128
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	6	19	26	2	39	29	259	22	15	317	34
Total Analysis Volume [veh/h]	254	23	74	102	9	154	115	1037	86	59	1269	136
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	60	0	20	60	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	117	117	117	117	117	117	117	117	117	117
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	12	23	10	21	67	58	58	67	56	56
g / C, Green / Cycle	0.10	0.20	0.08	0.18	0.57	0.49	0.49	0.57	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.06	0.11	0.20	0.33	0.06	0.10	0.40	0.10
s, saturation flow rate [veh/h]	3138	1376	1590	1466	567	3179	1396	608	3179	1408
c, Capacity [veh/h]	320	272	133	263	276	1558	684	318	1506	667
d1, Uniform Delay [s]	51.56	40.67	52.72	44.50	21.76	22.67	16.27	15.20	27.10	18.02
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.08	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.32	0.58	6.62	1.76	2.36	1.16	0.19	0.21	3.13	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.36	0.76	0.62	0.42	0.67	0.13	0.19	0.84	0.20
d, Delay for Lane Group [s/veh]	54.89	41.26	59.34	46.26	24.12	23.83	16.47	15.40	30.23	18.38
Lane Group LOS	D	D	E	D	C	C	B	B	C	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.80	2.47	3.19	4.51	1.46	10.30	1.23	0.65	15.02	2.11
50th-Percentile Queue Length [ft/ln]	94.92	61.83	79.71	112.67	36.56	257.58	30.84	16.31	375.45	52.82
95th-Percentile Queue Length [veh/ln]	6.83	4.45	5.74	7.99	2.63	15.57	2.22	1.17	21.37	3.80
95th-Percentile Queue Length [ft/ln]	170.86	111.30	143.47	199.71	65.80	389.18	55.51	29.36	534.34	95.07

Movement, Approach, & Intersection Results

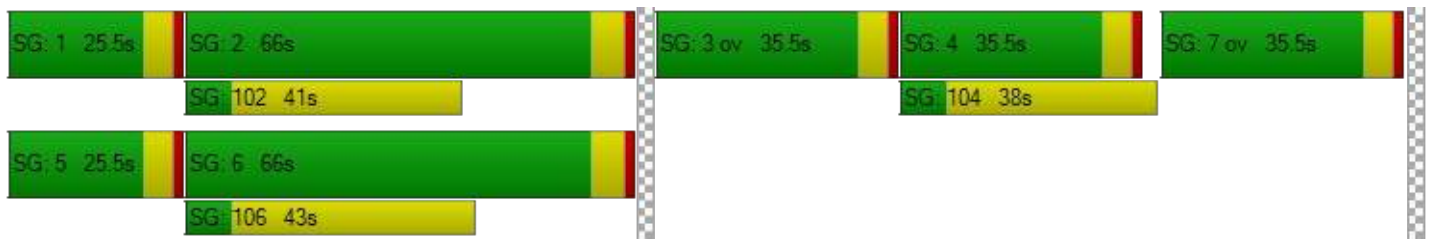
d_M, Delay for Movement [s/veh]	54.89	41.26	41.26	59.34	46.26	46.26	24.12	23.83	16.47	15.40	30.23	18.38
Movement LOS	D	D	D	E	D	D	C	C	B	B	C	B
d_A, Approach Delay [s/veh]	51.12			51.29			23.34			28.53		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	30.80											
Intersection LOS	C											
Intersection V/C	0.701											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.296	2.342	3.163	3.105
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1333	1333
d_b, Bicycle Delay [s]	3.33	2.69	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	2.139	1.997	2.581	2.767
Bicycle LOS	B	A	B	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.561

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	93	0	156	119	1037	0	0	1200	43
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	24	0	41	31	270	0	0	313	11
Total Analysis Volume [veh/h]	0	0	0	97	0	163	124	1080	0	0	1250	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	5	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	5	5	10	0	5	10	0
Maximum Green [s]	0	20	0	0	30	20	20	60	0	20	60	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	4.5	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	2.5	2.5	4.0	0.0	2.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	3.5	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall		No			No	No	No	Yes		No	Yes	
Maximum Recall		No			No	No	No	No		No	No	
Pedestrian Recall		No			No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	73	73	73	73	73	73	73	73	73	73
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	11	11	11	24	51	45	45	51	37	37
g / C, Green / Cycle	0.15	0.15	0.15	0.33	0.70	0.62	0.62	0.70	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.00	0.12	0.19	0.32	0.32	0.00	0.39	0.03
s, saturation flow rate [veh/h]	1710	1265	1710	1408	657	1669	1669	557	3179	1454
c, Capacity [veh/h]	298	248	248	471	476	1037	1037	447	1614	738
d1, Uniform Delay [s]	0.00	28.88	0.00	18.24	9.07	7.72	7.72	0.00	14.54	9.11
k, delay calibration	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.08	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.75	0.00	0.32	0.41	0.58	0.58	0.00	1.17	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.39	0.00	0.35	0.26	0.52	0.52	0.00	0.77	0.06
d, Delay for Lane Group [s/veh]	0.00	29.63	0.00	18.56	9.47	8.29	8.29	0.00	15.71	9.16
Lane Group LOS	A	C	A	B	A	A	A	A	B	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	1.56	0.00	1.99	0.49	3.98	3.98	0.00	7.54	0.34
50th-Percentile Queue Length [ft/ln]	0.00	39.12	0.00	49.73	12.28	99.40	99.40	0.00	188.47	8.45
95th-Percentile Queue Length [veh/ln]	0.00	2.82	0.00	3.58	0.88	7.16	7.16	0.00	12.04	0.61
95th-Percentile Queue Length [ft/ln]	0.00	70.41	0.00	89.51	22.11	178.92	178.92	0.00	301.04	15.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	29.63	0.00	18.56	9.47	8.29	8.29	0.00	15.71	9.16
Movement LOS	A	A	A	C	A	B	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	0.00			22.69			8.42			15.48		
Approach LOS	A			C			A			B		
d_I, Intersection Delay [s/veh]	13.08											
Intersection LOS	B											
Intersection V/C	0.561											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.714	2.330	2.810	2.992
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	667	1333	1333
d_b, Bicycle Delay [s]	27.22	20.00	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	1.560	1.989	2.553	2.628
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	58.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.110

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	8	1126	2	0	1235
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	290	1	0	318
Total Analysis Volume [veh/h]	8	8	1161	2	0	1273
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	58.52	16.92	0.00	0.00	10.92	0.00
Movement LOS	F	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.42	0.42	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.59	10.59	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	37.72		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	F					

**Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd**

Control Type:	Two-way stop	Delay (sec / veh):	86.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.264

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	22	8	1094	1185	3
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	6	2	282	305	1
Total Analysis Volume [veh/h]	14	23	8	1128	1222	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.26	0.06	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	86.83	27.61	12.26	0.00	0.00	0.00
Movement LOS	F	D	B	A	A	A
95th-Percentile Queue Length [veh/ln]	1.25	1.25	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	31.23	31.23	1.21	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	50.02		0.09		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.81					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	158.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.158

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔		↕↔		↖	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	304	13	872	244	25	922
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	3	227	64	7	240
Total Analysis Volume [veh/h]	317	14	908	254	26	960
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

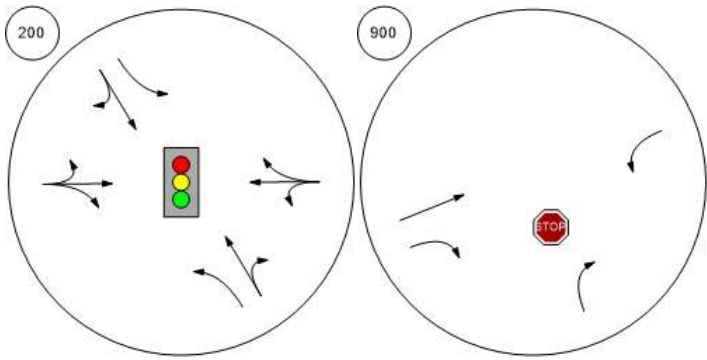
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.16	0.04	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	158.89	156.90	0.00	0.00	9.92	0.00
Movement LOS	F	F	A	A	A	
95th-Percentile Queue Length [veh/ln]	15.13	15.13	0.00	0.00	0.11	0.00
95th-Percentile Queue Length [ft/ln]	378.34	378.34	0.00	0.00	2.66	0.00
d_A, Approach Delay [s/veh]	158.81		0.00		9.92	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	34.77					
Intersection LOS	F					

Appendix E 2022 Mitigated Background Traffic Analysis

Lane Configuration and Traffic Control



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	40.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	659	5	5	810	4	6	0	278	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	177	1	1	218	1	2	0	75	0	0	1
Total Analysis Volume [veh/h]	273	709	5	5	871	4	6	0	299	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	82	82	82	82	82	82
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	54	40	40	19	19
g / C, Green / Cycle	0.67	0.67	0.49	0.49	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.34	0.42	0.01	0.52	0.21	0.00
s, saturation flow rate [veh/h]	808	1681	567	1682	1457	1203
c, Capacity [veh/h]	387	1119	208	821	389	339
d1, Uniform Delay [s]	21.00	7.95	25.73	20.98	30.22	23.96
k, delay calibration	0.50	0.13	0.11	0.50	0.14	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.33	0.73	0.05	50.60	4.38	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.64	0.02	1.07	0.78	0.01
d, Delay for Lane Group [s/veh]	31.33	8.68	25.78	71.58	34.60	23.97
Lane Group LOS	C	A	C	F	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.58	5.77	0.08	25.15	6.06	0.06
50th-Percentile Queue Length [ft/ln]	64.53	144.34	1.93	628.80	151.39	1.48
95th-Percentile Queue Length [veh/ln]	4.65	9.71	0.14	35.04	10.09	0.11
95th-Percentile Queue Length [ft/ln]	116.15	242.85	3.48	876.04	252.28	2.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.33	8.68	8.68	25.78	71.58	71.58	34.60	34.60	34.60	23.97	23.97	23.97
Movement LOS	C	A	A	C	F	E	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.94			71.32			34.60			23.97		
Approach LOS	B			E			C			C		
d_I, Intersection Delay [s/veh]	40.51											
Intersection LOS	D											
Intersection V/C	0.854											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.556			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.188			3.012			2.063			1.566		
Bicycle LOS	C			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↻	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	0	0	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	307	13	872	244	25	922
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	80	3	227	64	7	240
Total Analysis Volume [veh/h]	320	14	908	254	26	960
Pedestrian Volume [ped/h]	0		0		0	

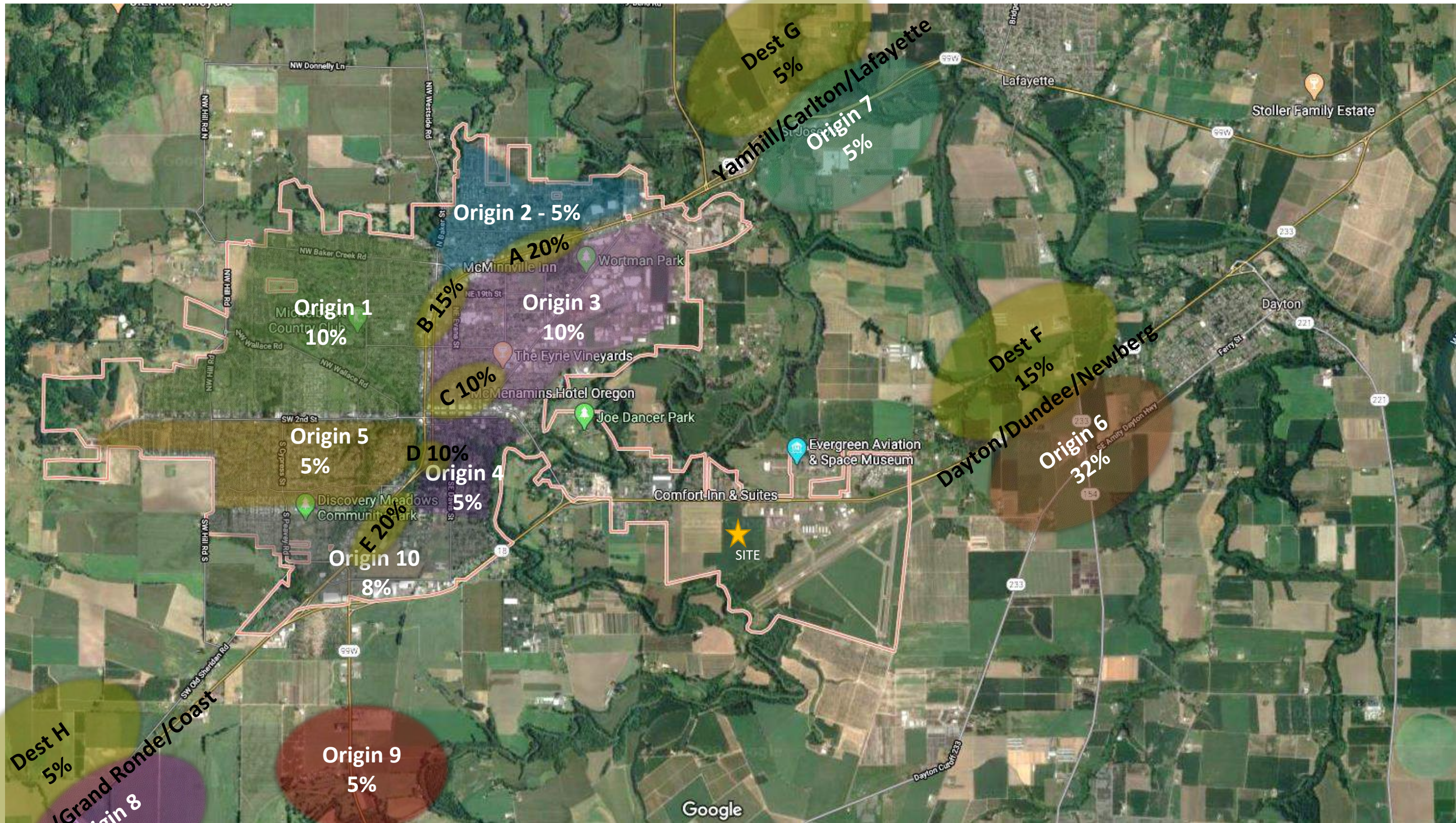
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	16.67	0.00	0.00	9.92	0.00
Movement LOS		C	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.14	0.00	0.00	0.11	0.00
95th-Percentile Queue Length [ft/ln]	0.00	3.39	0.00	0.00	2.66	0.00
d_A, Approach Delay [s/veh]	16.67		0.00		9.92	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.41					
Intersection LOS	C					

Appendix F 2022 Total Traffic Volumes and Analysis



Dest H
5%

Sheridan/Grand Ronde/Coast
Origin 8
15%

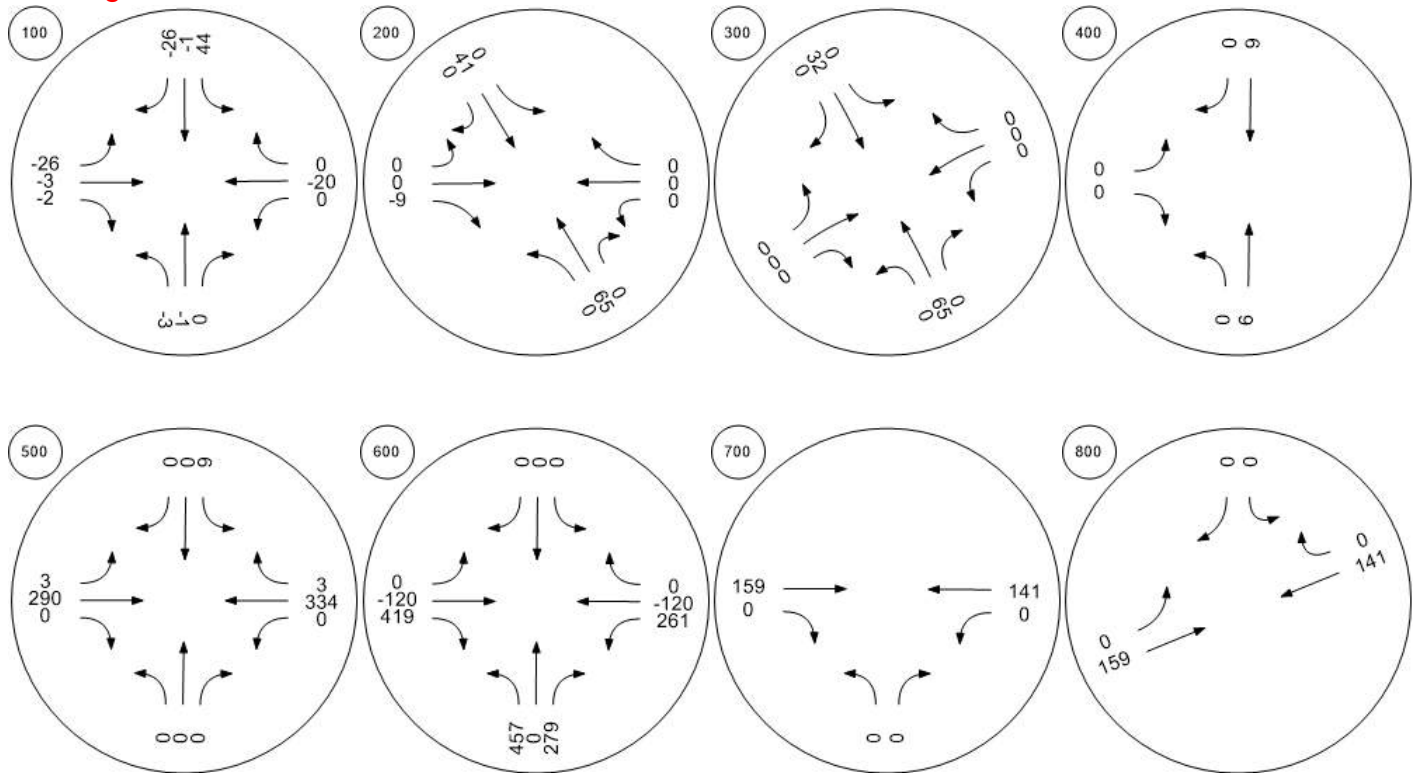
Origin 9
5%

Amity

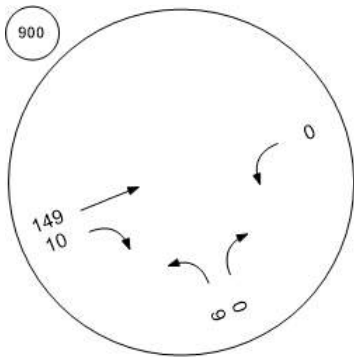
Traffic Volume - Net New Site Trips



Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Net New Site Trips

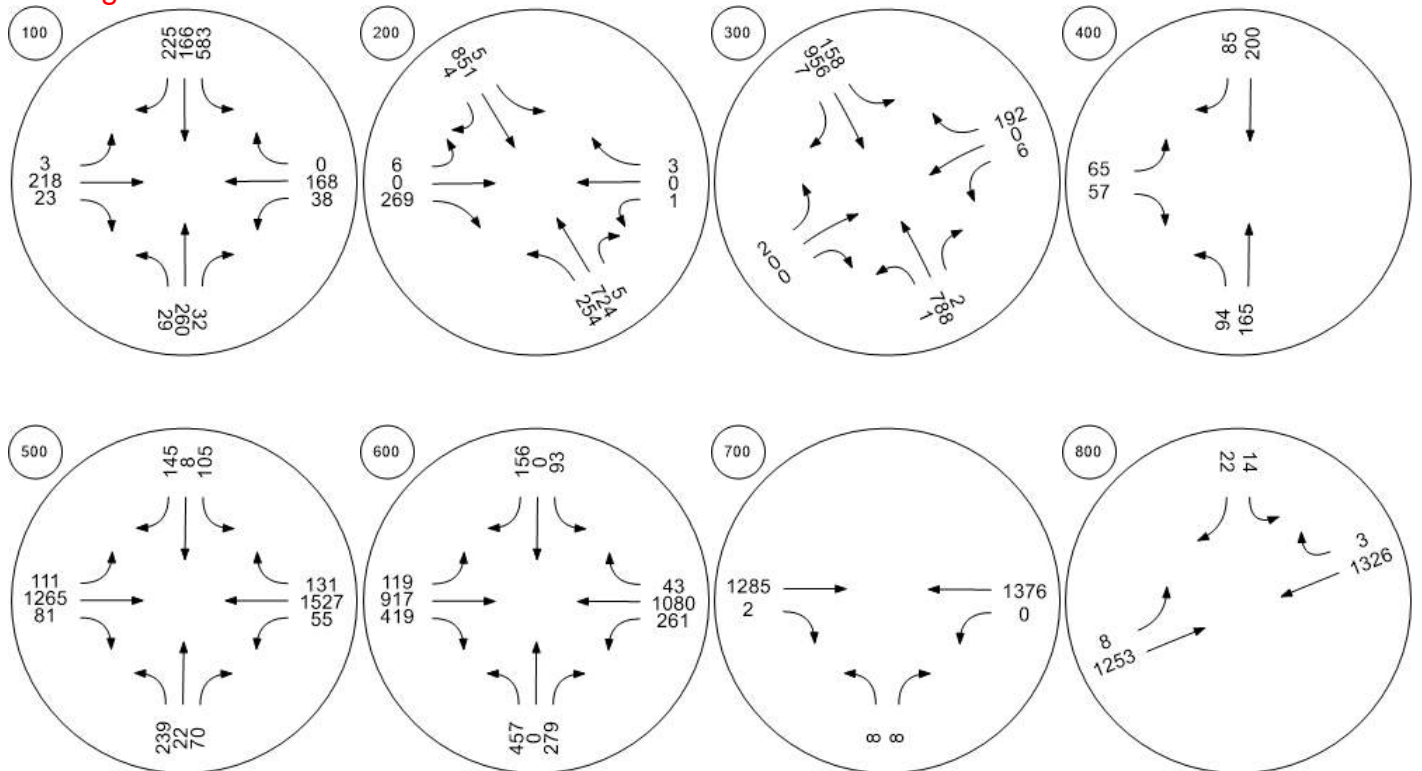


The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Traffic Volume - Future Total Volume



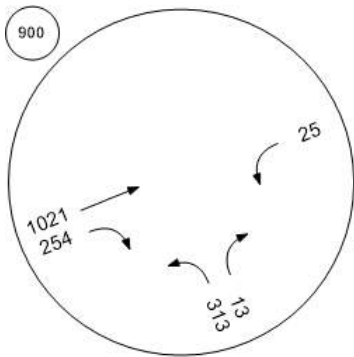
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	45.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-2	-1	0	45	0	-18	-4	17	0	0	-34	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	-1	0	0	-1	-1	-8	-22	-20	-2	0	14	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	260	32	583	166	225	3	218	23	38	168	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	65	8	146	42	56	1	55	6	10	42	0
Total Analysis Volume [veh/h]	29	260	32	583	166	225	3	218	23	38	168	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	111	111	111	111	111	111	111
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	40	69	0	18	12	30
g / C, Green / Cycle	0.23	0.36	0.62	0.00	0.17	0.11	0.27
(v / s)_i Volume / Saturation Flow Rate	0.20	0.36	0.26	0.00	0.15	0.02	0.10
s, saturation flow rate [veh/h]	1577	1603	1528	1603	1655	1603	1683
c, Capacity [veh/h]	392	575	949	4	274	65	452
d1, Uniform Delay [s]	37.43	29.07	4.26	55.48	42.39	43.81	28.83
k, delay calibration	0.30	0.47	0.17	0.08	0.28	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.86	40.06	0.46	87.42	19.86	8.24	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	1.01	0.41	0.68	0.88	0.59	0.37
d, Delay for Lane Group [s/veh]	48.29	69.13	4.72	142.90	62.25	52.05	29.34
Lane Group LOS	D	F	A	F	E	D	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.97	19.93	1.89	0.19	7.57	1.07	3.26
50th-Percentile Queue Length [ft/ln]	224.32	498.31	47.21	4.77	189.36	26.83	81.41
95th-Percentile Queue Length [veh/ln]	13.89	27.52	3.40	0.34	12.09	1.93	5.86
95th-Percentile Queue Length [ft/ln]	347.13	687.92	84.98	8.59	302.20	48.30	146.54

Movement, Approach, & Intersection Results

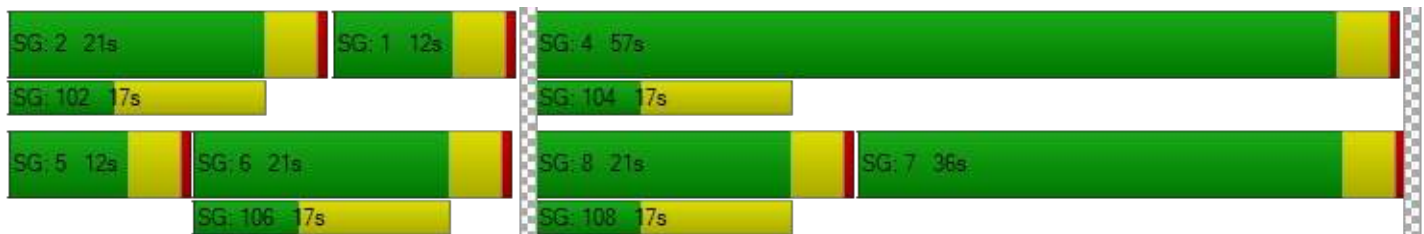
d_M, Delay for Movement [s/veh]	48.29	48.29	48.29	69.13	4.72	4.72	142.90	62.25	62.25	52.05	29.34	0.00
Movement LOS	D	D	D	F	A	A	F	E	E	D	C	
d_A, Approach Delay [s/veh]	48.29			43.27			63.24			33.53		
Approach LOS	D			D			E			C		
d_I, Intersection Delay [s/veh]	45.84											
Intersection LOS	D											
Intersection V/C	0.740											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
l_p,int, Pedestrian LOS Score for Intersection	1.982			2.342			2.197			2.384		
Crosswalk LOS	A			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	378			1178			378			378		
d_b, Bicycle Delay [s]	29.61			7.61			29.61			29.61		
l_b,int, Bicycle LOS Score for Intersection	2.089			3.167			1.962			1.900		
Bicycle LOS	B			C			A			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Two-way stop	Delay (sec / veh):	1,917.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	724	5	5	851	4	6	0	269	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	195	1	1	229	1	2	0	72	0	0	1
Total Analysis Volume [veh/h]	273	778	5	5	915	4	6	0	289	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.37	0.01	0.00	0.01	0.01	0.00	0.29	0.00	0.87	0.47	0.00	0.01
d_M, Delay for Movement [s/veh]	12.64	0.00	0.00	9.76	0.00	0.00	305.81	271.20	144.85	1917.03	352.41	224.33
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	1.70	0.00	0.00	0.02	0.00	0.00	13.35	13.35	13.35	0.98	0.98	0.98
95th-Percentile Queue Length [ft/ln]	42.38	0.00	0.00	0.50	0.00	0.00	333.85	333.85	333.85	24.59	24.59	24.59
d_A, Approach Delay [s/veh]	3.27			0.05			148.12			647.50		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	21.85											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.325

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	-38	0	0	79	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	788	2	158	956	7	2	0	0	6	0	192
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	214	1	43	260	2	1	0	0	2	0	52
Total Analysis Volume [veh/h]	1	857	2	172	1039	8	2	0	0	7	0	209
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			Yes	Yes
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.22	0.01	0.00	0.33	0.00	0.00	0.40	0.00	0.58
d_M, Delay for Movement [s/veh]	10.36	0.00	0.00	10.90	0.00	0.00	10000.0	10000.0	10000.0	291.29	267.42	96.30
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.84	0.84	0.84	1.00	1.00	1.00	8.76	8.76	8.76
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.11	20.91	20.91	20.91	25.00	25.00	25.00	219.07	219.07	219.07
d_A, Approach Delay [s/veh]	0.01			1.54			10000.00			102.62		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	19.18											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.156

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	6	9	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	165	200	85	65	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	43	53	22	17	15
Total Analysis Volume [veh/h]	99	174	211	89	68	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.16	0.07
d_M, Delay for Movement [s/veh]	8.16	0.00	0.00	0.00	14.06	10.07
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.26	0.13	0.00	0.00	0.55	0.55
95th-Percentile Queue Length [ft/ln]	6.52	3.26	0.00	0.00	13.76	13.76
d_A, Approach Delay [s/veh]	2.96		0.00		12.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.38					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	48.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	199	0	0	65	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	3	0	-3	-1	-3	0	0	-1	1
Pass-by Trips [veh/h]	0	0	0	6	0	3	4	0	0	0	0	2
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	22	70	105	8	145	111	1265	81	55	1527	131
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	6	19	28	2	39	30	336	22	15	406	35
Total Analysis Volume [veh/h]	254	23	74	112	9	154	118	1346	86	59	1624	139
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	60	0	20	60	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	124	124	124	124	124	124	124	124	124	124
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	13	24	11	23	72	62	62	72	60	60
g / C, Green / Cycle	0.10	0.19	0.09	0.18	0.58	0.50	0.50	0.58	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.07	0.11	0.25	0.42	0.06	0.12	0.51	0.10
s, saturation flow rate [veh/h]	3138	1376	1590	1466	467	3179	1396	493	3179	1408
c, Capacity [veh/h]	319	268	143	268	219	1588	697	233	1529	677
d1, Uniform Delay [s]	54.75	43.49	55.58	46.83	27.31	27.11	16.65	22.12	32.37	18.64
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.19	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.39	0.61	6.84	1.65	4.78	3.09	0.19	1.02	35.96	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.36	0.78	0.61	0.54	0.85	0.12	0.25	1.06	0.21
d, Delay for Lane Group [s/veh]	58.14	44.10	62.41	48.48	32.09	30.19	16.84	23.14	68.33	18.99
Lane Group LOS	E	D	E	D	C	C	B	C	F	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.05	2.65	3.72	4.78	1.69	16.69	1.29	0.74	28.76	2.28
50th-Percentile Queue Length [ft/ln]	101.14	66.26	92.93	119.42	42.22	417.34	32.33	18.46	719.07	56.95
95th-Percentile Queue Length [veh/ln]	7.28	4.77	6.69	8.36	3.04	23.39	2.33	1.33	39.34	4.10
95th-Percentile Queue Length [ft/ln]	182.05	119.27	167.27	209.02	76.00	584.86	58.19	33.23	983.61	102.51

Movement, Approach, & Intersection Results

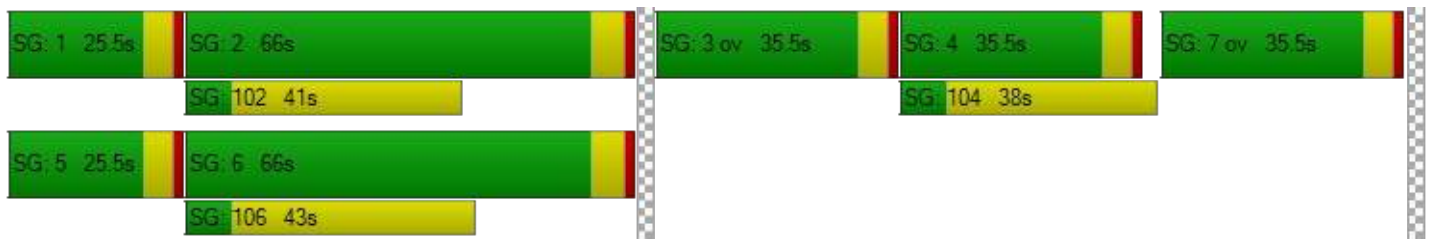
d_M, Delay for Movement [s/veh]	58.14	44.10	44.10	62.41	48.48	48.48	32.09	30.19	16.84	23.14	68.33	18.99
Movement LOS	E	D	D	E	D	D	C	C	B	C	F	B
d_A, Approach Delay [s/veh]	54.26			54.16			29.59			63.11		
Approach LOS	D			D			C			E		
d_I, Intersection Delay [s/veh]	48.72											
Intersection LOS	D											
Intersection V/C	0.819											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.297	2.349	3.325	3.270
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1333	1333
d_b, Bicycle Delay [s]	3.33	2.69	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	2.139	2.013	2.838	3.063
Bicycle LOS	B	B	C	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	156.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.206

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	93	0	156	119	917	419	261	1080	43
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	24	0	41	31	239	109	68	281	11
Total Analysis Volume [veh/h]	476	0	291	97	0	163	124	955	436	272	1125	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	5	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	5	5	10	0	5	10	0
Maximum Green [s]	0	20	0	0	30	20	20	60	0	20	60	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	4.5	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	2.5	2.5	4.0	0.0	2.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	3.5	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall		No			No	No	No	Yes		No	Yes	
Maximum Recall		No			No	No	No	No		No	No	
Pedestrian Recall		No			No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	20	20	20	36	64	48	48	64	48	48
g / C, Green / Cycle	0.21	0.21	0.21	0.37	0.67	0.51	0.51	0.67	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.63	0.10	0.00	0.12	0.18	0.43	0.45	0.43	0.35	0.03
s, saturation flow rate [veh/h]	1218	971	1710	1408	673	1669	1497	629	3179	1454
c, Capacity [veh/h]	316	75	358	524	442	844	757	389	1613	737
d1, Uniform Delay [s]	40.57	34.18	0.00	21.31	10.46	20.60	21.13	21.68	17.97	11.98
k, delay calibration	0.50	0.08	0.08	0.08	0.15	0.26	0.27	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	653.23	145.29	0.00	0.25	0.49	5.90	8.40	9.97	0.79	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	2.43	1.29	0.00	0.31	0.28	0.86	0.88	0.70	0.70	0.06
d, Delay for Lane Group [s/veh]	693.80	179.47	0.00	21.56	10.94	26.50	29.53	31.65	18.76	12.03
Lane Group LOS	F	F	A	C	B	C	C	C	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	64.73	4.59	0.00	2.57	0.85	14.42	14.15	2.99	9.05	0.48
50th-Percentile Queue Length [ft/ln]	1618.25	114.83	0.00	64.37	21.26	360.43	353.86	74.86	226.36	12.09
95th-Percentile Queue Length [veh/ln]	102.53	8.27	0.00	4.63	1.53	20.64	20.32	5.39	13.99	0.87
95th-Percentile Queue Length [ft/ln]	2563.36	206.69	0.00	115.87	38.28	516.11	508.12	134.75	349.73	21.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	693.80	693.80	693.80	179.47	0.00	21.56	10.94	27.24	29.53	31.65	18.76	12.03
Movement LOS	F	F	F	F	A	C	B	C	C	C	B	B
d_A, Approach Delay [s/veh]	693.80			80.47			26.56			20.98		
Approach LOS	F			F			C			C		
d_I, Intersection Delay [s/veh]	156.52											
Intersection LOS	F											
Intersection V/C	1.206											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.637			2.328			3.616			3.043		
Crosswalk LOS	B			B			D			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	444			667			1333			1333		
d_b, Bicycle Delay [s]	27.22			20.00			5.00			5.00		
I_b,int, Bicycle LOS Score for Intersection	2.825			1.989			2.809			2.749		
Bicycle LOS	C			A			C			B		

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	84.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.158

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	32	0	0	97
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	127	0	0	44
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	8	1285	2	0	1376
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	331	1	0	355
Total Analysis Volume [veh/h]	8	8	1325	2	0	1419
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	84.73	22.29	0.00	0.00	11.83	0.00
Movement LOS	F	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.61	0.61	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	15.23	15.23	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	53.51		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	136.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	32	97	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	22	8	1253	1326	3
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	6	2	323	342	1
Total Analysis Volume [veh/h]	14	23	8	1292	1367	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.39	0.06	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	136.28	46.35	13.33	0.00	0.00	0.00
Movement LOS	F	E	B	A	A	A
95th-Percentile Queue Length [veh/ln]	1.85	1.85	0.06	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	46.17	46.17	1.39	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	80.38		0.08		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	1.14					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	303.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.484

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔		↕↔		↖	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	6	0	30	2	0	91
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	313	13	1021	254	25	1013
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	3	266	66	7	264
Total Analysis Volume [veh/h]	326	14	1064	265	26	1055
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

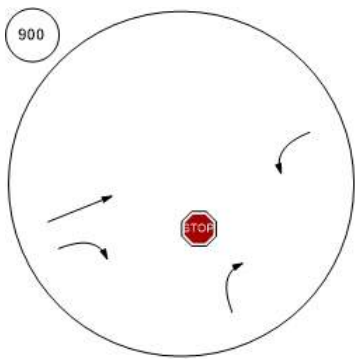
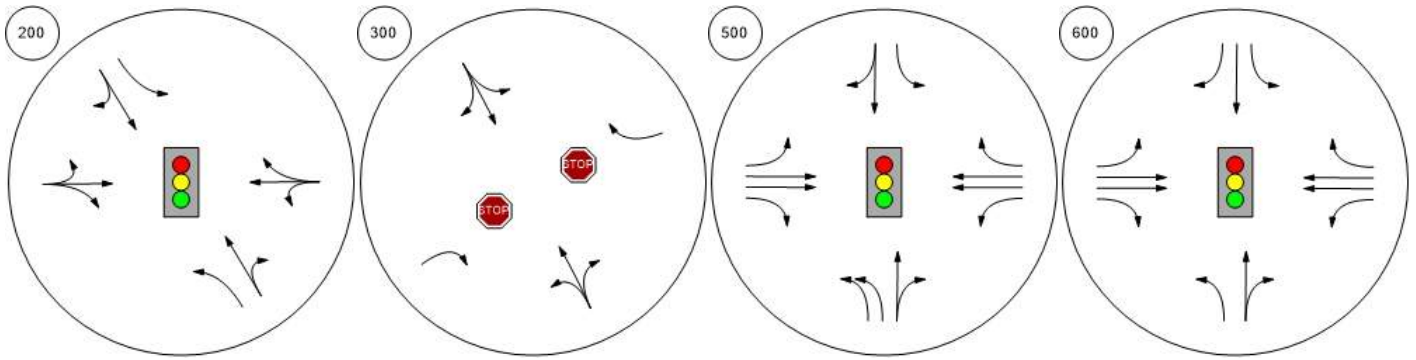
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.48	0.05	0.01	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	303.20	300.59	0.00	0.00	10.66	0.00
Movement LOS	F	F	A	A	B	
95th-Percentile Queue Length [veh/ln]	20.94	20.94	0.00	0.00	0.12	0.00
95th-Percentile Queue Length [ft/ln]	523.60	523.60	0.00	0.00	3.06	0.00
d_A, Approach Delay [s/veh]	303.09		0.00		10.66	
Approach LOS	F		A		B	
d_I, Intersection Delay [s/veh]	60.96					
Intersection LOS	F					

Appendix G 2022 Mitigated Total Traffic
Analysis

Lane Configuration and Traffic Control



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	46.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	724	5	5	851	4	6	0	269	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	195	1	1	229	1	2	0	72	0	0	1
Total Analysis Volume [veh/h]	273	778	5	5	915	4	6	0	289	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	81	81	81	81	81	81
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	54	40	40	19	19
g / C, Green / Cycle	0.67	0.67	0.49	0.49	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.35	0.47	0.01	0.55	0.20	0.00
s, saturation flow rate [veh/h]	789	1681	532	1682	1457	1227
c, Capacity [veh/h]	388	1129	182	829	380	338
d1, Uniform Delay [s]	20.87	8.19	27.87	20.56	30.16	24.12
k, delay calibration	0.50	0.16	0.11	0.50	0.12	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.20	1.18	0.06	65.31	3.75	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.69	0.03	1.11	0.78	0.01
d, Delay for Lane Group [s/veh]	31.08	9.37	27.93	85.87	33.91	24.14
Lane Group LOS	C	A	C	F	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.50	6.62	0.08	28.56	5.74	0.06
50th-Percentile Queue Length [ft/ln]	62.60	165.56	2.02	713.94	143.42	1.48
95th-Percentile Queue Length [veh/ln]	4.51	10.84	0.15	40.30	9.66	0.11
95th-Percentile Queue Length [ft/ln]	112.68	271.06	3.64	1007.48	241.62	2.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.08	9.37	9.37	27.93	85.87	85.87	33.91	33.91	33.91	24.14	24.14	24.14
Movement LOS	C	A	A	C	F	F	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.98			85.56			33.91			24.14		
Approach LOS	B			F			C			C		
d_I, Intersection Delay [s/veh]	46.06											
Intersection LOS	D											
Intersection V/C	0.874											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.599			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.302			3.084			2.046			1.566		
Bicycle LOS	C			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			└			└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	0	0	0	0	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	-38	0	0	79	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	788	2	158	956	7	0	0	0	0	0	192
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	214	1	43	260	2	0	0	0	0	0	52
Total Analysis Volume [veh/h]	1	857	2	172	1039	8	0	0	0	0	0	209
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.22	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.58
d_M, Delay for Movement [s/veh]	10.36	0.00	0.00	10.90	0.00	0.00	0.00	0.00	17.81	0.00	0.00	28.23
Movement LOS	B	A	A	B	A	A			C			D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.00	3.54
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.11	20.91	20.91	20.91	0.00	0.00	0.00	0.00	0.00	88.41
d_A, Approach Delay [s/veh]	0.01			1.54			17.81			28.23		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	3.40											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	199	0	0	65	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	3	0	-3	-1	-3	0	0	-1	1
Pass-by Trips [veh/h]	0	0	0	6	0	3	4	0	0	0	0	2
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	22	70	105	8	145	111	1265	81	55	1527	131
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	6	19	28	2	39	30	336	22	15	406	35
Total Analysis Volume [veh/h]	254	23	74	112	9	154	118	1346	86	59	1624	139
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	80	0	20	80	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	15	28	13	26	93	83	83	93	80	80
g / C, Green / Cycle	0.10	0.18	0.09	0.17	0.62	0.55	0.55	0.62	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.07	0.11	0.27	0.42	0.06	0.13	0.51	0.10
s, saturation flow rate [veh/h]	3138	1376	1590	1466	434	3179	1396	465	3179	1408
c, Capacity [veh/h]	305	253	136	253	199	1749	768	237	1691	749
d1, Uniform Delay [s]	66.59	53.80	67.53	57.88	34.50	26.36	16.20	21.25	33.64	18.26
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.34	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.43	0.71	8.81	2.05	6.44	1.73	0.15	1.70	8.82	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.38	0.82	0.65	0.59	0.77	0.11	0.25	0.96	0.19
d, Delay for Lane Group [s/veh]	71.01	54.51	76.34	59.93	40.95	28.09	16.35	22.95	42.46	18.53
Lane Group LOS	E	D	E	E	D	C	B	C	D	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.99	3.30	4.58	5.94	1.94	18.15	1.42	0.87	28.51	2.51
50th-Percentile Queue Length [ft/ln]	124.72	82.46	114.44	148.55	48.39	453.82	35.61	21.79	712.87	62.87
95th-Percentile Queue Length [veh/ln]	8.65	5.94	8.09	9.94	3.48	25.14	2.56	1.57	37.27	4.53
95th-Percentile Queue Length [ft/ln]	216.30	148.43	202.16	248.49	87.11	628.51	64.10	39.23	931.81	113.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	71.01	54.51	54.51	76.34	59.93	59.93	40.95	28.09	16.35	22.95	42.46	18.53
Movement LOS	E	D	D	E	E	E	D	C	B	C	D	B
d_A, Approach Delay [s/veh]	66.45			66.61			28.42			40.00		
Approach LOS	E			E			C			D		
d_I, Intersection Delay [s/veh]	39.67											
Intersection LOS	D											
Intersection V/C	0.804											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.301			2.357			3.325			3.270		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1456			1511			1778			1778		
d_b, Bicycle Delay [s]	3.33			2.69			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.139			2.013			2.838			3.063		
Bicycle LOS	B			B			C			C		

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	93	0	156	119	917	419	261	1080	43
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	24	0	41	31	239	109	68	281	11
Total Analysis Volume [veh/h]	476	0	291	97	0	163	124	955	436	272	1125	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	117	117	117	117	117	117	117	117	117	117	117
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.50	0.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	40	29	40	6	23	66	48	84	66	49	62
g / C, Green / Cycle	0.34	0.24	0.34	0.05	0.19	0.56	0.41	0.72	0.56	0.42	0.53
(v / s)_i Volume / Saturation Flow Rate	0.30	0.20	0.09	0.00	0.12	0.18	0.30	0.30	0.34	0.35	0.03
s, saturation flow rate [veh/h]	1564	1454	1113	1710	1408	689	3179	1454	801	3179	1454
c, Capacity [veh/h]	617	354	279	83	272	338	1306	1042	406	1333	771
d1, Uniform Delay [s]	36.41	42.03	29.82	0.00	43.23	20.38	29.15	6.71	20.52	30.65	13.35
k, delay calibration	0.50	0.25	0.08	0.08	0.08	0.15	0.15	0.15	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.03	10.41	0.55	0.00	1.57	0.95	1.15	0.38	8.49	2.18	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.82	0.35	0.00	0.60	0.37	0.73	0.42	0.67	0.84	0.06
d, Delay for Lane Group [s/veh]	45.44	52.44	30.37	0.00	44.80	21.33	30.30	7.09	29.01	32.83	13.40
Lane Group LOS	D	D	C	A	D	C	C	A	C	C	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	14.13	8.95	1.98	0.00	4.44	1.62	11.36	4.06	4.66	14.38	0.59
50th-Percentile Queue Length [ft/ln]	353.27	223.66	49.38	0.00	110.93	40.39	284.03	101.49	116.43	359.53	14.67
95th-Percentile Queue Length [veh/ln]	20.30	13.85	3.56	0.00	7.89	2.91	16.89	7.31	8.20	20.60	1.06
95th-Percentile Queue Length [ft/ln]	507.39	346.29	88.88	0.00	197.29	72.70	422.23	182.68	204.90	515.01	26.40

Movement, Approach, & Intersection Results

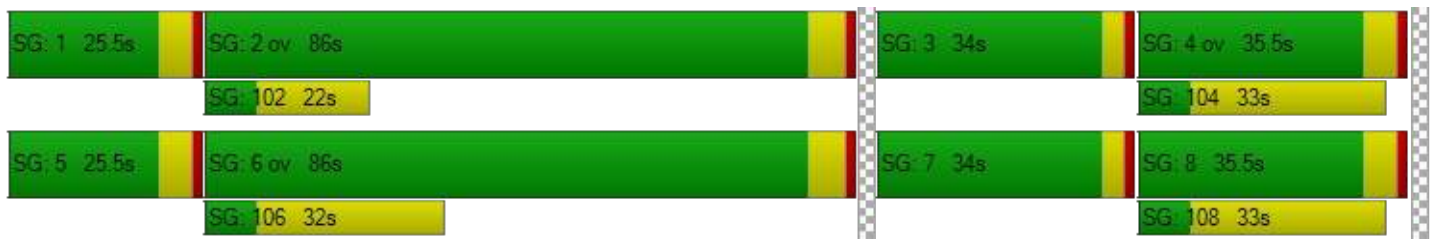
d_M, Delay for Movement [s/veh]	45.44	52.44	52.44	30.37	0.00	44.80	21.33	30.30	7.09	29.01	32.83	13.40
Movement LOS	D	D	D	C	A	D	C	C	A	C	C	B
d_A, Approach Delay [s/veh]	48.10			39.42			22.88			31.50		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.94											
Intersection LOS	C											
Intersection V/C	0.794											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.584	2.312	3.029	2.941
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	1778	1778
d_b, Bicycle Delay [s]	20.00	20.00	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.825	1.989	2.809	2.749
Bicycle LOS	C	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	6	0	30	2	0	91
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	313	13	1021	254	25	1013
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	3	266	66	7	264
Total Analysis Volume [veh/h]	326	14	1064	265	26	1055
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

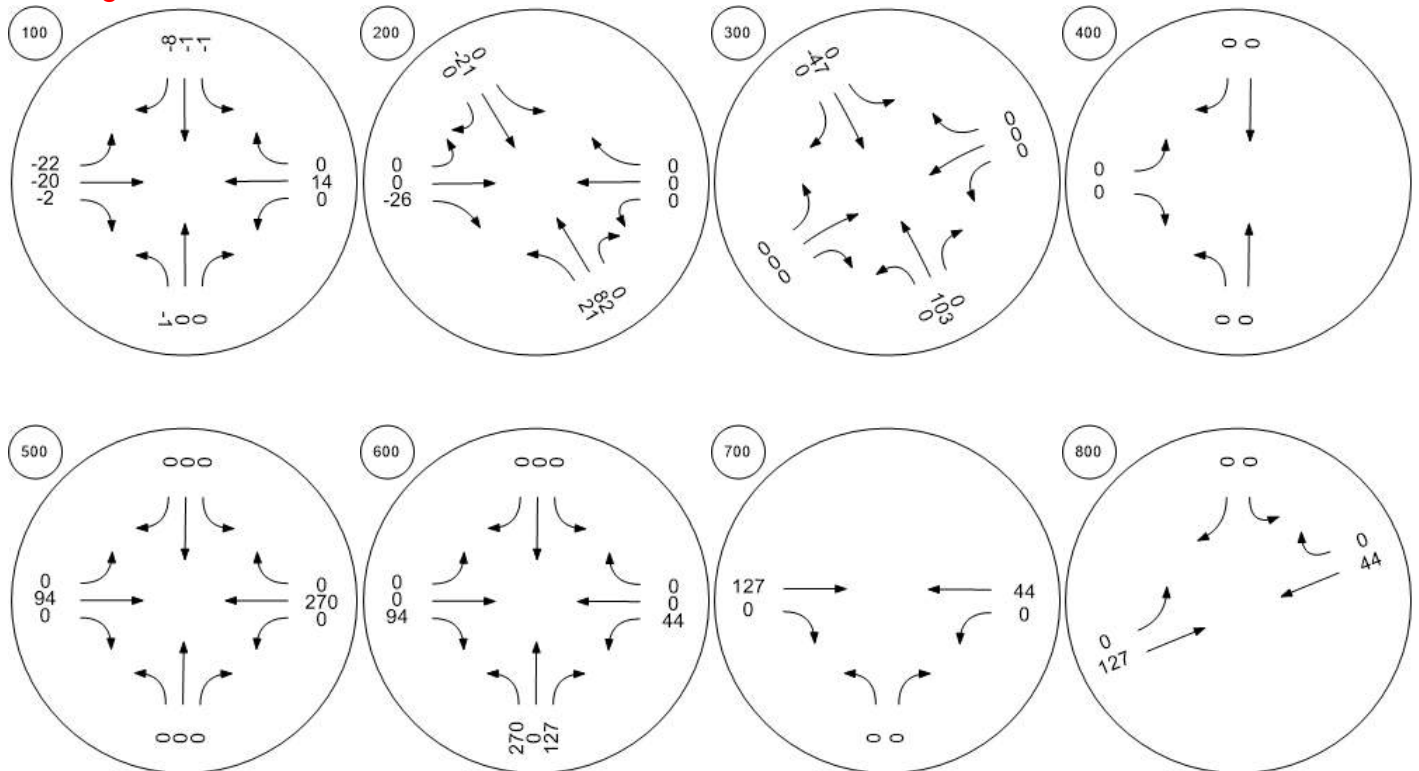
V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	19.56	0.00	0.00	10.66	0.00
Movement LOS		C	A	A	B	
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.12	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.22	0.00	0.00	3.06	0.00
d_A, Approach Delay [s/veh]	19.56		0.00		10.66	
Approach LOS	C		A		B	
d_I, Intersection Delay [s/veh]	0.40					
Intersection LOS	C					

Appendix H 2037 Background Traffic Volumes and Analysis

Traffic Volume - Net New Site Trips



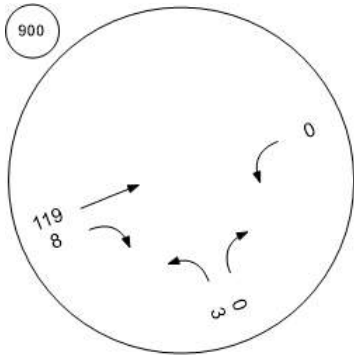
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Net New Site Trips



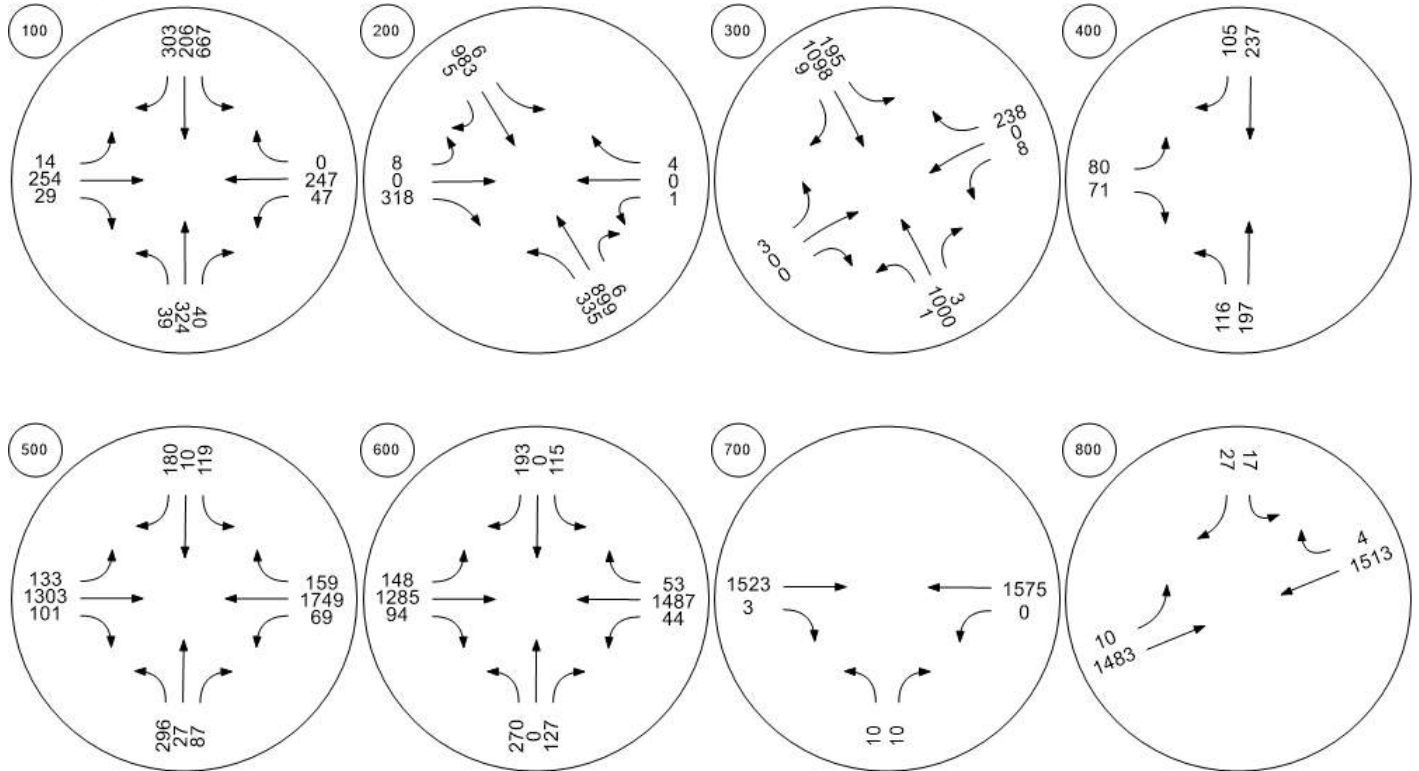
The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Traffic Volume - Future Total Volume



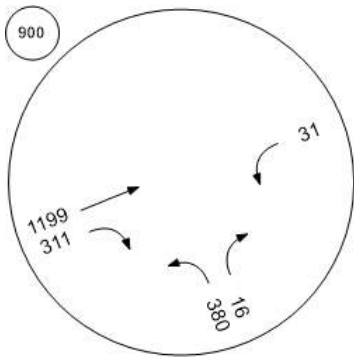
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	105.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.966

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	-1	0	0	-1	-1	-8	-22	-20	-2	0	14	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	324	40	667	206	303	14	254	29	47	247	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	81	10	167	52	76	4	64	7	12	62	0
Total Analysis Volume [veh/h]	39	324	40	667	206	303	14	254	29	47	247	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	123	123	123	123	123	123	123
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	40	74	1	23	14	35
g / C, Green / Cycle	0.24	0.33	0.60	0.01	0.19	0.11	0.29
(v / s)_i Volume / Saturation Flow Rate	0.35	0.42	0.33	0.01	0.17	0.03	0.15
s, saturation flow rate [veh/h]	1162	1603	1523	1603	1653	1603	1683
c, Capacity [veh/h]	317	523	920	16	310	59	485
d1, Uniform Delay [s]	43.13	34.58	6.13	60.39	44.95	47.80	31.06
k, delay calibration	0.50	0.50	0.31	0.08	0.46	0.11	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	145.32	137.88	1.52	65.79	31.16	21.34	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.27	1.27	0.55	0.90	0.91	0.80	0.51
d, Delay for Lane Group [s/veh]	188.45	172.47	7.64	126.17	76.11	69.15	32.25
Lane Group LOS	F	F	A	F	E	E	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	22.29	34.30	3.57	0.72	10.63	1.62	5.41
50th-Percentile Queue Length [ft/ln]	557.24	857.45	89.19	18.00	265.80	40.45	135.24
95th-Percentile Queue Length [veh/ln]	34.02	50.67	6.42	1.30	15.98	2.91	9.22
95th-Percentile Queue Length [ft/ln]	850.38	1266.76	160.55	32.39	399.49	72.82	230.60

Movement, Approach, & Intersection Results

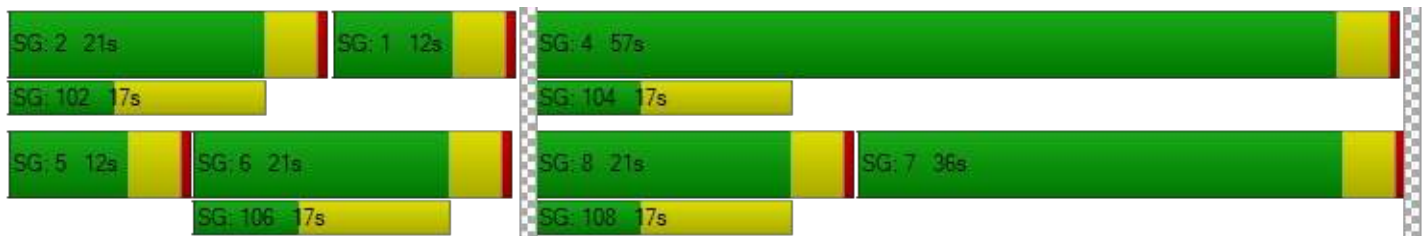
d_M, Delay for Movement [s/veh]	188.45	188.45	188.45	172.47	7.64	7.64	126.17	76.11	76.11	69.15	32.25	0.00
Movement LOS	F	F	F	F	A	A	F	E	E	E	C	
d_A, Approach Delay [s/veh]	188.45			101.13			78.47			38.15		
Approach LOS	F			F			E			D		
d_I, Intersection Delay [s/veh]	105.71											
Intersection LOS	F											
Intersection V/C	0.966											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.048	2.432	2.283	2.436
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.225	3.500	2.050	2.045
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	116.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.041

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	335	899	6	6	983	5	8	0	318	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	242	2	2	264	1	2	0	85	0	0	1
Total Analysis Volume [veh/h]	360	967	6	6	1057	5	9	0	342	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	94	94	94	94	94	94
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	61	61	40	40	25	25
g / C, Green / Cycle	0.65	0.65	0.42	0.42	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.43	0.58	0.01	0.63	0.24	0.00
s, saturation flow rate [veh/h]	835	1681	445	1682	1455	1175
c, Capacity [veh/h]	453	1097	76	713	421	355
d1, Uniform Delay [s]	25.92	13.52	47.17	27.17	33.77	25.73
k, delay calibration	0.50	0.36	0.11	0.50	0.27	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.49	8.10	0.43	227.65	10.24	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.89	0.08	1.49	0.83	0.01
d, Delay for Lane Group [s/veh]	39.41	21.62	47.60	254.81	44.01	25.74
Lane Group LOS	D	C	D	F	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.47	16.27	0.15	59.87	8.79	0.08
50th-Percentile Queue Length [ft/ln]	111.74	406.69	3.69	1496.73	219.70	2.10
95th-Percentile Queue Length [veh/ln]	7.94	22.88	0.27	91.59	13.65	0.15
95th-Percentile Queue Length [ft/ln]	198.42	572.05	6.64	2289.82	341.24	3.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.41	21.62	21.62	47.60	254.81	254.81	44.01	44.01	44.01	25.74	25.74	25.74
Movement LOS	D	C	C	D	F	F	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.43			253.65			44.01			25.74		
Approach LOS	C			F			D			C		
d_I, Intersection Delay [s/veh]	116.69											
Intersection LOS	F											
Intersection V/C	1.041											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	36.45	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.731	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1422	889	667	667
d_b, Bicycle Delay [s]	3.76	13.89	20.00	20.00
I_b,int, Bicycle LOS Score for Intersection	3.759	3.322	2.139	1.568
Bicycle LOS	D	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	92.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.984

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			└			└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	0	0	0	0	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	1000	3	195	1098	9	0	0	0	0	0	238
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	272	1	53	298	2	0	0	0	0	0	65
Total Analysis Volume [veh/h]	1	1087	3	212	1193	10	0	0	0	0	0	259
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.33	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.98
d_M, Delay for Movement [s/veh]	11.14	0.00	0.00	13.38	0.00	0.00	0.00	0.00	20.77	0.00	0.00	92.89
Movement LOS	B	A	A	B	A	A			C			F
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	1.45	1.45	1.45	0.00	0.00	0.00	0.00	0.00	9.59
95th-Percentile Queue Length [ft/ln]	0.13	0.13	0.13	36.16	36.16	36.16	0.00	0.00	0.00	0.00	0.00	239.76
d_A, Approach Delay [s/veh]	0.01			2.01			20.77			92.89		
Approach LOS	A			A			C			F		
d_I, Intersection Delay [s/veh]	9.73											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.233

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	197	237	105	80	71
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	52	62	28	21	19
Total Analysis Volume [veh/h]	122	207	249	111	84	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.23	0.09
d_M, Delay for Movement [s/veh]	8.42	0.00	0.00	0.00	16.58	11.05
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.35	0.17	0.00	0.00	0.90	0.90
95th-Percentile Queue Length [ft/ln]	8.68	4.34	0.00	0.00	22.47	22.47
d_A, Approach Delay [s/veh]	3.12		0.00		13.97	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.83					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	85.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.930

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	296	27	87	119	10	180	133	1303	101	69	1749	159
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	7	23	32	3	48	35	347	27	18	465	42
Total Analysis Volume [veh/h]	315	29	93	127	11	191	141	1386	107	73	1861	169
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	80	0	20	80	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	165	165	165	165	165	165	165	165	165	165
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	19	35	16	32	97	87	87	97	80	80
g / C, Green / Cycle	0.12	0.21	0.09	0.19	0.59	0.52	0.52	0.59	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.08	0.14	0.32	0.44	0.08	0.16	0.59	0.12
s, saturation flow rate [veh/h]	3138	1376	1590	1465	439	3179	1396	457	3179	1408
c, Capacity [veh/h]	365	294	151	281	214	1665	731	202	1539	682
d1, Uniform Delay [s]	71.73	56.10	73.58	62.58	48.38	33.22	20.29	29.48	42.62	24.98
k, delay calibration	0.08	0.08	0.08	0.23	0.32	0.26	0.26	0.50	0.29	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.66	0.70	9.11	7.15	9.71	2.65	0.22	4.99	97.94	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.42	0.84	0.72	0.66	0.83	0.15	0.36	1.21	0.25
d, Delay for Lane Group [s/veh]	76.38	56.79	82.68	69.73	58.09	35.87	20.51	34.46	140.56	25.43
Lane Group LOS	E	E	F	E	E	D	C	C	F	C
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.82	4.50	5.71	8.56	2.94	23.01	2.16	1.45	50.83	3.93
50th-Percentile Queue Length [ft/ln]	170.59	112.45	142.76	214.05	73.38	575.20	53.89	36.15	1270.63	98.30
95th-Percentile Queue Length [veh/ln]	11.11	7.98	9.63	13.36	5.28	30.87	3.88	2.60	71.76	7.08
95th-Percentile Queue Length [ft/ln]	277.69	199.41	240.74	334.02	132.09	771.86	97.01	65.07	1794.09	176.95

Movement, Approach, & Intersection Results

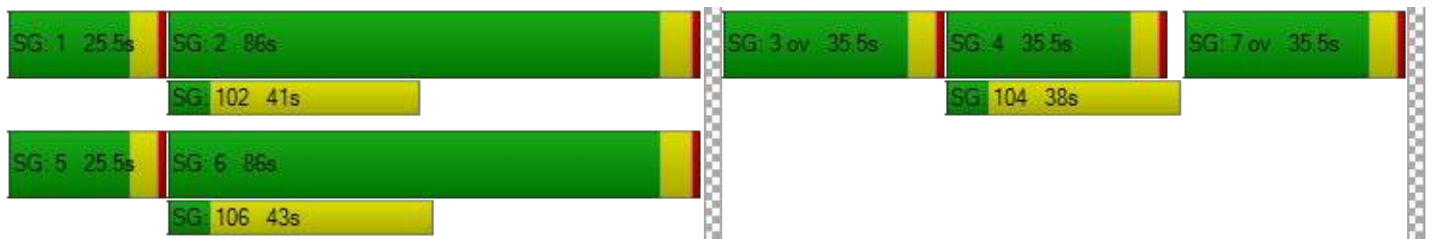
d_M, Delay for Movement [s/veh]	76.38	56.79	56.79	82.68	69.73	69.73	58.09	35.87	20.51	34.46	140.56	25.43
Movement LOS	E	E	E	F	E	E	E	D	C	C	F	C
d_A, Approach Delay [s/veh]	70.91			74.73			36.78			127.62		
Approach LOS	E			E			D			F		
d_I, Intersection Delay [s/veh]	85.29											
Intersection LOS	F											
Intersection V/C	0.930											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.339	2.393	3.428	3.356
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1778	1778
d_b, Bicycle Delay [s]	3.33	2.69	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.281	2.102	2.908	3.295
Bicycle LOS	B	B	C	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	270	0	127	115	0	193	148	1285	94	44	1487	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	0	33	30	0	50	39	335	24	11	387	14
Total Analysis Volume [veh/h]	281	0	132	120	0	201	154	1339	98	46	1549	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	154	154	154	154	154	154	154	154	154	154	154
L, Total Lost Time per Cycle [s]	4.00	5.50	5.50	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.50	0.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	29	27	42	10	31	100	91	125	100	79	97
g / C, Green / Cycle	0.18	0.17	0.27	0.06	0.20	0.65	0.59	0.81	0.65	0.51	0.63
(v / s)_i Volume / Saturation Flow Rate	0.17	0.09	0.09	0.00	0.14	0.29	0.42	0.07	0.10	0.49	0.04
s, saturation flow rate [veh/h]	1629	1454	1272	1710	1408	533	3179	1454	471	3179	1454
c, Capacity [veh/h]	302	253	323	109	284	278	1866	1179	261	1630	910
d1, Uniform Delay [s]	61.91	57.88	44.52	0.00	57.36	37.99	22.72	2.95	17.75	35.73	11.21
k, delay calibration	0.37	0.08	0.08	0.08	0.21	0.18	0.15	0.15	0.20	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	30.29	1.24	0.53	0.00	6.24	2.77	0.75	0.04	0.58	5.27	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.52	0.37	0.00	0.71	0.55	0.72	0.08	0.18	0.95	0.06
d, Delay for Lane Group [s/veh]	92.20	59.12	45.04	0.00	63.60	40.76	23.47	2.99	18.33	41.01	11.25
Lane Group LOS	F	E	D	A	E	D	C	A	B	D	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.41	4.80	3.71	0.00	7.83	2.28	17.30	0.56	0.61	28.34	0.76
50th-Percentile Queue Length [ft/ln]	335.18	120.05	92.63	0.00	195.79	56.89	432.48	14.01	15.33	708.50	19.00
95th-Percentile Queue Length [veh/ln]	19.41	8.40	6.67	0.00	12.42	4.10	24.12	1.01	1.10	37.07	1.37
95th-Percentile Queue Length [ft/ln]	485.31	209.89	166.73	0.00	310.52	102.40	603.01	25.22	27.59	926.77	34.19

Movement, Approach, & Intersection Results

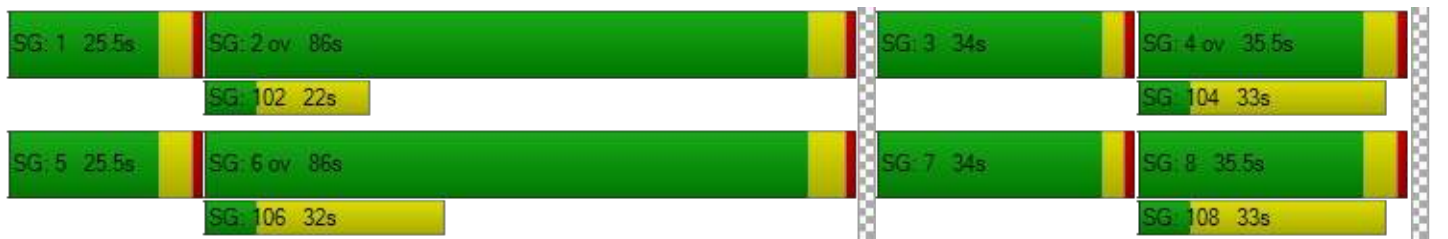
d_M, Delay for Movement [s/veh]	92.20	59.12	59.12	45.04	0.00	63.60	40.76	23.47	2.99	18.33	41.01	11.25
Movement LOS	F	E	E	D	A	E	D	C	A	B	D	B
d_A, Approach Delay [s/veh]	81.63			56.66			23.88			39.38		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	38.96											
Intersection LOS	D											
Intersection V/C	0.828											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.160			2.375			3.041			3.011		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			667			1778			1778		
d_b, Bicycle Delay [s]	20.00			20.00			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.241			2.089			2.872			2.921		
Bicycle LOS	B			B			C			C		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	162.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.341

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	127	0	0	44
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	10	1523	3	0	1575
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	393	1	0	406
Total Analysis Volume [veh/h]	10	10	1570	3	0	1624
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.03	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	162.81	50.60	0.00	0.00	13.48	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	1.34	1.34	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	33.56	33.56	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	106.70		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.66					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	343.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1483	1513	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	382	390	1
Total Analysis Volume [veh/h]	18	28	10	1529	1560	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.86	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	343.17	182.55	15.09	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	4.00	4.00	0.08	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	99.90	99.90	2.10	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	245.40		0.10		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	3.63					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	24.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	380	16	1199	311	31	1133
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	99	4	312	81	8	295
Total Analysis Volume [veh/h]	396	17	1249	324	32	1180
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

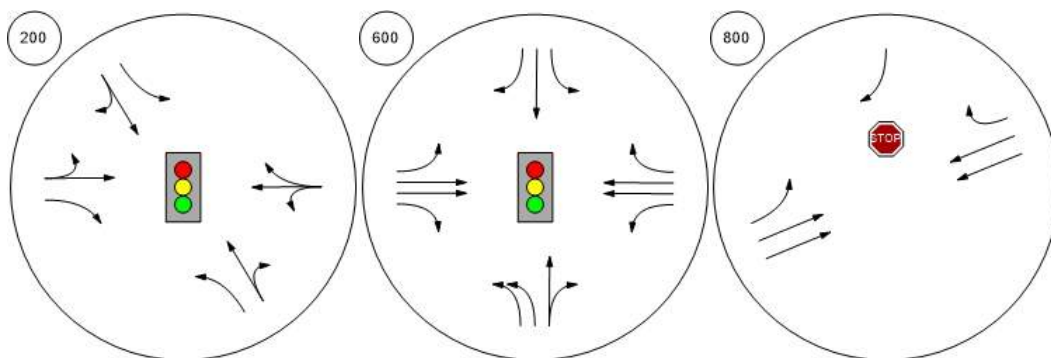
Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.08	0.01	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	0.00	24.35	0.00	0.00	11.77	0.00
Movement LOS		C	A	A	B	
95th-Percentile Queue Length [veh/ln]	0.00	0.27	0.00	0.00	0.18	0.00
95th-Percentile Queue Length [ft/ln]	0.00	6.78	0.00	0.00	4.50	0.00
d_A, Approach Delay [s/veh]	24.35		0.00		11.77	
Approach LOS	C		A		B	
d_I, Intersection Delay [s/veh]	0.49					
Intersection LOS	C					

Appendix I 2037 Mitigated Background Traffic Analysis

Lane Configuration and Traffic Control



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	90.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.977

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	335	899	6	6	983	5	8	0	318	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	242	2	2	264	1	2	0	85	0	0	1
Total Analysis Volume [veh/h]	360	967	6	6	1057	5	9	0	342	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Overla	Permis	Permis	Permis
Signal Group	1	6	0	0	2	0	0	8	1	0	4	0
Auxiliary Signal Groups									1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	5	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	20	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No	No		No	
Maximum Recall	No	No			No			No	No		No	
Pedestrian Recall	No	No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	R	C
C, Cycle Length [s]	88	88	88	88	88	88	88
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	62	62	40	40	18	40	18
g / C, Green / Cycle	0.70	0.70	0.46	0.46	0.20	0.45	0.20
(v / s)_i Volume / Saturation Flow Rate	0.43	0.58	0.01	0.63	0.01	0.24	0.00
s, saturation flow rate [veh/h]	837	1681	445	1682	1324	1442	1450
c, Capacity [veh/h]	490	1184	90	767	353	652	346
d1, Uniform Delay [s]	23.00	9.11	42.91	23.83	27.88	17.23	27.82
k, delay calibration	0.50	0.32	0.11	0.50	0.11	0.46	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.43	4.25	0.31	180.87	0.03	2.74	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.82	0.07	1.38	0.03	0.52	0.01
d, Delay for Lane Group [s/veh]	32.43	13.36	43.22	204.70	27.91	19.97	27.84
Lane Group LOS	C	B	D	F	C	B	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.17	10.79	0.13	52.79	0.15	5.18	0.08
50th-Percentile Queue Length [ft/ln]	79.29	269.82	3.35	1319.85	3.80	129.54	2.11
95th-Percentile Queue Length [veh/ln]	5.71	16.18	0.24	79.48	0.27	8.91	0.15
95th-Percentile Queue Length [ft/ln]	142.72	404.51	6.04	1986.92	6.84	222.87	3.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.43	13.36	13.36	43.22	204.70	204.70	27.91	27.91	19.97	27.84	27.84	27.84
Movement LOS	C	B	B	D	F	F	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	18.51			203.79			20.17			27.84		
Approach LOS	B			F			C			C		
d_I, Intersection Delay [s/veh]	90.51											
Intersection LOS	F											
Intersection V/C	0.977											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.731			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.759			3.322			2.139			1.568		
Bicycle LOS	D			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	270	0	127	115	0	193	148	1285	94	44	1487	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	0	33	30	0	50	39	335	24	11	387	14
Total Analysis Volume [veh/h]	281	0	132	120	0	201	154	1339	98	46	1549	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Overla	ProtPer	Permis	Overla	ProtPer	Permis	Overla
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	144	144	144	144	144	144	144	144	144	144	144
L, Total Lost Time per Cycle [s]	4.00	5.50	4.00	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.50	2.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	16	15	13	12	36	101	91	112	101	77	96
g / C, Green / Cycle	0.11	0.10	0.09	0.09	0.25	0.70	0.63	0.78	0.70	0.53	0.67
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.08	0.00	0.14	0.27	0.42	0.07	0.10	0.49	0.04
s, saturation flow rate [veh/h]	3163	1454	1590	1710	1408	563	3179	1454	470	3179	1454
c, Capacity [veh/h]	344	152	144	147	353	335	2003	1134	300	1695	967
d1, Uniform Delay [s]	62.88	63.62	64.52	0.00	47.23	28.96	17.03	3.72	12.73	30.64	8.39
k, delay calibration	0.11	0.08	0.11	0.08	0.18	0.15	0.15	0.15	0.17	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.80	10.76	11.73	0.00	2.36	1.40	0.56	0.05	0.36	3.21	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.87	0.83	0.00	0.57	0.46	0.67	0.09	0.15	0.91	0.06
d, Delay for Lane Group [s/veh]	67.68	74.38	76.25	0.00	49.59	30.36	17.59	3.77	13.09	33.85	8.43
Lane Group LOS	E	E	E	A	D	C	B	A	B	C	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.29	5.24	4.82	0.00	6.59	1.71	13.94	0.63	0.47	24.61	0.61
50th-Percentile Queue Length [ft/ln]	132.15	130.98	120.49	0.00	164.71	42.66	348.42	15.87	11.65	615.31	15.25
95th-Percentile Queue Length [veh/ln]	9.06	8.99	8.42	0.00	10.80	3.07	20.06	1.14	0.84	32.75	1.10
95th-Percentile Queue Length [ft/ln]	226.41	224.83	210.50	0.00	269.95	76.78	501.48	28.56	20.98	818.71	27.44

Movement, Approach, & Intersection Results

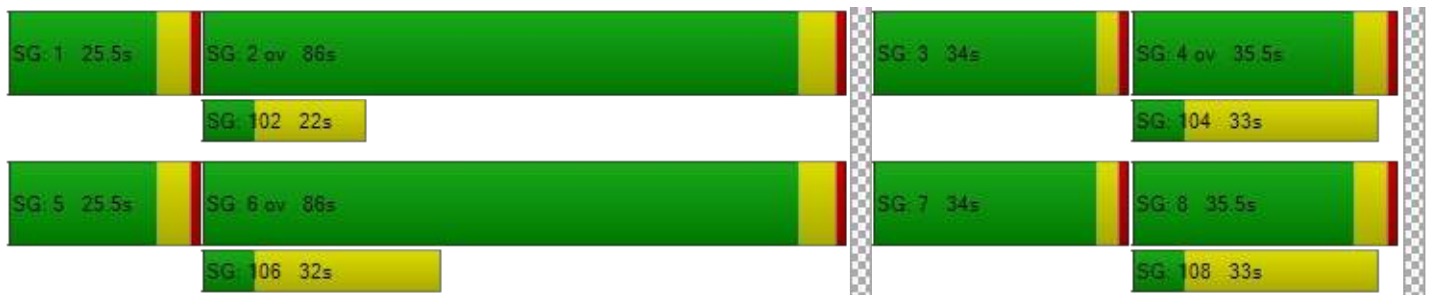
d_M, Delay for Movement [s/veh]	67.68	74.38	74.38	76.25	0.00	49.59	30.36	17.59	3.77	13.09	33.85	8.43
Movement LOS	E	E	E	E	A	D	C	B	A	B	C	A
d_A, Approach Delay [s/veh]	69.82			59.55			17.97			32.42		
Approach LOS	E			E			B			C		
d_I, Intersection Delay [s/veh]	32.72											
Intersection LOS	C											
Intersection V/C	0.765											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.309			2.380			3.041			2.979		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			667			1778			1778		
d_b, Bicycle Delay [s]	20.00			20.00			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.241			2.089			2.872			2.921		
Bicycle LOS	B			B			C			C		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.088

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↗		↖		↗	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1483	1513	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	382	390	1
Total Analysis Volume [veh/h]	18	28	10	1529	1560	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	17.36	15.09	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.29	0.08	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	7.15	2.10	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.36		0.10		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	C					

Appendix J Oregon Highway Plan Policy
Intent Statements



Oregon


John A. Kitzhaber, MD, Governor

Department of Transportation

Office of the Director
1158 Chemeketa St. NE
Salem, OR 97301-2528

DATE: May 25, 2011

TO: Joint Subcommittee on the TPR and OHP
Mike McArthur, AOC Executive Director
Mike McCauley, LOC Executive Director
ODOT Region Managers

FROM: Matthew L. Garrett 
Director

SUBJECT: Oregon Highway Plan - Policy Intent Statements

Introduction

The Oregon Transportation Commission (OTC) and the Land Conservation and Development Commission (LCDC) established a Joint Subcommittee in response to concerns on the Transportation Planning Rule (TPR) and Oregon Highway Plan (OHP) mobility standards. This joint subcommittee held three meetings to gather information on TPR and OHP issues, and to develop recommendations for further work. Transportation Commissioners Mary Olson and David Lohman represent the OTC.

The joint subcommittee heard considerable stakeholder concern that the combination of TPR Section 0060 and OHP mobility standards is leading to unintended consequences. In particular, there are concerns that economic development objectives should be balanced better with transportation performance, but in practice the TPR and OHP may be giving precedence to transportation. Also there are concerns that Section 0060 of the TPR and OHP mobility standards are making it more difficult to increase development intensities, hindering implementation of other statewide planning goals.

The joint subcommittee agreed that, changes to the TPR and OHP are warranted in light of the concerns and it developed recommendations to address several issues in initial phases of this work. The subcommittee also recommended that the tasks be conducted through coordinated processes to ensure that Department of Land Conservation and Development (DLCD) and Oregon Department of Transportation (ODOT) tasks jointly address the issues. The joint subcommittee's final recommendations were presented to the OTC and LCDC in April 2011. Both commissions concurred with the recommendations and directed the two agencies to move forward with the necessary tasks.

Additional information on the joint subcommittee process, including the final recommendations report is available at: http://www.oregon.gov/LCD/Rulemaking_TPR_2011.shtml.



The joint subcommittee recommended that ODOT tasks consider potential exemptions for proposals with small increases in traffic, average trip generation and average case land use assumptions; and to improve current alternate mobility standard processes; and expand mobility standard options. While many of these issues will require in-depth work over the next several months, the work below represents actions we can do right away to make progress on several key tasks. As a result, the department has developed three policy intent statements that seek to clarify its commitment to find flexibility and to provide relief under existing conditions. These are a starting point in our efforts; and it is my expectation that ODOT staff will use this information as it works with communities and development interests from this day forward.

OHP Policy Intent Statements

Alternate Mobility Standards

The development of alternate mobility standards provides one primary area for flexibility in existing OHP policy. While the department will explore ways to streamline the alternate mobility standard development process to make it a more effective tool, it is important that ODOT's intent to work with local governments on these matters is clear to all those involved.

Policy Intent Statement 1:

ODOT affirms its commitment to work collaboratively with local governments to develop alternate mobility standards for state highway facilities through TSP update processes and through the development of ODOT facility plans. Establishment of alternate mobility standards will be based upon mutual agreement about likely funding, transportation system constraints, growth expectations, community values, and commitment to reduce demand on state highways through the use of transportation demand management measures, system and service improvements for alternative modes of travel, and development of more complete and connected local transportation system networks.

“Avoid Further Degradation” (OHP Action 1F.6)

The joint subcommittee heard testimony and criticism that the increase of a single trip is enough to trigger a significant effect determination in some cases, and perhaps more important, the associated analysis and mitigation requirements for a plan amendment. This is most applicable for facilities that are already operating over standard, for which the proposal must be able to at least “avoid further degradation” of the impacted facility. In many cases the mitigation associated with a facility already in a “failing” condition can be very significant and may not be feasible for the development to implement, especially for a small increase in trips. In order to help reduce this concern, the following policy intent statement provides thresholds to define a small increase in traffic. These are for situations for which the operational risk to the transportation facility is small, and the resulting plan amendment is unlikely to cause further degradation of the facility. These thresholds are consistent with proposed changes in ODOT's Access Management Program related to requirements for Traffic Impact Analyses.

Policy Intent Statement 2:

In applying the "Avoid Further Degradation" standard established in OHP Action 1F.6 for state highway facilities already operating above the existing standard when evaluating amendments to transportation system plans, acknowledged comprehensive plans, and land use regulations subject to OAR 660-12-0060, a small increase in traffic does not cause "further degradation" of the facility.

The threshold for a small increase in traffic between the existing plan and the proposed amendment is defined in terms of the increase in average daily trip volumes as follows:

- *Any proposed amendment that does not increase the average daily trips by more than 400.*
- *Any proposed amendment that increases the average daily trips by more than 400 but less than 1001 for state facilities where:*
 - *The annual average daily traffic is less than 5,000 for a two-lane highway*
 - *The annual average daily traffic is less than 15,000 for a three-lane highway*
 - *The annual average daily traffic is less than 10,000 for a four-lane highway*
 - *The annual average daily traffic is less than 25,000 for a five-lane highway*
- *If the increase in traffic between the existing plan and the proposed amendment is more than 1000 average daily trips, then it is not considered a small increase in traffic and the amendment causes further degradation of the facility and would follow existing processes for resolution.*

Precision of Volume-to-Capacity Ratios in Analyzing Mitigation

While volume-to-capacity (v/c) ratios provide a high level of precision in traffic analysis, it is difficult to forecast actual traffic conditions and the effects of mitigation, especially over a long period (e.g. 20 years). While the department will not compromise the integrity of the OHP mobility standards in determining a significant affect under the TPR, there are situations for which reasonable levels of mitigation have already been determined and the resulting v/c measure may be within the typical range of uncertainty of fully meeting standards. In these cases, it may be prudent to allow for the plan amendment to proceed with the identified reasonable level of mitigation.

The range provided in Policy Intent Statement 3 allows flexibility within 0.03 in terms of v/c ratios when considering reasonable levels of mitigation. While the impact/scale of a 0.03 v/c ratio change can vary significantly depending on a number of facility characteristics, it typically represents an increase of approximately 750 daily trips on a three-lane highway, and approximately 1,500 daily trips on a five-lane highway that is functioning near current mobility standard levels. In terms of land use types, this increase in the v/c ratio is roughly similar to the traffic impact characteristics of a gas station or fast food restaurant.

Policy Intent Statement 3:

In applying OHP mobility standards to analyze mitigation, ODOT recognizes that there are many variables and levels of uncertainty in calculating volume-to-capacity ratios, particularly over the planning horizon. In applying the standards after negotiating reasonable levels of mitigation for actions required under OAR 660-012-0060, ODOT considers calculated values for volume-to-capacity ratios that are within 0.03 of the adopted standard in the OHP to be considered in compliance with the standard. It is not the intent of the agency to consider variation within modest levels of uncertainty in violation of OHP mobility standards for reasonable mitigation. The specific OHP mobility standard still applies for determining significant affect under OAR 660-012-0060.

Next Steps

Effective immediately, ODOT will begin carrying out the policy intent statements described above. ODOT will also begin the more significant work to address the full recommendations of the joint subcommittee and applicable legislative direction through a more thorough review of policies, procedures and guidance related to the TPR and OHP mobility standards.

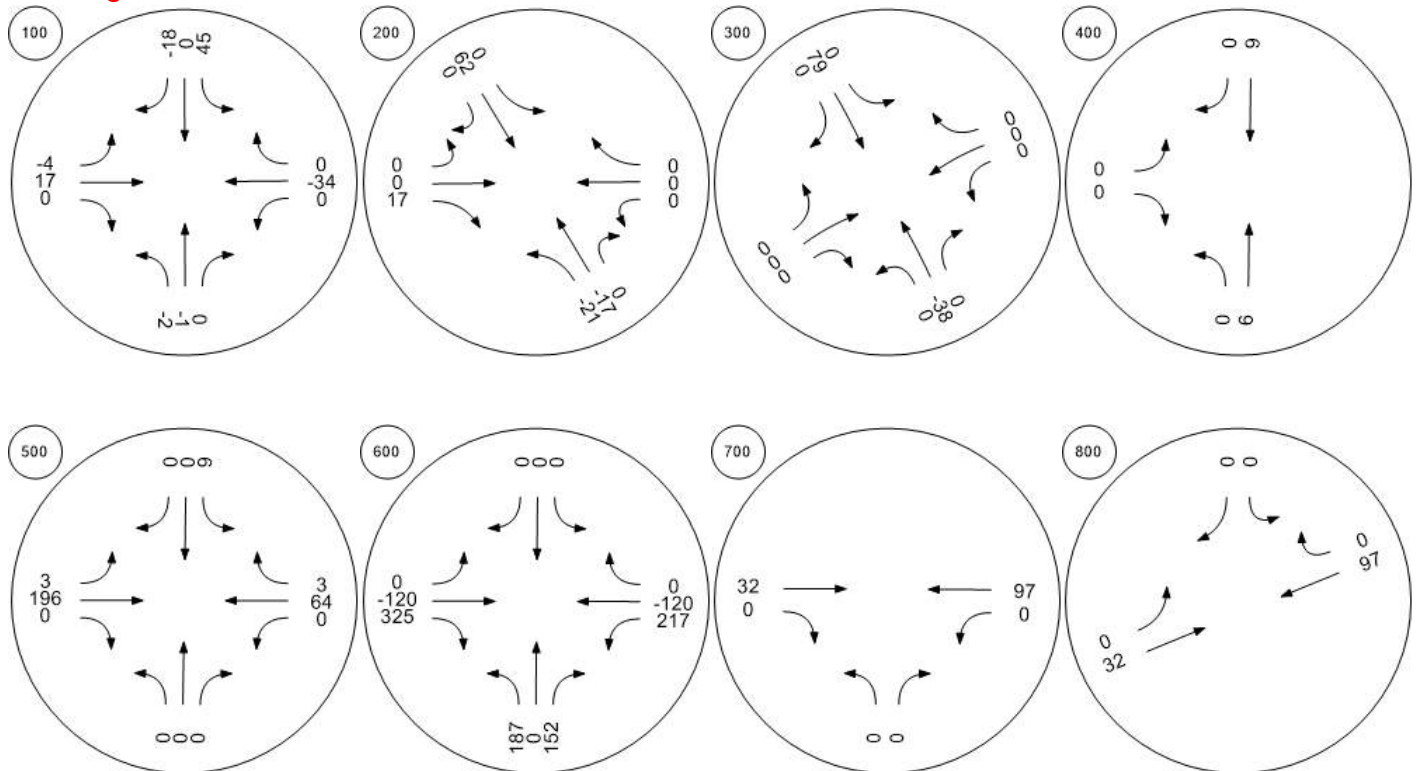
Cc: Jerry Lidz, DLCD Acting Director
Rob Hallyburton, DLCD Planning Services
Matt Crall, DLCD TGM Program
Jerri Bohard, ODOT Director's Office
ODOT Region Planning Managers
Erik Havig, ODOT Planning Section
Michael Rock, ODOT Planning Section
TPR Rulemaking Advisory Committee

Appendix K 2037 Total Traffic Volumes and Analysis

Traffic Volume - Net New Site Trips - Proposed Rezone



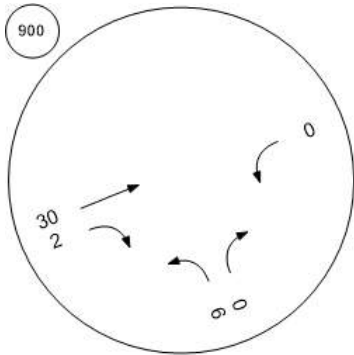
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Net New Site Trips - Proposed Rezone



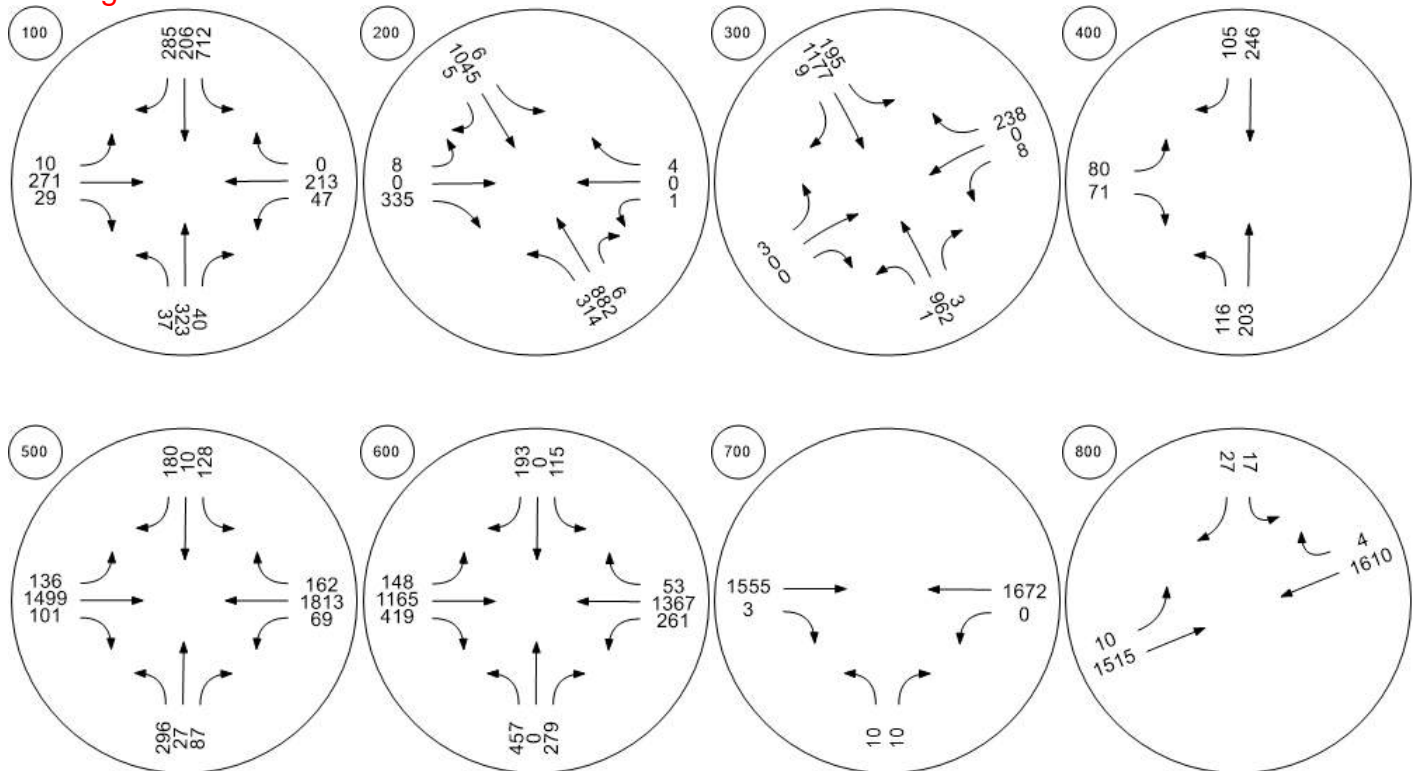
The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Traffic Volume - Future Total Volume



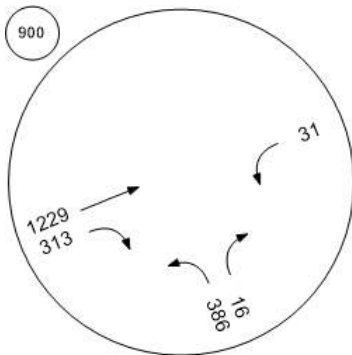
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	122.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.995

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-2	-1	0	45	0	-18	-4	17	0	0	-34	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	-1	0	0	-1	-1	-8	-22	-20	-2	0	14	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	323	40	712	206	285	10	271	29	47	213	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	81	10	178	52	71	3	68	7	12	53	0
Total Analysis Volume [veh/h]	37	323	40	712	206	285	10	271	29	47	213	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	124	124	124	124	124	124	124
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	40	74	1	24	14	37
g / C, Green / Cycle	0.24	0.32	0.60	0.01	0.20	0.11	0.30
(v / s)_i Volume / Saturation Flow Rate	0.34	0.44	0.32	0.01	0.18	0.03	0.13
s, saturation flow rate [veh/h]	1187	1603	1527	1603	1655	1603	1683
c, Capacity [veh/h]	319	517	911	12	326	58	504
d1, Uniform Delay [s]	43.82	35.35	6.59	61.33	44.77	48.50	29.50
k, delay calibration	0.50	0.50	0.30	0.08	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	138.01	181.75	1.39	69.33	33.11	22.54	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.26	1.38	0.54	0.85	0.92	0.81	0.42
d, Delay for Lane Group [s/veh]	181.82	217.10	7.98	130.66	77.88	71.04	30.06
Lane Group LOS	F	F	A	F	E	E	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	21.92	40.43	3.64	0.54	11.53	1.65	4.43
50th-Percentile Queue Length [ft/ln]	548.02	1010.71	90.95	13.51	288.20	41.31	110.77
95th-Percentile Queue Length [veh/ln]	33.31	60.82	6.55	0.97	17.10	2.97	7.88
95th-Percentile Queue Length [ft/ln]	832.64	1520.48	163.71	24.33	427.40	74.36	197.07

Movement, Approach, & Intersection Results

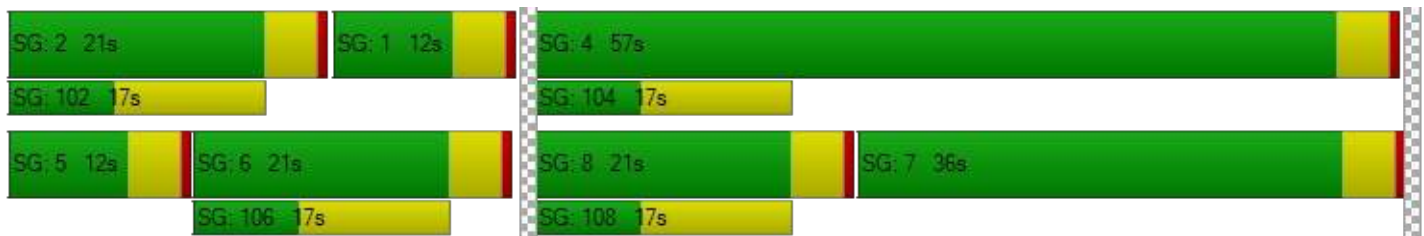
d_M, Delay for Movement [s/veh]	181.82	181.82	181.82	217.10	7.98	7.98	130.66	77.88	77.88	71.04	30.06	0.00
Movement LOS	F	F	F	F	A	A	F	E	E	E	C	
d_A, Approach Delay [s/veh]	181.82			131.74			79.58			37.47		
Approach LOS	F			F			E			D		
d_I, Intersection Delay [s/veh]	122.24											
Intersection LOS	F											
Intersection V/C	0.995											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.047	2.439	2.267	2.443
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.220	3.545	2.071	1.989
Bicycle LOS	B	D	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	137.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.088

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	314	882	6	6	1045	5	8	0	335	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	237	2	2	281	1	2	0	90	0	0	1
Total Analysis Volume [veh/h]	338	948	6	6	1124	5	9	0	360	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	94	94	94	94	94	94
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	60	60	40	40	26	26
g / C, Green / Cycle	0.64	0.64	0.43	0.43	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.42	0.57	0.01	0.67	0.25	0.00
s, saturation flow rate [veh/h]	800	1681	453	1682	1455	1146
c, Capacity [veh/h]	432	1077	76	714	439	360
d1, Uniform Delay [s]	25.73	14.07	47.12	27.12	33.21	24.89
k, delay calibration	0.50	0.35	0.11	0.50	0.30	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.14	7.90	0.43	268.52	11.33	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.89	0.08	1.58	0.84	0.01
d, Delay for Lane Group [s/veh]	38.87	21.97	47.56	295.64	44.54	24.90
Lane Group LOS	D	C	D	F	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.27	16.20	0.15	68.01	9.33	0.08
50th-Percentile Queue Length [ft/ln]	106.66	405.08	3.68	1700.22	233.25	2.06
95th-Percentile Queue Length [veh/ln]	7.65	22.80	0.27	105.36	14.34	0.15
95th-Percentile Queue Length [ft/ln]	191.35	570.12	6.63	2634.01	358.49	3.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.87	21.97	21.97	47.56	295.64	295.64	44.54	44.54	44.54	24.90	24.90	24.90
Movement LOS	D	C	C	D	F	F	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.39			294.33			44.54			24.90		
Approach LOS	C			F			D			C		
d_I, Intersection Delay [s/veh]	137.35											
Intersection LOS	F											
Intersection V/C	1.088											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	36.45	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.749	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1422	889	667	667
d_b, Bicycle Delay [s]	3.76	13.89	20.00	20.00
I_b,int, Bicycle LOS Score for Intersection	3.691	3.432	2.168	1.568
Bicycle LOS	D	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	77.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.931

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			↶			↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	0	0	0	0	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	-38	0	0	79	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	962	3	195	1177	9	0	0	0	0	0	238
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	261	1	53	320	2	0	0	0	0	0	65
Total Analysis Volume [veh/h]	1	1046	3	212	1279	10	0	0	0	0	0	259
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.32	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.93
d_M, Delay for Movement [s/veh]	11.62	0.00	0.00	12.95	0.00	0.00	0.00	0.00	22.70	0.00	0.00	77.70
Movement LOS	B	A	A	B	A	A			C			F
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	1.38	1.38	1.38	0.00	0.00	0.00	0.00	0.00	8.73
95th-Percentile Queue Length [ft/ln]	0.14	0.14	0.14	34.39	34.39	34.39	0.00	0.00	0.00	0.00	0.00	218.26
d_A, Approach Delay [s/veh]	0.01			1.83			22.70			77.70		
Approach LOS	A			A			C			F		
d_I, Intersection Delay [s/veh]	8.14											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.238

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	6	9	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	203	246	105	80	71
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	53	65	28	21	19
Total Analysis Volume [veh/h]	122	214	259	111	84	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.24	0.09
d_M, Delay for Movement [s/veh]	8.46	0.00	0.00	0.00	16.87	11.17
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.35	0.18	0.00	0.00	0.92	0.92
95th-Percentile Queue Length [ft/ln]	8.76	4.38	0.00	0.00	23.07	23.07
d_A, Approach Delay [s/veh]	3.07		0.00		14.18	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.80					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	99.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.958

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	199	0	0	65	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	3	0	-3	-1	-3	0	0	-1	1
Pass-by Trips [veh/h]	0	0	0	6	0	3	4	0	0	0	0	2
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	296	27	87	128	10	180	136	1499	101	69	1813	162
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	7	23	34	3	48	36	399	27	18	482	43
Total Analysis Volume [veh/h]	315	29	93	136	11	191	145	1595	107	73	1929	172
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	80	0	20	80	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	167	167	167	167	167	167	167	167	167	167
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	19	35	17	33	98	87	87	98	80	80
g / C, Green / Cycle	0.12	0.21	0.10	0.20	0.59	0.52	0.52	0.59	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.09	0.14	0.33	0.50	0.08	0.18	0.61	0.12
s, saturation flow rate [veh/h]	3138	1376	1590	1465	434	3179	1396	400	3179	1408
c, Capacity [veh/h]	364	292	159	288	217	1656	727	157	1521	674
d1, Uniform Delay [s]	72.60	56.89	74.00	62.58	49.55	38.51	20.78	38.18	43.57	25.88
k, delay calibration	0.08	0.08	0.08	0.24	0.34	0.26	0.26	0.50	0.31	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.73	0.71	9.27	6.65	10.43	9.32	0.22	9.52	123.91	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.42	0.85	0.70	0.67	0.96	0.15	0.46	1.27	0.26
d, Delay for Lane Group [s/veh]	77.32	57.59	83.27	69.23	59.99	47.83	21.00	47.70	167.48	26.35
Lane Group LOS	E	E	F	E	E	D	C	D	F	C
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.91	4.56	6.19	8.59	3.12	31.94	2.20	1.61	56.19	4.12
50th-Percentile Queue Length [ft/ln]	172.78	114.02	154.68	214.65	77.98	798.53	55.03	40.29	1404.81	102.95
95th-Percentile Queue Length [veh/ln]	11.22	8.06	10.27	13.39	5.61	41.21	3.96	2.90	80.84	7.41
95th-Percentile Queue Length [ft/ln]	280.56	201.58	256.66	334.79	140.37	1030.25	99.05	72.52	2021.07	185.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.32	57.59	57.59	83.27	69.23	69.23	59.99	47.83	21.00	47.70	167.48	26.35
Movement LOS	E	E	E	F	E	E	E	D	C	D	F	C
d_A, Approach Delay [s/veh]	71.81			74.88			47.23			152.29		
Approach LOS	E			E			D			F		
d_I, Intersection Delay [s/veh]	99.04											
Intersection LOS	F											
Intersection V/C	0.958											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.339	2.399	3.496	3.427
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1778	1778
d_b, Bicycle Delay [s]	3.33	2.69	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.281	2.117	3.083	3.353
Bicycle LOS	B	B	C	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	45.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.846

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	115	0	193	148	1165	419	261	1367	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	30	0	50	39	303	109	68	356	14
Total Analysis Volume [veh/h]	476	0	291	120	0	201	154	1214	436	272	1424	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	155	155	155	155	155	155	155	155	155	155	155
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.50	0.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	45	30	45	11	34	99	79	115	99	76	93
g / C, Green / Cycle	0.29	0.19	0.29	0.07	0.22	0.63	0.51	0.74	0.63	0.49	0.60
(v / s)_i Volume / Saturation Flow Rate	0.31	0.20	0.10	0.00	0.14	0.26	0.38	0.30	0.43	0.45	0.04
s, saturation flow rate [veh/h]	1531	1454	1153	1710	1408	585	3179	1453	639	3179	1454
c, Capacity [veh/h]	513	280	215	124	308	301	1611	1073	344	1553	872
d1, Uniform Delay [s]	55.59	62.78	45.44	0.00	55.37	31.02	30.60	7.61	29.29	36.83	12.93
k, delay calibration	0.50	0.44	0.08	0.08	0.22	0.15	0.15	0.19	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.28	60.71	1.67	0.00	4.63	1.91	1.04	0.44	16.70	3.58	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	1.04	0.56	0.00	0.65	0.51	0.75	0.41	0.79	0.92	0.06
d, Delay for Lane Group [s/veh]	80.87	123.49	47.11	0.00	60.00	32.93	31.64	8.05	45.99	40.42	12.97
Lane Group LOS	F	F	D	A	E	C	C	A	D	D	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	22.24	15.83	3.70	0.00	7.63	2.36	18.30	5.36	5.81	25.53	0.83
50th-Percentile Queue Length [ft/ln]	556.06	395.70	92.42	0.00	190.79	59.11	457.49	134.02	145.19	638.22	20.82
95th-Percentile Queue Length [veh/ln]	29.98	22.81	6.65	0.00	12.16	4.26	25.32	9.16	9.76	33.82	1.50
95th-Percentile Queue Length [ft/ln]	749.43	570.21	166.36	0.00	304.05	106.40	632.88	228.95	244.00	845.38	37.48

Movement, Approach, & Intersection Results

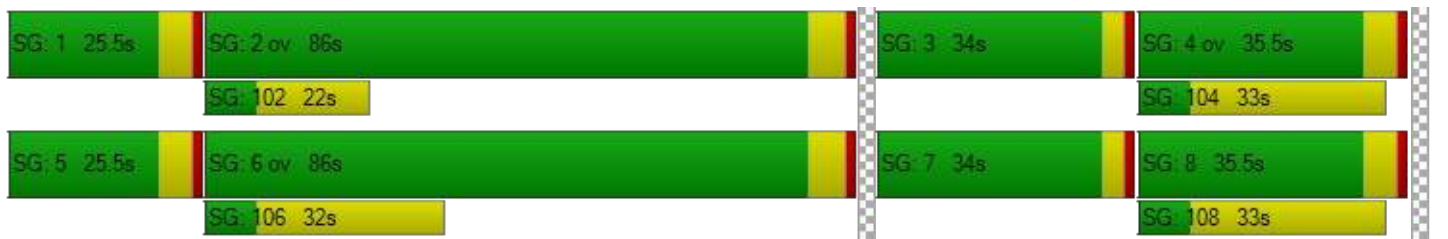
d_M, Delay for Movement [s/veh]	80.87	123.49	123.49	47.11	0.00	60.00	32.93	31.64	8.05	45.99	40.42	12.97
Movement LOS	F	F	F	D	A	E	C	C	A	D	D	B
d_A, Approach Delay [s/veh]	97.04			55.18			26.05			40.42		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	45.21											
Intersection LOS	D											
Intersection V/C	0.846											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.620	2.370	3.258	3.036
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	1778	1778
d_b, Bicycle Delay [s]	20.00	20.00	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.825	2.089	3.048	3.004
Bicycle LOS	C	B	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	191.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.389

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	32	0	0	97
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	127	0	0	44
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	10	1555	3	0	1672
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	401	1	0	431
Total Analysis Volume [veh/h]	10	10	1603	3	0	1724
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.39	0.03	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	191.28	62.15	0.00	0.00	13.73	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	1.51	1.51	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	37.71	37.71	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	126.72		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	466.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.052

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	32	97	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1515	1610	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	390	415	1
Total Analysis Volume [veh/h]	18	28	10	1562	1660	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.05	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	466.49	268.18	16.12	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	4.54	4.54	0.09	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	113.47	113.47	2.31	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	345.78		0.10		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	4.90					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	25.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	6	0	30	2	0	91
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	386	16	1229	313	31	1224
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	4	320	82	8	319
Total Analysis Volume [veh/h]	402	17	1280	326	32	1275
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

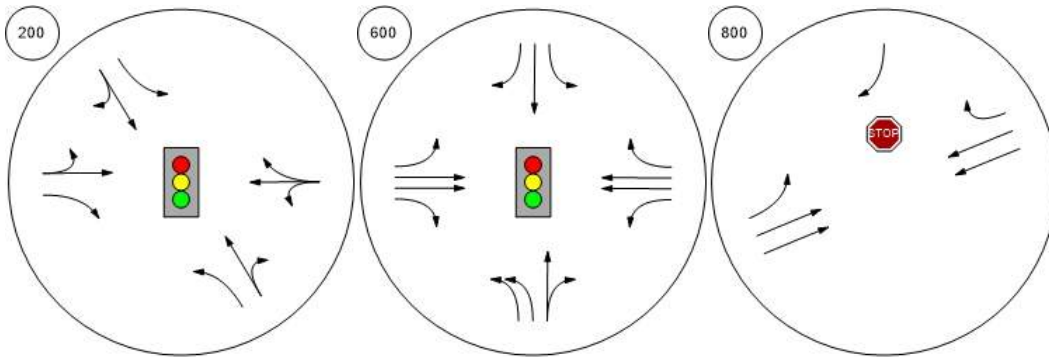
Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.09	0.01	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	0.00	25.27	0.00	0.00	11.96	0.00
Movement LOS		D	A	A	B	
95th-Percentile Queue Length [veh/ln]	0.00	0.28	0.00	0.00	0.19	0.00
95th-Percentile Queue Length [ft/ln]	0.00	7.09	0.00	0.00	4.63	0.00
d_A, Approach Delay [s/veh]	25.27		0.00		11.96	
Approach LOS	D		A		B	
d_I, Intersection Delay [s/veh]	0.49					
Intersection LOS	D					

Appendix L 2037 Mitigated Total Traffic Analysis

Lane Configuration and Traffic Control



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	114.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.021

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←↑			←↑			↑↑			↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	314	882	6	6	1045	5	8	0	335	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	237	2	2	281	1	2	0	90	0	0	1
Total Analysis Volume [veh/h]	338	948	6	6	1124	5	9	0	360	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	1	0	4	0
Auxiliary Signal Groups									1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	5	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	20	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No	No		No	
Maximum Recall	No	No			No			No	No		No	
Pedestrian Recall	No	No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	R	C
C, Cycle Length [s]	89	89	89	89	89	89	89
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	62	62	40	40	19	41	19
g / C, Green / Cycle	0.70	0.70	0.45	0.45	0.21	0.46	0.21
(v / s)_i Volume / Saturation Flow Rate	0.41	0.57	0.01	0.67	0.01	0.25	0.00
s, saturation flow rate [veh/h]	827	1681	453	1682	1322	1442	1448
c, Capacity [veh/h]	493	1174	89	752	361	669	356
d1, Uniform Delay [s]	22.39	9.41	43.57	24.75	27.92	17.15	27.86
k, delay calibration	0.50	0.32	0.11	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.54	4.05	0.31	232.90	0.03	3.09	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.81	0.07	1.50	0.02	0.54	0.01
d, Delay for Lane Group [s/veh]	29.92	13.46	43.88	257.65	27.95	20.25	27.88
Lane Group LOS	C	B	D	F	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.90	10.94	0.14	63.05	0.15	5.59	0.09
50th-Percentile Queue Length [ft/ln]	72.54	273.62	3.42	1576.14	3.85	139.70	2.13
95th-Percentile Queue Length [veh/ln]	5.22	16.37	0.25	96.77	0.28	9.46	0.15
95th-Percentile Queue Length [ft/ln]	130.58	409.25	6.16	2419.20	6.92	236.62	3.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.92	13.46	13.46	43.88	257.65	257.65	27.95	27.95	20.25	27.88	27.88	27.88
Movement LOS	C	B	B	D	F	F	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.77			256.52			20.44			27.88		
Approach LOS	B			F			C			C		
d_I, Intersection Delay [s/veh]	114.88											
Intersection LOS	F											
Intersection V/C	1.021											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.749			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.691			3.432			2.168			1.568		
Bicycle LOS	D			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	49.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	115	0	193	148	1165	419	261	1367	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	30	0	50	39	303	109	68	356	14
Total Analysis Volume [veh/h]	476	0	291	120	0	201	154	1214	436	272	1424	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Overla	ProtPer	Permis	Overla	ProtPer	Permis	Overla
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	163	163	163	163	163	163	163	163	163	163	163
L, Total Lost Time per Cycle [s]	4.00	5.50	4.00	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.50	2.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	28	30	14	17	42	103	83	116	103	78	98
g / C, Green / Cycle	0.17	0.18	0.09	0.10	0.26	0.63	0.50	0.71	0.63	0.48	0.60
(v / s)_i Volume / Saturation Flow Rate	0.15	0.20	0.08	0.00	0.14	0.25	0.38	0.30	0.42	0.45	0.04
s, saturation flow rate [veh/h]	3163	1454	1590	1710	1408	606	3179	1454	642	3179	1453
c, Capacity [veh/h]	534	267	141	177	365	307	1603	1032	341	1516	875
d1, Uniform Delay [s]	66.47	66.71	73.40	0.00	52.26	35.47	32.47	9.83	31.93	40.51	13.43
k, delay calibration	0.11	0.48	0.11	0.08	0.25	0.15	0.15	0.21	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.41	80.38	13.14	0.00	2.91	1.80	1.07	0.54	17.49	4.82	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	1.09	0.85	0.00	0.55	0.50	0.76	0.42	0.80	0.94	0.06
d, Delay for Lane Group [s/veh]	71.88	147.09	86.54	0.00	55.17	37.27	33.54	10.37	49.43	45.34	13.48
Lane Group LOS	E	F	F	A	E	D	C	B	D	D	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	10.17	17.13	5.51	0.00	7.50	2.51	19.48	6.55	6.16	27.93	0.88
50th-Percentile Queue Length [ft/ln]	254.14	428.16	137.75	0.00	187.52	62.74	486.89	163.67	153.91	698.18	21.94
95th-Percentile Queue Length [veh/ln]	15.39	25.01	9.36	0.00	11.99	4.52	26.71	10.74	10.23	36.59	1.58
95th-Percentile Queue Length [ft/ln]	384.86	625.25	233.99	0.00	299.80	112.94	667.82	268.57	255.65	914.85	39.49

Movement, Approach, & Intersection Results

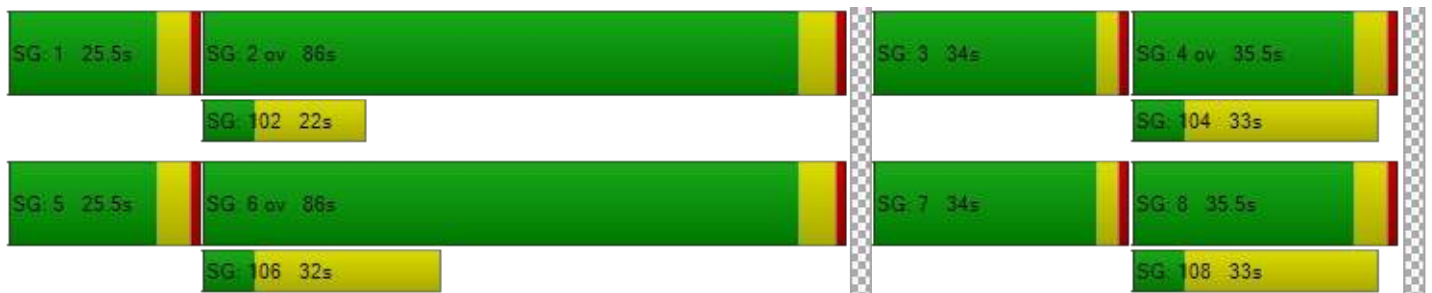
d_M, Delay for Movement [s/veh]	71.88	147.09	147.09	86.54	0.00	55.17	37.27	33.54	10.37	49.43	45.34	13.48
Movement LOS	E	F	F	F	A	E	D	C	B	D	D	B
d_A, Approach Delay [s/veh]	100.42			66.90			28.26			44.97		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	49.15											
Intersection LOS	D											
Intersection V/C	0.794											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.690			2.367			3.087			3.001		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			667			1778			1778		
d_b, Bicycle Delay [s]	20.00			20.00			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.825			2.089			3.048			3.004		
Bicycle LOS	C			B			C			C		

Sequence




Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	32	97	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1515	1610	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	390	415	1
Total Analysis Volume [veh/h]	18	28	10	1562	1660	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	18.47	16.12	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.31	0.09	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	7.78	2.31	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.47		0.10		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	C					



Memorandum

Date January 10, 2020
To Alan Roodhouse, RPS Development
Michael Strahs, Kimco Realty
From Sam Brookham, Leland Consulting Group
Chris Zahas, AICP, Leland Consulting Group
Subject EOA Land Supply Update
Project McMinnville Three Mile Lane

Kimco and RPS Development are in the process of preparing a zone change application for its property on Three Mile Lane in McMinnville. As part of this application, the applicant is required to refer to the industrial and commercial land supply in McMinnville, as noted in the City's Economic Opportunities Analysis (EOA). Since the EOA was adopted in 2013, several zone changes elsewhere in the city have rendered the numbers in the EOA incorrect. In order for the applicant to provide the City with accurate information, Leland Consulting Group was engaged to prepare a supplementary memorandum that updates the land supply numbers in the 2013 EOA to reflect these zone changes. This technical memorandum, therefore, documents all zone changes since the 2013 EOA and reconciles the corresponding commercial land supply numbers.

ZONE CHANGES SINCE 2013

The following table shows all of the commercial rezones in McMinnville since 2012 and provides information about the development status for each associated parcel. This information is a critical and foundational component of updating the commercial land demand and supply numbers.

Table 1. Zone Changes to/from Commercial Lands (2012-2019)

Year	Old Zone	New Zone	Site Address	Tax Lot Number	Lot Acres	Ord. No.	Development Status	Notes
2012	R-4 PD	O-R PD	500 NW Hill Road	R4419AC04700	3.39	4957	Partially Developed	Approximately 1/3 developed
2013	R-4	C-3 PD	304 NE Logan St	R4421AC03100	0.44	4968	Developed	Subaru car dealership, built 2013
			337 NE Macy St	R4421AC03200				
2017	R-1, EF-40	C-3	2121 NE 27th St	R4416AA05002	0.72	5020	Developed	Built pre-2013
2018	R-4 PD	O-R	600 SE Baker Street	R4420DD00100	2.86	5061	Undeveloped	Linfield College, vacant
				R4420DD00200				
2019	County	C-3 PD	1755 NW Baker Creek	R4418 00100	6.62		Undeveloped	Vacant

C-3	(4.56)
O-R	3.13
Total Comm.	(1.44)

Source: LCG, City of McMinnville

The following information provides a brief explanation of the preceding table and the resulting numbers.

- There were three instances of a zone change from a residential zone to an office/residential zone (O/R), totaling 6.25 acres. The O-R Zone (Office/Residential) is both commercial and residential and, thus, the total new acreage is split 50/50 between residential and commercial needs for the purpose of the buildable lands inventory. This equates to a gross increase of 3.125 acres of commercially designated land.
- The 2019 rezone resulted in a reduction of the site’s 12.34 acres of commercially designated land by 5.72 acres for a new total of 6.62 acres.
- The addition of the 2013 and 2017 C-3 rezones (totaling an increase of 1.16 acres) less the 2019 reduction equals an overall 4.56-acre reduction of General Commercial C-3 land.
- The gross reduction of 4.56 acres of C-3 zoned land and an increase of 3.13 of O-R zoned land results in a net loss of 1.44 acres of commercial land inventory.

EOA UPDATE

The following table was reproduced from the 2013 OEA. It is reproduced here to provide contextual information about the need for commercial, industrial, and institutional land based on the 20-year employment forecast (as of 2013). In 2013, the EOA forecasted a 20-year need for 165 acres of commercial land, 145 acres of industrial land, and 10 acres for institutional uses, totaling 320 acres.

Table 2. Forecast Demand for Vacant Employment Land (2013-2033)

Land Use Type	Forecast Job Growth	Added Jobs on C/I Land	Employees per Acre	Acreage Need	% of Total
Commercial	4,898	4,065	26.0	164.6	51.5%
Industrial	1,826	1,516	11.0	145.1	45.4%
Institutional	660	340	35.0	10.2	3.2%
Total All Uses	7,385	5,921	19.5	319.9	100%

Source: ECONorthwest, 2001 EOA and E. D. Hovee & Company, LLC.

The table below shows the original 2012 buildable land inventory summary and the adjustments based on the aforementioned zone changes between 2012 and 2019. Key takeaways are as follows.

- The commercial buildable land inventory decreased by 1.44 acres, largely because of the aforementioned reduction of 5.72 acres of vacant commercial land.
- Most of the “added” commercial land is considered *unavailable* because of the presence of buildings.
- The buildable industrial land inventory was not affected by commercial zone changes between 2012 and 2019.

Table 3. McMinnville Commercial & Industrial BLI (2012 + 2013-2019 Zone Changes)

BLI Category	# of Parcels	Land Area (in acres)		Total
		Unavailable	Available	
Commercial Inventory				
Developed	793	464.4	0.0	464.4
Recent Zone Change	3	1.2	0.0	1.2
Partially Developed	18	84.1	22.5	106.6
Recent Zone Change	1	0.6	1.1	1.7
Vacant	43	14.3	108.5	122.7
Recent Zone Change	3	0.0	(4.3)	-4.3
2013 Subtotal	861	562.8	130.9	693.7
Recent Zone Change	7	1.7	(3.2)	(1.4)
Rev. 2019 Subtotal	868	564.5	127.8	692.3
Industrial Inventory				
Developed	174	1,154.6	0.0	1,154.6
Partially Developed	6	4.5	12.4	16.9
Vacant	49	20.5	376.7	397.2
Subtotal Industrial	229	1,179.7	389.7	1,569.4
Commercial + Industrial	1,097.0	1,744.2	517.5	2,261.6

Source: E. D. Hovee & Company, LLC., City of McMinnville Planning Department

Table 4, below, is a reproduction of the table in the 2013 EOA—with the original comments—but includes an update for 2019 using the information presented thus far in this memorandum. Given the reduction in *available* commercial land, from 130.9 acres in the 2013 EOA to 127.8 acres after computing the impacts of recent zone changes, the commercial land deficit has also increased by 3.1 acres, from 35.9 to 39.0.

Any rezoning efforts of industrial-zoned to commercial-zoned land will, therefore, reduce the forecasted deficit in commercial land supply (as of the 2033 forecast year).

Table 4. Comparison of Land Demand to Supply (2013/2019-2033)

Acres by Plan Designation				Comments
	Commercial	Industrial	Total	
Vacant Land Demand				Based on 2013-33 jobs forecast
Commercial	164.6	0.0	164.6	Commercial retail & service need
Industrial	0.0	145.1	145.1	Manufacturing & related sectors
Institutional	2.2	8.0	10.2	62% of need w/ per job method
Totals	166.8	153.2	319.9	Employment land demand
Available Land Supply				Fully & partially vacant sites
2013 BLI Update	130.9	389.7	520.0	Revised per BLI update 7/13
2013 Surplus/(Deficit)	(35.9)	235.9	200.1	As of 2033 forecast year
2019 Revision	127.8	389.7		With 2013-2019 zone changes
2019 Surplus/(Deficit)	(39.0)	236.5	197.5	As of 2033 forecast year

Source: E. D. Hovee & Company, LLC.

City of McMinnville Economic Opportunities Analysis

January-February 2020

Prepared for:
City of McMinnville

DRAFT REPORT

ECONorthwest
ECONOMICS • FINANCE • PLANNING

KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503.222.6060

This page intentionally blank

Draft

Acknowledgments

ECONorthwest prepared this report for the City of McMinnville. ECONorthwest and the City thank the many people who helped to develop the McMinnville Economic Opportunities Analysis.

<p>Project Advisory Committee Kellie Menke Roger Lizut Susan Dirks Sid Friedman Mark Davis Paul Davis Andrew Burton Beth Caster Michael Jester Robert J. Banagay Amanda Perron Matt Deppe</p>	<p>Patty O’Leary Doug Hurl Scott Cooper Alan Amerson Kelly McDonald Mike Morris Jeff Knapp Gioia Goodrum Ed Gormley Kyle Faulk Jody Christensen</p>
<p>Public/Semi-Public Lands Work Group <i>PAC Members:</i> Paul Davis, Chemeketa Susan Muir, Parks Mike Bisset, City Infrastructure John Dietz, MWL Other Interested PAC Members</p>	<p><i>Additional Representatives:</i> Mary Ann Rodriguez, Linfield Matt Johnson, Churches Laura Syring, SD, Parks Peter Keenan, SD Ryan McIrvin, SD/Athletics Steve Ganzer, Parks Justin Hogue, County</p>
<p>Technical Advisory Committee (TAC): Tom Schauer - Lead Heather Richards Chuck Darnell Jamie Fleckenstein</p>	<p>Mike Bisset Susan Muir (Parks Director) Angela Carnahan (DLCD) Stephanie Armstrong (Yamhill County)</p>
<p>ECONorthwest Consulting Staff Bob Parker, Project Director</p>	<p>Margaret Raimann, Technical Manager</p>

For over 40 years ECONorthwest has helped its clients make sound decisions based on rigorous economic, planning, and financial analysis. For more information about ECONorthwest: www.econw.com. For more information about this report, please contact:

Tom Schauer
 Senior Planner
 230 NE Second Street
 McMinnville, OR 97128
 503-4745108
tom.schauer@mcminnvilleoregon.gov

Bob Parker
 ECONorthwest
 222 SW Columbia, Suite 1600
 Portland, OR 97201
 503-222-6060
parker@econw.com

Table of Contents

1. INTRODUCTION	1
CONTENTS, FORMAT, AND GUIDING REQUIREMENTS	1
BACKGROUND	2
STATEWIDE PLANNING GUIDANCE	7
PUBLIC PROCESS	8
ORGANIZATION OF THIS REPORT	9
2. THE MCMINNVILLE ECONOMY	10
3. NATIONAL, STATE, AND REGIONAL OUTLOOK	19
NATIONAL TRENDS	19
STATE TRENDS	27
REGIONAL AND LOCAL TRENDS	31
4. ECONOMIC DEVELOPMENT POTENTIAL	44
FACTORS AFFECTING COMMUNITY ECONOMIC DEVELOPMENT POTENTIAL	45
TARGET INDUSTRIES	59
5. FORECAST EMPLOYMENT AND LAND NEEDS	67
EOA UPDATE PROCESS	67
BUILDABLE LANDS INVENTORY	67
FORECAST OF EMPLOYMENT GROWTH AND COMMERCIAL AND INDUSTRIAL LAND DEMAND	75
ESTIMATE OF DEMAND FOR COMMERCIAL AND INDUSTRIAL LAND	82
SUMMARY OF LAND SUFFICIENCY FOR EMPLOYMENT LAND IN MCMINNVILLE	104
6. COMPREHENSIVE PLAN POLICIES	107
ECONOMIC DEVELOPMENT GOALS AND POLICIES	107
APPENDIX A. BUILDABLE LANDS INVENTORY	115
STUDY AREA	115
METHODS FOR INVENTORY OF COMMERCIAL AND INDUSTRIAL LANDS	115
APPENDIX B. EMPLOYMENT ON OTHER LAND AND EMPLOYMENT DENSITY	119
EMPLOYMENT ON OTHER (NON-VACANT) LAND	119
EMPLOYMENT DENSITY	124

This page intentionally blank

Draft

1. Introduction

This report presents an update to the 2013 Economic Opportunities Analysis (EOA) for the City of McMinnville. The purpose of an EOA is to develop information as a basis for policies that capitalize on McMinnville's opportunities and help address the City's challenges. In 2019, the City adopted the *MAC-Town 2032 Economic Development Strategic Plan*. This EOA Update is intended to:

- Provide the analysis and land use foundation necessary to achieve the City's economic development strategy.
- Identify policy issues that will need to be reflected in the Comprehensive Plan to achieve the economic development strategy.
- Update the trend data and forecasting, the buildable land inventory, and employment land needs to a common planning period with the City's housing needs analysis and other land needs. This update is part of an urbanization report to inform the strategy and identify land needs for a 20-year planning period to determine sufficiency of buildable lands and land use policies to meet identified needs consistent with the City's vision. Additional long-term and short-term planning periods are also analyzed consistent with planning for Urban Reserves and to ensure adequate short-term supply of needed sites.

This version of the EOA is intended to provide an update to the previous 2013 EOA, and thus retains portions of the content and narrative throughout. Where necessary, this update uses updated data on employment trends and commercial and industrial land needs, as well as refined approaches to methods for forecasting employment growth. The competitive advantages (i.e., advantages and disadvantages) for economic development in McMinnville did not change substantially since evaluation of these factors in the 2013 EOA or the *MAC-Town 2032 Economic Development Strategic Plan* adopted in 2019. This 2020 EOA updates the information included in the 2013 EOA to include the new information on competitive advantages and the target industries identified in the Strategic Plan, with consideration for any outdated information.

Contents, Format, and Guiding Requirements

The EOA includes technical analysis to address a range of questions that McMinnville faces in managing its commercial and industrial land. For example, the EOA includes an employment forecast that describes how much growth McMinnville should plan for over the planning period and identifies the amount and type of employment land necessary to accommodate growth in McMinnville over that period. The EOA also includes an inventory of commercial and industrial land within McMinnville's urban growth boundary (UGB) to provide information about the amount of land available to accommodate employment growth.

This EOA complies with the requirements of statewide planning Goal 9, the Goal 9 administrative rules (OAR 660 Division 9), and the court decisions that have interpreted them. Goal 9 requires cities to identify the characteristics of sites needed to accommodate industrial and other employment uses (OAR 660-009-0025(1)) over the 2021-2041 20-year planning period. This approach could be characterized as a *site-based* approach that projects land need based on the forecast for employment growth, the City's economic development objectives, and the specific needs of target industries. This updated analysis is more comprehensive than the State requires, as it looks at the employment needs for a 5-, 10-, and 46-year period, in addition to the 20-year period. The shorter-term analyses are intended to identify immediate employment land needs and strategies given current land-need deficiencies, and the 46-year analysis can provide a basis for the establishment of urban reserve areas (URAs).

Background

The City adopted an updated EOA in 2013. It provided the following history of work prior to the 2013 EOA update:

McMinnville's Comprehensive Plan, as adopted in 1981, consists of three interrelated volumes:

- Volume I – covering background information for the plan process
- Volume II – listing adopted goals and policies
- Volume III – consisting of implementation ordinances and measures including the comprehensive plan and zoning maps, annexation, zoning and land division ordinances, and planned development overlays on areas of special significance

In 2001, the City of McMinnville completed an Economic Opportunities Analysis (EOA) aimed to "inventory all non-residential lands and conduct an analysis of its future commercial and industrial land needs, consistent with the requirements of current Statewide Planning Goals, laws, and administrative rules." The EOA identified a potential surplus of industrial land and a deficit of commercial land over what was then a 20-year forecast horizon of 2000-2020. The EOA was approved by the City Council in February 2002 and subsequently acknowledged by the State Land Conservation and Development Commission (LCDC).

In 2003, a McMinnville Growth Management and Urbanization Plan (MGMUP) was adopted as an element of the Comprehensive Plan. This document provided guiding principles and a development concept for future growth, including a proposed expansion of McMinnville's Urban Growth Boundary (UGB).

In conjunction with this process, the City also updated the work of the 2001 EOA with respect to a revised Population and Employment Justification and a Revised Buildable Land Analysis, to bring these analyses current to the January 1, 2003 starting benchmark of the UGB review process. In effect, the 20-year planning horizon was shifted from 2000-2020 by three years to 2003-2023. In addition, the buildable lands analysis was updated to reflect changes that occurred between 2001 and 2003, and land need projections were adjusted accordingly.

The MGMUP documented the need for UGB expansion approaching 1,125 buildable acres (to meet needs for 2003-2023), with more than 90% of the need accounted by proposed expansion of land for residential, parks and related public uses. The remaining 9% represented land documented as needed for commercial development. The MGMUP was approved by LCDC, but then appealed by private parties to the Oregon Court of Appeals for issues related to prioritization of the types of agricultural land that can be added to the UGB. The Court eventually reversed and remanded LCDC's approval; LCDC subsequently reversed and remanded their action to the City of McMinnville.

2013 EOA Update

The City of McMinnville last conducted a Goal 9-compliant analysis and evaluation of economic trends in the 2013 EOA update, which was based on 2010 Census and other employment data. The 2019 Economic Development Strategic Plan also included a Demographic and Economic profile of McMinnville.

The 2013 EOA acknowledged that due to the prior Court of Appeals decision, "a previously determined 106-acre deficiency of commercial land for McMinnville's 20-year need has not been fully remedied. While the City of McMinnville is not pursuing any proposal to increase its UGB at this time, the need to address the potential imbalance of commercial and industrial land requirements has become more apparent due to the effects of a changing global, regional and local economy..."

The 2013 EOA stated, "As noted, while always an option for potential consideration, this EOA update assumes that McMinnville's UGB will not be expanded during the updated 20-year forecast period for purposes of providing non-residential (or employment) land need; rather, any needs for added forecast employment growth are anticipated to be accommodated through efficiency or other measures as available to avoid UGB expansion." The 2013 EOA found a 36-acre shortfall of commercial land for the 2013-2033 planning period, and a surplus of industrial land. This resulted in findings that led to subsequent rezoning of some of the surplus industrially-zoned acreage to commercially-zoned acreage in response to identified commercial land deficits.

Planning Area Definition

The EOA provides the data and analysis necessary to evaluate the sufficiency of McMinnville's UGB to meet needs for the identified planning period. As such, it includes an evaluation of the buildable lands within McMinnville's current UGB (as illustrated by the Comprehensive Plan map on the following page). This EOA also provides discussion of the Yamhill County, regional, statewide and national context within which local economic development opportunities are appropriately framed. The report provides information that will be needed to address UGB and Urban Reserve needs for any deficit of lands that isn't met within the current UGB. It also provides information about site needs and characteristics that will assist with UGB an Urban Reserve alternatives analysis. The analysis area for alternatives analysis is articulated in state law and will be addressed in a separate step in this review.

Community Economic Development Objectives

Current community objectives for economic development can be found as part of the following City documents:

MAC-Town 2032 Strategic Plan (adopted 2019)

In 2019, McMinnville adopted the *MAC-Town 2032 Strategic Plan*, which includes new vision, mission, and values statements. It also includes goals for seven strategic priorities, and for each goal, there are identified objectives and priority actions. Additional actions are also identified.

Vision, Mission, Values

Vision

A collaborative and caring city inspiring an exceptional quality of life.

Mission

The City of McMinnville delivers high-quality services in collaboration with partners for a prosperous, safe, and livable community.

Values

- **Stewardship.** We are responsible caretakers of our shared public assets and resources. We do this to preserve the strong sense of community pride which is a McMinnville trademark.
- **Equity.** We are a compassionate and welcoming community for all – different points of view will be respected. Because not all members of our community are equally able to access our services or participate in public process, we commit ourselves to lowering these barriers.
- **Courage.** We are future-oriented, proactively embracing and planning for change that is good for our community and consistent with our values.
- **Accountability.** We believe healthy civil discourse is fostered through responsive service and clear, accurate, useful information.

Strategic Priorities. To move McMinnville toward its vision, the City believes it will need to make disproportionate investment in time and resources in these areas.

One of these strategic priorities is Economic Prosperity, with the following goal and objectives. Each objective also has associated priority actions.

- Goal: Provide economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors.
- Objectives:
 - Accelerate growth in living wage jobs across a balanced array of industry sectors

- Improve systems for economic mobility and inclusion
- Foster opportunity in technology and entrepreneurship
- Be a leader in hospitality and place-based tourism
- Locate higher job density activities in McMinnville
- Encourage connections to the local food system and cultivate a community of exceptional restaurants

MAC-Town 2032 Economic Development Strategic Plan (adopted 2019)

In 2019, McMinnville adopted the *MAC-Town 2032 Economic Development Strategic Plan*, which updated the City's mission and goals related to economic development, as a supplement to the goals and policies in the Strategic Plan and Comprehensive Plan. The mission in the Plan states:

“McMinnville provides economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors, from steel manufacturing to technology. Economic growth is collaborative, and inclusive of individuals from diverse backgrounds. Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville’s high quality of life. Our strong downtown serves residents and visitors alike, featuring unique shops and world-class restaurants that offer locally-produced food products and globally-renowned wine. As we evolve, we prize our small-town roots and we maintain McMinnville’s character.”

The “foundational goals and strategies” defined in the plan are:

1. Accelerate growth in living-wage jobs across a balanced array of industry sectors
2. Improve systems for economic mobility and inclusion
3. Maintain and enhance our high quality of life

The “target sector goals and strategies” defined in the plan are:

4. Sustain and innovate within traditional industry and advanced manufacturing
5. Foster opportunity in technology and entrepreneurship
6. Be a leader in hospitality and place-based tourism
7. Align and cultivate opportunities in craft beverages and food systems
8. Proactively assist growth in education, medicine, and other sciences

Economic Opportunities Analysis (2013)

McMinnville last completed an EOA in 2013, as an update to the 2001/2003 EOA process. Section 6 of the EOA provided discussion and findings for each relevant goal in the Comprehensive Plan for community economic development objectives. Chapter 6 provides updated discussion of these Goals. The 2013 EOA also recommended updates to the list of cluster target industries to include Advanced Manufacturing and Healthcare/Traded Sector Services. A full discussion of these sectors is included in Chapter 4 of this EOA.

Comprehensive Plan (Adopted 1981, and subsequently amended).

McMinnville's Comprehensive Plan consists of three interrelated volumes.

- Volume I – covering background information for the plan process
- Volume II – listing adopted goals and policies
- Volume III – consisting of implementation ordinances and measures including the comprehensive plan and zoning maps, annexation, zoning and land division ordinances, and planned development overlays on areas of special significance

A more detailed statement of economic development goals is embodied by the Comprehensive Plan (Volume II Goals and Policies), Chapter IV – Economy of McMinnville (as amended)

General:

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Commercial Development:

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future neighborhood and community serving commercial lands and discouraging strip development.

Goal IV 4: To promote the downtown as a cultural, administrative service, and retail center of McMinnville.

Industrial Development:

Goal IV 5: To continue the growth and diversification of McMinnville's industrial base through the provision of an adequate amount of properly designated lands.

Goal IV 6: To insure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

Each goal has associated policies and proposals. The Comprehensive Plan includes a series of general, locational and design policies as “more precise and limited statements intended to further define the goals.” Also included as part of the Economic Development element of the existing adopted plan are three proposals as “possible courses of action” to further implement the goals and policies.

The 2020 EOA draws on information from numerous data sources, such as the Oregon Employment Department, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, and the U.S. Census. In addition to retaining all relevant information from the 2013 EOA, the EOA update also uses information from the Three Mile Lane market analysis, completed in March 2019.

Statewide Planning Guidance

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The analysis in this report is designed to conform to the requirements for an Economic Opportunities Analysis in OAR 660-009 as amended.

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends; identify the number of sites by type reasonably expected to be needed to accommodate projected employment growth based on the site characteristics typical of expected uses; include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use; and estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input-based process in conjunction with state agencies.
2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that commit the city or county to designate an adequate number of employment sites of suitable sizes, types and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area.

3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025).* Cities and counties must adopt measures to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementation measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage and characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

Public Process

At the broadest level, the purpose of the project was to understand how McMinnville's employment has changed since the completion of the 2013 EOA, as well as update the city's employment land needs to align with planning periods used in the 2019 HNA. In 2019, the city adopted an economic development strategy that provided a framework for policies and implementation actions for economic development. The update to the EOA requires a broad range of assumptions that influence the outcomes. Public engagement during the project was accomplished through facilitation of a Project Advisory Committee as described below.¹

Project Advisory Committee Meetings

The City of McMinnville and ECONorthwest solicited public input from an ad-hoc Project Advisory Committee. The Project Advisory Committee met 5 times² to discuss project assumptions, results, and implications. The project relied on the Project Advisory Committee to:

- Review work products, advise on public involvement, and consider public input when making recommendations.
- Advise the project team on matters regarding employment needs and the buildable lands inventory in McMinnville.
- Work collaboratively with, and provide guidance to, the staff and consultant project team in the preparation for the McMinnville Economic Opportunities Analysis.

A public lands work group was also established to review and make recommendation regarding unique land needs associated with employment and land uses for public and semi-public organizations.

¹ In addition to Project Advisory Committee meetings, the City of McMinnville also maintained a project website and social media presence.

² Project Advisory Committee meeting dates: July 10, 2019; September 5, 2019; October 10, 2019; November 13, 2019; and January 21, 2020.

Organization of this Report

This report is organized as follows:³

- **Chapter 2. The McMinnville Economy** – as a review of pertinent population, demographic and economic trends for McMinnville in the context of what is occurring throughout Yamhill County, a larger economic region, statewide and nationally.
- **Chapter 3. National, State & Regional Outlook** – covering recent economic experience and forecasts external to the community that could influence employment uses reasonably expected to locate or expand in the McMinnville UGB over the 5-, 10-, 20-, and 46-year planning horizons of this EOA.
- **Chapter 4. Economic Development Potential** – focused on factors that currently and prospectively affect economic development in McMinnville.
- **Chapter 5. Forecast Employment & Land Needs** – detailing an updated UGB employment forecast together with industrial/commercial buildable lands inventory and determination of long- and short- term needs, parcel size evaluation, site characteristics, and commercial/industrial policy options necessary to provide the land use foundation for the City's economic development strategy.

This report also includes two appendices:

- **Appendix A, Buildable Lands Inventory Methodology**
- **Appendix B, Employment on Other Land and Employment Density**

³ The organization of the report is intended to align as closely as possible to the 2013 EOA. Some subsections may differ due to changes in methodology or alternative data sources.

2. The McMinnville Economy

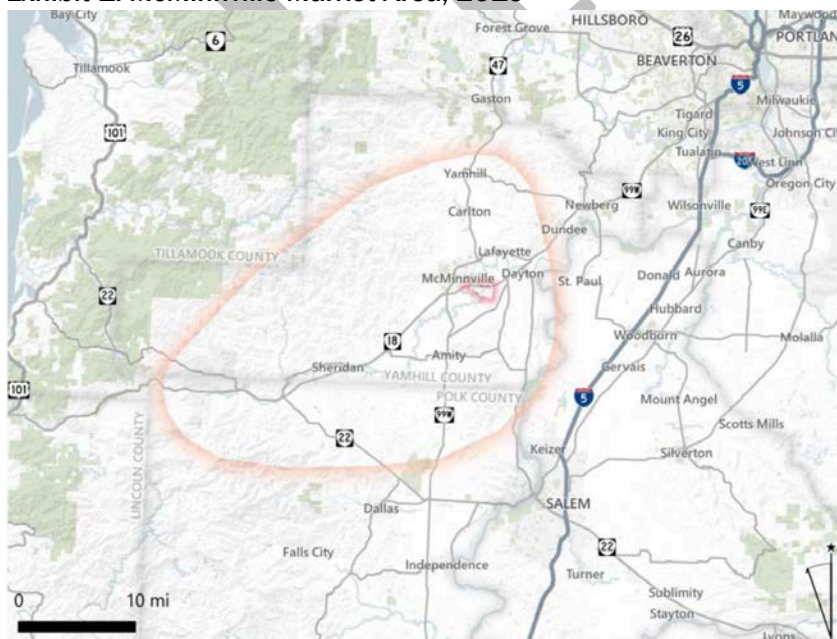
This chapter describes the factors affecting economic growth in McMinnville within the context of national and regional economic trends. The analysis presents the City's competitive advantages for growing and attracting businesses, which forms the basis for identifying potential growth industries in McMinnville.

McMinnville exists within the context of the county, market area, region, state, national, and international context and economies. OAR 660-009-0015 (1) requires a review of national, state, regional, county and local trends.

Regions are defined differently for different purposes. McMinnville exists as part of the economy of the following regions. Also included, as available, are pertinent comparable data for Yamhill County, the state of Oregon and United States.

- 10-County Economic Region. (used for 2013 EOA)
- 7-County Portland MSA (US Census Bureau-defined economically integrated region)
- 6-County North Valley Region (used in 2001/03 EOA, which also used "Willamette valley with three additional counties for some indicators)
- 4-County Mid-Valley Region (defined by the Oregon Employment Department and used in their reporting): Linn, Marion, Polk, Yamhill
- Market Area (relates predominantly to retail trade) (Exhibit 1). Market area will vary depending on the type of attractor. Larger regional shopping may have a larger market areas while neighborhood retail will have a smaller market area).

Exhibit 1. McMinnville Market Area, 2019



Source: McMinnville Three Mile Lane Area Plan: Market Analysis; TIGER, Leland Consulting Group.

Employment Trends in McMinnville and Yamhill County

The economy of the nation changed substantially between 1980 and 2018. These changes affected the composition of Oregon’s economy, including McMinnville’s economy. At the national level, the most striking change was the shift from manufacturing employment to service-sector employment. The most important shift in Oregon during this period has been the shift from a timber-based economy to a more diverse economy, with the greatest employment in services. This section focuses on changes in the economy in Yamhill County since 2001 and in McMinnville since 2007.

Exhibit 2 shows covered employment⁴ in Yamhill County for 2001 and 2018. Employment increased by 8,202 jobs, or 29%, over this period, which included the Great Recession and subsequent recovery. The sectors with the largest increases in numbers of employees were Arts, entertainment, and recreation; Healthcare and social assistance; Other services; Accommodation and food services; and Professional and business services.

The average wage for employment in Yamhill County in 2018 was about \$42,321. Employment in higher wage industries, such as Information and Transportation, Warehousing, and Utilities, decreased by 204 jobs over the 2001 to 2018 time period.

Exhibit 2. Covered Employment by Industry, Yamhill County, 2001-2018

Sector	2001	2018	Change 2001 to 2018		
			Difference	Percent	AAGR
Natural Resources and Mining	2,824	3,668	844	30%	1.6%
Construction	1,492	1,977	485	33%	1.7%
Manufacturing	5,584	6,901	1,317	24%	1.3%
Wholesale trade	560	629	69	12%	0.7%
Retail trade	3,157	3,728	571	18%	1.0%
Transportation, Warehousing and Utilities	645	468	-177	-27%	-1.9%
Information	269	242	-27	-10%	-0.6%
Financial Activities	972	1,007	35	4%	0.2%
Professional and Business Services	1,371	1,936	565	41%	2.1%
Educational Services	1,166	1,512	346	30%	1.5%
Health care and social assistance	2,792	4,881	2,089	75%	3.3%
Arts, entertainment, and recreation	172	350	178	103%	4.3%
Accommodation and food services	2,145	3,441	1,296	60%	2.8%
Other Services	852	1,378	526	62%	2.9%
Unclassified	19	10	-9	-47%	-3.7%
Government	4,090	4,184	94	2%	0.1%
Total	28,110	36,312	8,202	29%	1.5%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001-2018.

Exhibit 3 shows covered employment and average wage for the 10 largest employment industries in Yamhill County in 2018. Jobs in manufacturing account for about 19% of the

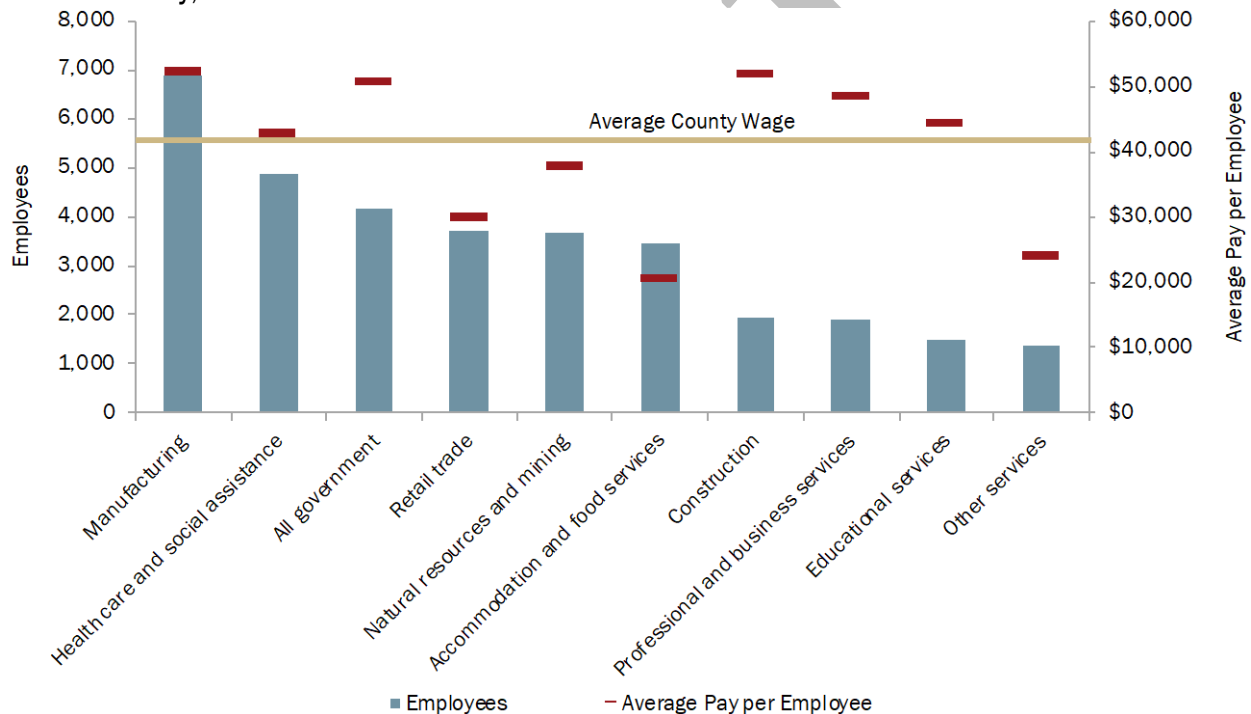
⁴ **Covered** employment includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as “1099 employees”), or some railroad workers. Covered employment data is from the Oregon Employment Department.

county's covered employment and these jobs pay approximately 24% more than the county average wage (\$52,303 compared to \$42,321). Healthcare and social assistance jobs are the next largest employment sector, making up about 13% of Yamhill County's covered employment. Wages in this industry are closer to the county average, paying employees an average of \$42,952. Government jobs account for 12% of the county's covered employment. These jobs pay roughly 20% more than the county average (\$50,765 compared to \$42,321).

Though not shown in Exhibit 3 due to relatively low employment levels, wholesale trade, on average, pays employees \$62,411, 47% above the county average wage. This sector only makes up about 2% of Yamhill County's total covered employment, though it pays the highest wages.

Additionally, jobs in construction (\$51,947), professional and business services (\$48,497), and educational services (\$44,398), pay more per year than the county average. However, these three sectors make up a smaller employment base than Retail trade, Natural resources and mining, and Accommodation and food services, which pay below the average county wage.

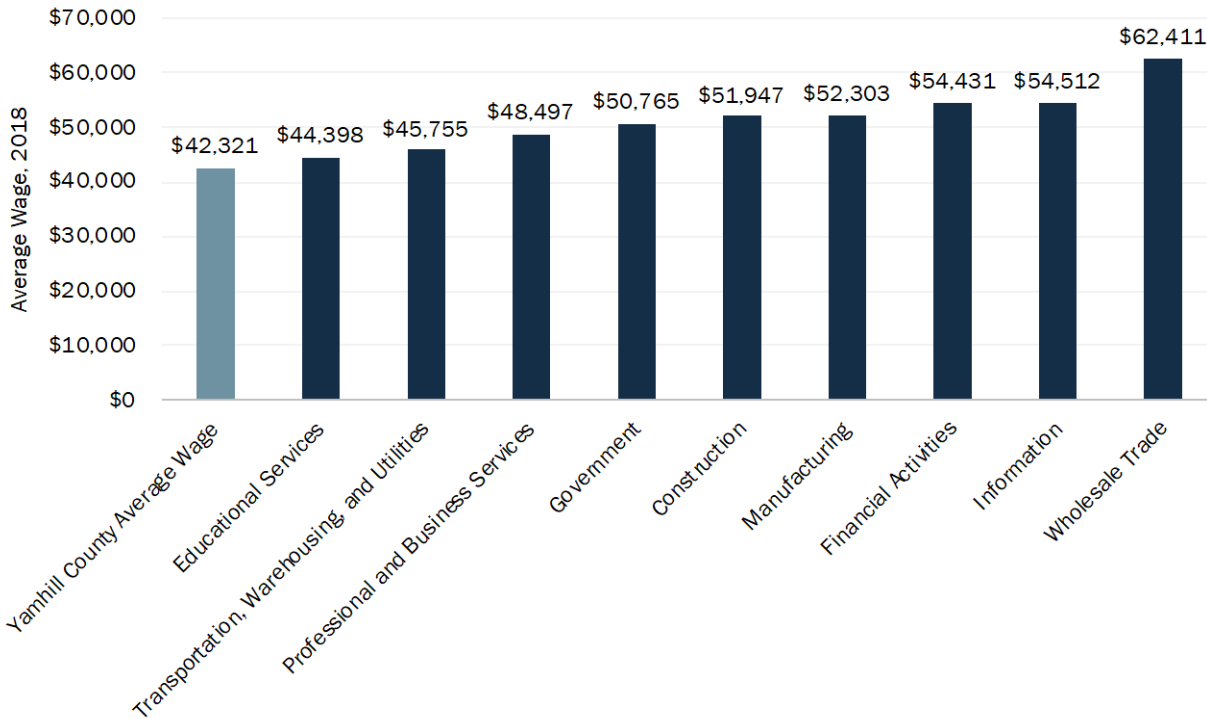
Exhibit 3. Covered Employment and Average Pay by Sector, 10 Largest Employment Sectors Yamhill County, 2018



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2018.

Exhibit 4 shows the sectors in Yamhill County that pay an annual average wage above the countywide average wage. Some of these sectors, such as wholesale trade and construction, are shown in Exhibit 3; however, other higher paying sectors include information (\$54,512), financial activities (\$54,431), and manufacturing (\$52,303).

Exhibit 4. Highest Paying Sectors in Yamhill County, 2018



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2018.

Between 2007 and 2017, employment in McMinnville increased by about 1,123 employees (8%) at an annual average growth rate of 0.8%. Employment in Accommodation and food services and Retail trade increased by 372 employees and 309 employees respectively, while employment in Transportation and warehousing and Utilities decreased by about 229 (Exhibit 5).

Exhibit 5. Change in Covered Employment, McMinnville UGB, 2007-2017

Sector	Employment		Change in Employment	Percent	AAGR
	2007	2017			
Agriculture, Forestry, and Mining	244	356	112	46%	3.8%
Construction	634	585	(49)	-8%	-0.8%
Manufacturing	2,300	2,277	(23)	-1%	-0.1%
Wholesale Trade	264	127	(137)	-52%	-7.1%
Retail Trade	1,861	2,170	309	17%	1.5%
Transportation and Warehousing and Utilities	369	140	(229)	-62%	-9.2%
Information	136	127	(9)	-7%	-0.7%
Finance and Insurance	511	459	(52)	-10%	-1.1%
Real Estate and Rental and Leasing	138	113	(25)	-18%	-2.0%
Professional and Technical Services	265	367	102	38%	3.3%
Management of Companies	221	117	(104)	-47%	-6.2%
Admin. and Support/Waste Mgmt/Remediation Serv.	494	584	90	18%	1.7%
Health Care and Social Assistance; Private Education Serv.	2,564	3,159	595	23%	2.1%
Arts, Entertainment, and Recreation	134	168	34	25%	2.3%
Accommodation and Food Services	1,131	1,503	372	33%	2.9%
Other Services	417	630	213	51%	4.2%
Government	2,158	2,082	(76)	-4%	-0.4%
Total	13,841	14,964	1,123	8%	0.8%

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2007 and 2017.

Exhibit 6 shows a summary of covered employment data for the McMinnville UGB in 2017. The sectors with the greatest number of employees were Health care and social assistance and Private education (21%); Manufacturing (15%); and Retail trade (15%). Exhibit 7 shows employment in McMinnville in 2017 for detailed industries in the manufacturing sector. Employment in Food manufacturing and Beverage and tobacco product manufacturing accounted for about one quarter of McMinnville’s manufacturing employment overall.

Exhibit 6. Covered Employment and Average Pay by Sector, McMinnville UGB, 2017

Sector	Establishments	Employees	Payroll	Average pay per employee
Agriculture, Forestry, and Mining	24	356	\$ 11,188,173	\$ 31,427
Construction	104	585	\$ 27,931,863	\$ 47,747
Manufacturing	71	2,277	\$ 113,267,986	\$ 49,744
Wholesale Trade	41	127	\$ 7,778,100	\$ 61,245
Retail Trade	141	2,170	\$ 62,991,136	\$ 29,028
Transportation and Warehousing and Utilities	20	140	\$ 4,582,386	\$ 32,731
Information	19	127	\$ 5,010,927	\$ 39,456
Finance and Insurance	51	459	\$ 29,183,634	\$ 63,581
Real Estate and Rental and Leasing	38	113	\$ 3,815,372	\$ 33,764
Professional and Technical Services	100	367	\$ 21,852,471	\$ 59,544
Management of Companies	9	117	\$ 7,033,600	\$ 60,116
Admin. and Support/Waste Mgmt./Remediation Serv.	49	584	\$ 14,681,454	\$ 25,139
Health Care and Social Assistance; Private Education :	173	3,159	\$ 144,631,456	\$ 45,784
Arts, Entertainment, and Recreation	9	168	\$ 3,128,546	\$ 18,622
Accommodation and Food Services	99	1,503	\$ 27,941,666	\$ 18,591
Other Services	218	630	\$ 13,857,430	\$ 21,996
Government	42	2,082	\$ 101,259,952	\$ 48,636
Total	1,208	14,964	\$ 600,136,152	\$ 40,105

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 7. Covered Employment in Manufacturing Industries, McMinnville UGB, 2017

Sector	Establishments	Employees
Food Manufacturing	14	448
Beverage and Tobacco Product Manufacturing	18	134
Wood, Plastic, and Chemical Product Manufacturing	18	536
Metal, Electronic, and Other Product Manufacturing	21	1,159
Total	71	2,277

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

The average size for a private business in McMinnville is 12 employees per business, compared to the State average of 11 employees per private business. Businesses with 50 or fewer employees account for 55% of private employment and 10 or fewer account for 19% of private employment. Exhibit 8 shows the distribution of establishments by size class (i.e., number of employees). Over 75% of the private (i.e., non-government) establishments are businesses with fewer than 10 employees.

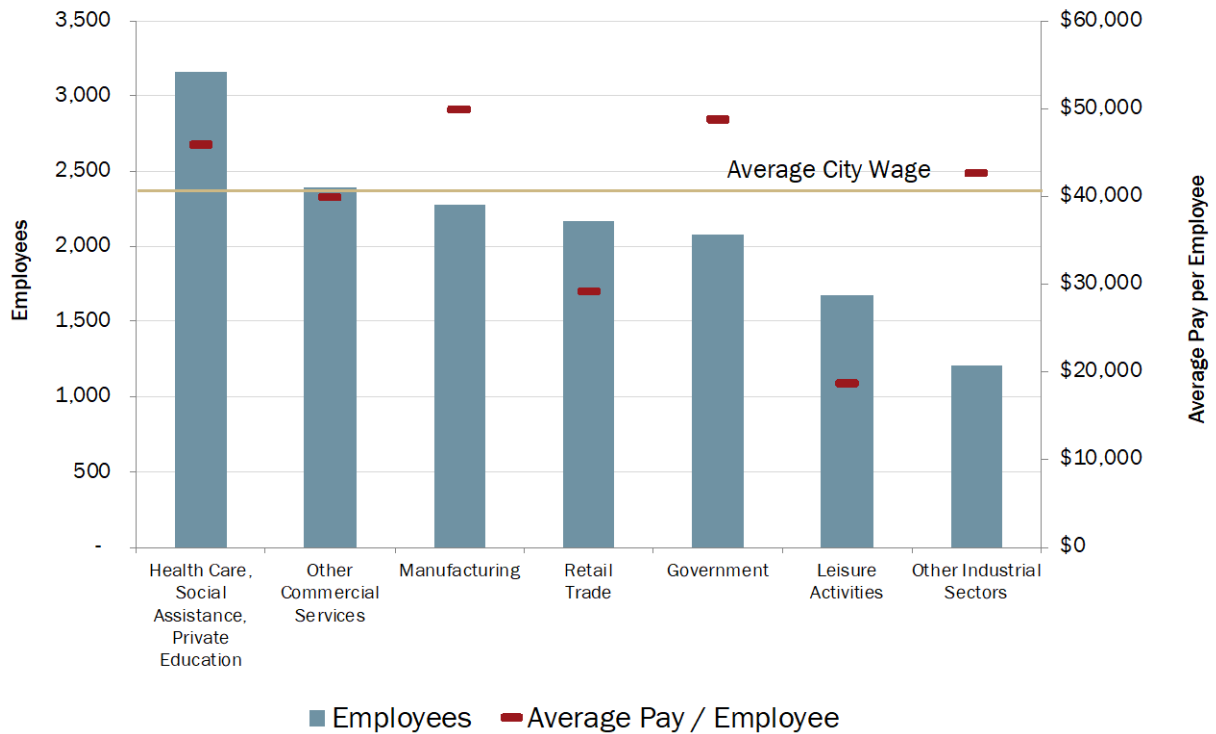
Exhibit 8. Covered Private Employment by Size Class, McMinnville UGB, 2017

Establishment size (number of employees)	Number of establishments
0 to 4	682
5 to 9	211
10 to 19	141
20 to 49	87
50 to 99	27
100+	18
Total	1,166

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 9 shows the employment and average pay per employee for sectors in McMinnville. Average pay for all employees (\$40,105) is shown as a light brown line across the graph and average pay for individual sectors as short red lines. The figure shows that Health care, social assistance, and Private education; Manufacturing; Government; and Other industrial sectors had above average wages. The lowest wages were in Retail trade and Leisure activities, which includes arts, entertainment, and recreation and accommodation and food services.

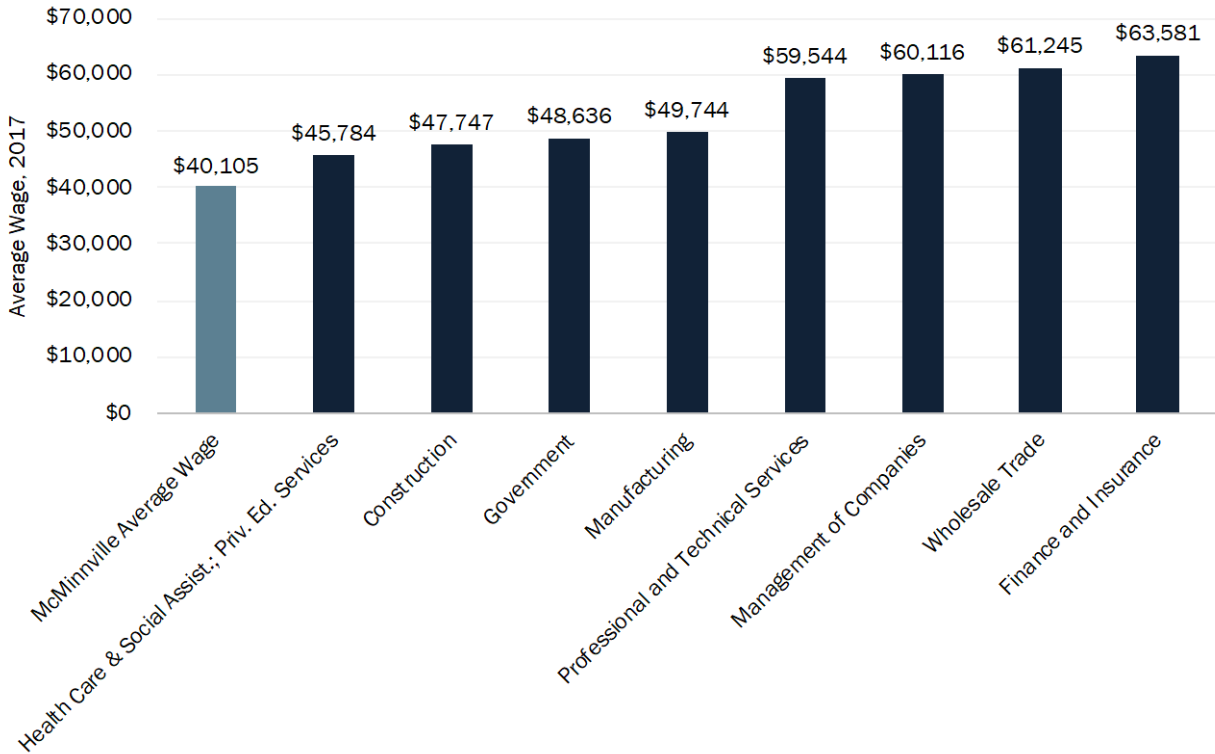
Exhibit 9. Covered Employment and Average Pay by Sector, McMinnville UGB, 2017



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 10 shows the sectors with average annual wages that exceed the McMinnville City average. The three highest paying sectors, finance and insurance, wholesale trade, and management of companies, all paid over \$60,000 in 2017. Other higher paying sectors include professional and technical services, manufacturing, government, and construction.

Exhibit 10. Highest Paying Sectors Exceeding Average Wage in McMinnville UGB, 2017



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

DRAFT

Outlook for growth in Yamhill County

Exhibit 11 shows the Oregon Employment Department's forecast for employment growth by industry for the Mid-Valley Region (Linn, Marion, Polk, and Yamhill Counties) over the 2017 to 2027 period. Employment in the region is forecasted to grow at an average annual growth rate of 1.1%.

The sectors that will lead employment in the region for the 10-year period are: Private educational and health services (adding 8,100 jobs), Trade, transportation, and utilities (5,100), Government (3,500), Construction (3,000), Leisure and hospitality (3,000), and Manufacturing and Natural resources and mining (2,400 each). In sum, these sectors are expected to add 27,500 new jobs or about 88% of employment growth in the Mid-Valley Region. Yamhill County accounts for about 14% of employment in these four counties, and McMinnville accounts for about 42% of the County's employment.

Exhibit 11. Regional Employment Projections, 2017-2027, Mid-Valley Region (Linn, Marion, Polk, and Yamhill Counties)

Industry Sector	2017	2027	Change 2017 - 2027		
			Number	Percent	AAGR
Total private	208,800	236,400	27,600	13%	1.2%
Natural resources and mining	17,700	20,100	2,400	14%	1.3%
Mining and logging	1,200	1,300	100	8%	0.8%
Construction	14,700	17,700	3,000	20%	1.9%
Manufacturing	27,700	30,100	2,400	9%	0.8%
Durable goods	16,300	17,700	1,400	9%	0.8%
Nondurable goods	11,400	12,400	1,000	9%	0.8%
Trade, transportation, and utilities	42,500	47,600	5,100	12%	1.1%
Wholesale trade	6,200	6,900	700	11%	1.1%
Retail trade	27,800	30,200	2,400	9%	0.8%
Transportation, warehousing, and utilities	8,500	10,500	2,000	24%	2.1%
Information	1,800	1,900	100	6%	0.5%
Financial activities	9,200	9,700	500	5%	0.5%
Professional and business services	19,000	21,000	2,000	11%	1.0%
Private educational and health services	43,700	51,800	8,100	19%	1.7%
Health care and social assistance	35,300	42,500	7,200	20%	1.9%
Leisure and hospitality	22,400	25,400	3,000	13%	1.3%
Accommodation and food services	19,900	22,600	2,700	14%	1.3%
Other services and private households	10,100	11,100	1,000	10%	0.9%
Government	52,200	55,700	3,500	7%	0.7%
Federal government	2,100	2,100	0	0%	0.0%
State government	21,900	23,900	2,000	9%	0.9%
Local government	28,200	29,700	1,500	5%	0.5%
Local education	16,000	16,900	900	6%	0.5%
Total payroll employment	261,000	292,100	31,100	12%	1.1%

Source: Oregon Employment Department. Employment Projections by Industry 2017-2027.

3. National, State, and Regional Outlook

Consistent with Oregon Administrative Rules (OAR 660), McMinnville's Economic Opportunities Analysis is set within the context of broader nationwide, state, and regional trends. Recent trends and conditions at a national and state level are considered first, followed by detailed information at a regional and local level.

National Trends

Economic development in McMinnville over the next 20 years will occur in the context of long-run national trends. The most important of these trends include:

- **Economic growth will continue at a moderate pace.** Analysis from the Congressional Budget Office (CBO) estimates after the 3.1% real GDP growth in 2018, real GDP will grow by approximately 2.3% in 2019. After 2019, the CBO forecasts the annual average growth of real GDP to slow and stabilize around 1.7% across the 2020 to 2029 period. The primary reason they provide for this slowing growth is that they expect the labor force to grow at a slower rate than historical trends.⁵

The unemployment rate is forecasted to decrease to 3.5% in the second-half of 2019, which is the rate's lowest point since the 1960s. After this year, the CBO predicts the unemployment rate will rise between 2020 and 2023 due to slower growth in economic output.⁶

- **The aging of the Baby Boomer generation, accompanied by increases in life expectancy.** As the Baby Boomer generation continues to retire, the number of Social Security recipients is expected to increase from 62.5 million in 2018 to over 87.0 million in 2040, a 39% increase. However, due to lower-birth rate replacement generations, the number of covered workers is only expected to increase 12% over the same time period, from 176.0 million to 196.4 million in 2040. Currently, there are 35 Social Security beneficiaries per 100 covered workers in 2018 but by 2040 there will be 44 beneficiaries per 100 covered workers. This will increase the percent of the federal budget dedicated to Social Security and Medicare.⁷

Baby Boomers are expecting to work longer than previous generations. An increasing proportion of people in their early- to mid-50s expect to work full-time after age 65. In 2004, about 40% of these workers expect to work full-time after age 65, compared with

⁵ Congressional Budget Office. *The Budget and Economic Outlook: 2019 to 2029. January 2019.* Retrieved from: <https://www.cbo.gov/system/files/2019-03/54918-Outlook-3.pdf>.

⁶ *Ibid.*

⁷ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, *The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, April 25, 2019. Retrieved from: <https://www.ssa.gov/OACT/TR/2019/tr2019.pdf>.

about 30% in 1992.⁸ This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2.9% of the workforce in 2000 to 4.1% of the workforce in 2010. In 2017, this share reached 5.5%. Over the same eighteen-year period, the share of workers 45 to 64 years increased from 35% of all employed Oregonians in 2000 to 37% in 2017.⁹

- **Need for replacement workers.** The need for workers to replace retiring Baby Boomers will outpace job growth. According to the Bureau of Labor Statistics, total employment in the United States will grow by about 11.5 million jobs over 2016 to 2026. Annually, they estimate there will be 18.7 million occupational openings over the same period. This exhibits the need for employees over the next decade as the quantity of openings per year is large relative to expected employment growth. About 71% of annual job openings are in occupations that do not require postsecondary education.¹⁰
- **The importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average, they will yield higher incomes than occupations that do not require an academic degree. The fastest-growing occupations requiring an academic degree will be registered nurses, software developers, general and operations managers, accountants and auditors, market research analysts and marketing specialists, and management analysts. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for approximately 71% of all new jobs by 2026. These occupations typically have lower pay than occupations requiring an academic degree.¹¹

The national median income for people over the age of 25 in 2018 was about \$48,464. Workers without a high school diploma earned \$19,708 less than the median income, and workers with a high school diploma earned \$10,504 less than the median income. Workers with some college earned \$6,760 less than median income, and workers with a bachelor's degree earned \$13,832 more than median. Workers in Oregon experience the same patterns as the nation but pay is generally lower in Oregon than the national average.¹²

- **Increases in labor productivity.** Productivity, as measured by output per hour of labor input, increased in most sectors between 2000 and 2010, peaking in 2007. However, productivity increases were interrupted by the recession. After productivity decreases from 2007 to 2009, many industries saw large productivity increases from 2009 to 2010.

⁸ "The Health and Retirement Study," 2007, National Institute of Aging, National Institutes of Health, U.S. Department of Health and Human Services.

⁹ Analysis of 2000 Decennial Census data, 2010 U.S. Census American Community Survey, 1-Year Estimates, and 2017 U.S. Census American Community Survey, 1-Year Estimates, for the table Sex by Age by Employment Status for the Population 16 Years and Over.

¹⁰ "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

¹¹ "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

¹² Bureau of Labor Statistics, Employment Projections, March 2019. <http://www.bls.gov/emp/epchart001.htm>.

Industries with the fastest productivity growth were Information Technology-related industries. These include wireless telecommunications carriers, computer and peripheral equipment manufacturing, electronics and appliance stores, and commercial equipment manufacturing wholesalers.¹³

Since the end of the recession (2010), labor productivity has increased across a handful of large sectors but has also decreased in others. In wholesale trade, productivity—measured in output per hour—increased by 19% over 2009 to 2017. Retail trade gained even more productivity over this period at 25%. Food services, however, have remained stagnant since 2009, fluctuating over the nine-year period and shrinking by 0.01% over this time frame. Additionally, the Bureau of Labor Statistics reports multifactor productivity in manufacturing has been slowing down 0.3% per year over the 2004 to 2016 period. Much of this, they note, is due to slowdown in semiconductors, other electrical component manufacturing, and computer and peripheral equipment manufacturing.¹⁴

- **The importance of entrepreneurship and growth in small businesses.** According to the U.S. Small Business Office of Advocacy, small businesses are those that have fewer than 500 employees. However, the Oregon Office of Small Business Advocacy defines small businesses as those with fewer than 100 employees. For consistency in our small business data comparisons, we will maintain the definition of small businesses to be those with fewer than 100 employees.

The U.S. Census Bureau's Statistics of U.S. Businesses (SUSB) shows in 2016 that about 98% of all firms in the United States had fewer than 100 employees. Their employees accounted for approximately 33% of American workers.¹⁵ The National League of Cities suggests ways that local governments can attract entrepreneurs and increase the number of small businesses including strong leadership from elected officials; better communication with entrepreneurs, especially about the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, businesses groups, and financial institutions.¹⁶

- **Increases in automation across sectors.** Automation is a long-running trend in employment, with increases in automation (and corresponding increases in productivity) over the last century and longer. The pace of automation is increasing, and the types of jobs likely to be automated over the next 20 years (or longer) is broadening.

¹³ Brill, Michael R. and Samuel T. Rowe, "Industry Labor Productivity Trends from 2000 to 2010." Bureau of Labor Statistics, *Spotlight on Statistics*, March 2013.

¹⁴ Michael Brill, Brian Chanksy, and Jennifer Kim. "Multifactor productivity slowdown in U.S. manufacturing," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, July 2018. Retrieved from: <https://www.bls.gov/opub/mlr/2018/article/multifactor-productivity-slowdown-in-us-manufacturing.htm>.

¹⁵ U.S. Census Bureau, Statistics of U.S. Businesses. Data by Enterprise Employment Size, 2016. Retrieved from: <https://www.census.gov/data/tables/2016/econ/susb/2016-susb-annual.html>

¹⁶ National League of Cities "Supporting Entrepreneurs and Small Businesses" (2012). <https://www.nlc.org/supporting-entrepreneurs-and-small-business>.

Lower paying jobs are more likely to be automated, with potential for automation of more than 80% of jobs paying less than \$20 per hour over the next 20 years. About 30% of jobs paying \$20 to \$40 per hour and 4% of jobs paying \$40 or more are at risk of being automated over the next 20 years.¹⁷

Low- to middle-skilled jobs that require interpersonal interaction, flexibility, adaptability, and problem solving will likely persist into the future as will occupations in technologically lagging sectors (e.g. production of restaurant meals, cleaning services, hair care, security/protective services, and personal fitness).¹⁸ This includes occupations such as (1) recreational therapists, (2) first-line supervisors of mechanics, installers, and repairers, (3) emergency management directors, (4) mental health and substance abuse social workers, (5) audiologists, (6) occupational therapists, (7) orthotists and prosthetists, (8) healthcare social workers, (9) oral and maxillofacial surgeons, and (10) first-line supervisors of firefighting and prevention workers. Occupations in the service and agricultural or manufacturing industry are most at-risk of automation because of the manual-task nature of the work.^{19,20,21} This includes occupations such as (1) telemarketers, (2) title examiners, abstractors, and searchers, (3) hand sewers, (4) mathematical technicians, (5) insurance underwriters, (6) watch repairers, (7) cargo and freight agents, (8) tax preparers, (9) photographic process workers and processing machine operators, and (10) accounts clerks.²²

- **Consolidation Transformation of retail.** Historical shift in retail businesses, starting in the early 1960s, was the movement from one-off, ‘mom and pop shops’ toward superstores and the clustering of retail into centers or hubs. Notably, we still see this trend persist; for example, in 1997, the 50 largest retail firms accounted for about 26% of retail sales and by 2007, they accounted for about 33%.²³ The more recent shift began in the late 1990s, where technological advances have provided consumers the option to buy goods through e-commerce channels. The trend toward e-commerce has become increasingly preferential to millennials and Generation X, who are easier to reach online and are more responsive to digital ads than older generations.²⁴ Since 2000, e-commerce

¹⁷ Executive Office of the President. (2016). Artificial Intelligence, Automation, and the Economy.

¹⁸ Autor, David H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *Journal of Economic Perspectives*, Volume 29, Number 3, Summer 2015, Pages 3–30.

¹⁹ Frey, Carl Benedikt and Osborne, Michael A. (2013). *The Future of Employment: How Susceptible Are Jobs to Computerisation?* Oxford Martin School, University of Oxford.

²⁰ Otekhile, Cathy-Austin and Zeleny, Milan. (2016). Self Service Technologies: A Cause of Unemployment. *International Journal of Entrepreneurial Knowledge*. Issue 1, Volume 4. DOI: 10.1515/ijek-2016-0005.

²¹ PwC. (n.d.). Will robots really steal our jobs? An international analysis of the potential long-term impact of automation.

²² Frey, Carl Benedikt and Osborne, Michael A. (2013). *The Future of Employment: How Susceptible Are Jobs to Computerisation?* Oxford Martin School, University of Oxford.

²³ Hortaçsu, Ali and Syverson, Chad. (2015). The Ongoing Evolution of US Retail: A Format Tug-of-War. *Journal of Economic Perspectives*, Volume 29, Number 4, Fall 2015, Pages 89-112.

²⁴ Pew Research Center (2010b). *Generations 2010*. Retrieved Online at: <http://www.pewinternet.org/Reports/2010/Generations-2010.aspx>

sales grew from 0.9% of total retail sales to 9.7% (2018). Over 2000 to 2018, e-commerce retail sales have grown at a rate 18% per year.²⁵ It is reasonable to expect this trend to continue. While it is unclear what impact e-commerce will have on employment and brick and mortar retail, it seems probable that e-commerce sales will continue to grow, shifting business away from some types of retail. Over the next decades, communities must begin considering how to redevelop and reuse retail buildings in shopping centers, along corridors, and in urban centers.

- ~~With it has come closures of retail stores. By 2027 for example, an estimated 15% of about 1,050 U.S. malls in smaller markets will close, impacting local employment levels, local government revenue streams (tax dollars), and neighborhood character.~~

~~While it is unclear what impact e-commerce will have on employment and brick and mortar retail, it seems probable that e-commerce sales will continue to grow, shifting business away from some types of retail. Over the next decades, communities must begin considering how to redevelop and reuse retail buildings in shopping centers, along corridors, and in urban centers.~~

The types of retail and related services that remain will likely be sales of goods that people prefer to purchase in person or that are difficult to ship and return (e.g., large furniture), specialty goods, groceries and personal goods that maybe needed immediately, restaurants, and experiences (e.g., entertainment or social experiences). According to the Urban Land Institute, in the post-disruption era of retail, new trends in this sector are beginning to emerge. These changes include the convergence of technology and shopping, as businesses focus on brand awareness and customer engagement via digital channels in the physical retail space.²⁶

In addition to dynamics with e-commerce, other factors influencing changes in retail include the growth of big box stores, income inequality, and changing preferences. The New York Times reported that while Amazon had \$38 billion in sales between 2000 and 2013, Costco had about \$50 billion and Sam's Club had about \$32 billion.²⁷ The other factors influencing traditional retail—income inequality and emphasis on services over goods—result in either less consumer spending overall or changes in preferences of consumers who increasingly spend more on services or experiences.

This shift in the retail industry is also described in the *Three-Mile Lane Area Plan: Market Analysis*, which documents proactive steps to adapt to the changing retail landscape by "commissioning studies of the marketplace and developing new strategies to maintain

²⁵ U.S. Census Bureau, Monthly Retail Trade, Latest Quarterly E-Commerce Report. Retrieved online at: <https://www.census.gov/retail/index.html#ecommerce>

²⁶ Diane Hoskins. "Three Trends Shaping Retail's Great Transformation." *Urban Land Institute*, September 3, 2019. Retrieved from: <https://urbanland.uli.org/economy-markets-trends/three-trends-shaping-retails-great-transformation/>

²⁷ Austan Goolsbee. "Never Mind the internet. Here's What's Killing Malls." *The New York Times*. February 14, 2020 <https://www.nytimes.com/2020/02/13/business/not-internet-really-killing-malls.html>

and foster better retail environments.”²⁸ It specifically describes the difference between “experiential consumerism” and other types of retail that are more likely to directly compete with e-commerce. Examples of “experiential consumerism” include dining, grocery, health and fitness clubs, etc.²⁹ These types of retail are typically located on main streets and neighborhood or commercial centers.

- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some states, especially in the Western U.S. Increases in the population and in households’ incomes, plus changes in tastes and preferences have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region’s quality of life and play an important role in attracting both households and firms.³⁰
- **Continued increase in demand for energy.** Energy prices are forecasted to increase over the planning period. While energy use per capita is expected to decrease through 2050, total energy consumption will increase with rising population. Energy consumption is expected to grow primarily from industrial (0.7%) and, to a lesser extent, commercial users (0.2%). Residential and transportation consumption are forecasted to decrease (-0.2% for both). This decrease in energy consumption for transportation is primarily due to increased federal standards and increased technology for energy efficiency in vehicles. The unspecified sector, which is made up of consumption not attributed to residential, commercial, industrial, or transportation, is forecasted to increase consumption by 1.4% through 2050. Going forward through the projection period, potential changes in federal laws (such as decreases in car emissions) leave energy demand somewhat uncertain.

Energy consumption by type of fuel is expected to change over the planning period. By 2050, the U.S. will continue to shift from crude oil towards natural gas and renewables. For example, from 2018 to 2050, the Energy Information Administration projects that U.S. energy consumption of motor gasoline will average a 0.9% annual decrease, while consumption of renewable sources will grow at 1.6% per year and natural gases liquefied for exporting will grow 5.0% per year through 2050. With increases in energy efficiency, strong domestic production of energy, and relatively flat demand for energy by some industries, the U.S. will be able to be a net exporter of energy over the 2018 to

²⁸ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

²⁹ Ibid. pg 36.

³⁰ For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. “Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes.” *Growth and Change* 36 (2): 273-297.

2050 period. Demand for electricity is expected to increase 0.2% per year annually over 2018 to 2050 as the population grows and economic activity increases.³¹

- **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, energy consumption for transportation will decrease. These increasing energy prices may decrease willingness to commute long distances, though with expected increases in fuel economy, it could be that people commute further while consuming less energy.³² Over 2018 to 2038, the U.S. Energy Information Administration estimates in its forecast that the decline in transportation energy consumption is a result of increasing fuel economy offsetting the total growth in vehicle miles traveled (VMT). VMT for passenger vehicles is forecasted to increase through 2050.
- **Potential impacts of global climate change.** The consensus among the scientific community that global climate change is occurring expounds important ecological, social, and economic consequences over the next decades and beyond.³³ Extensive research shows that Oregon and other western states already have experienced noticeable changes in climate and predicts that more change will occur in the future.³⁴

In the Pacific Northwest, climate change is likely to (1) increase average annual temperatures, (2) increase the number and duration of heat waves, (3) increase the amount of precipitation falling as rain during the year, (4) increase the intensity of rainfall events, and 5) increase sea level. These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.³⁵

³¹ Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019. <https://www.eia.gov/outlooks/aeo/pdf/AEO2019.pdf>. Note, the cited growth rates are shown in the Executive Summary and can be viewed here: <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=1-AEO2019&cases=ref2019&sid=&sourcekey=0>.

³² Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019.

³³ Karl, T.R., J.M. Melillo, and T.C. Peterson, eds. 2009. *Global Climate Change Impacts in the United States*. U.S. Global Change Research Program. June. Retrieved June 16, 2009, from www.globalchange.gov/usimpacts; and Pachauri, R.K. and A. Reisinger, eds. 2007. *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

³⁴ Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Upper Willamette River Basin of Western Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009, from <http://climlead.uoregon.edu/pdfs/willamettereport3.11FINAL.pdf> and Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Rogue River Basin of Southwest Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009 from <http://climlead.uoregon.edu/pdfs/ROGUE%20WSFINAL.pdf>

³⁵ Mote, P., E. Salathe, V. Duliere, and E. Jump. 2008. *Scenarios of Future Climate for the Pacific Northwest*. Climate Impacts Group, University of Washington. March. Retrieved June 16, 2009, from <http://cses.washington.edu/db/pdf/moteetal2008scenarios628.pdf>; Littell, J.S., M. McGuire Elsner, L.C. Whitely Binder, and A.K. Snover (eds). 2009. "The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate - Executive Summary." *In The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate*, Climate Impacts Group, University of Washington. Retrieved June 16, 2009, from www.cses.washington.edu/db/pdf/

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to materialize and the magnitude of the associated economic consequences. Assuming climate change proceeds as today's models predict, however, some of the potential economic impacts of climate change in the Pacific Northwest will likely include:³⁶

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in growing season, temperature ranges, and water availability.³⁷ Climate change may impact Oregon's forestry through an increase in wildfires, a decrease in the rate of tree growth, a change in the mix of tree species, and increases in disease and pests that damage trees.³⁸
- *Potential impact on tourism and recreation.* Impacts on tourism and recreation may range from (1) decreases in snow-based recreation if snow-pack in the Cascades decreases, (2) negative impacts to tourism along the Oregon Coast as a result of damage and beach erosion from rising sea levels,³⁹ (3) negative impacts on availability of water summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times, these trends may run counter to the long-term trends described above. A recent example is the downturn in economic activity in 2008 and 2009 following declines in the housing market and the mortgage banking crisis. The result of the economic downturn was decreases in employment related to the housing market, such as construction and real estate. As these industries recover, they will continue to play a significant role in the national, state, and local economy over the long run. This report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run national business cycles on employment or economic activity.

wacciaexecsummary638.pdf; Madsen, T. and E. Figdor. 2007. *When it Rains, it Pours: Global Warming and the Rising Frequency of Extreme Precipitation in the United States*. Environment America Research & Policy Center and Frontier Group.; and Mote, P.W. 2006. "Climate-driven variability and trends in mountain snowpack in western North America." *Journal of Climate* 19(23): 6209-6220.

³⁶ The issue of global climate change is complex and there is a substantial amount of uncertainty about climate change. This discussion is not intended to describe all potential impacts of climate change but to present a few ways that climate change may impact the economy of cities in Oregon and the Pacific Northwest.

³⁷ "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

³⁸ "Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, May 2007.

³⁹ "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

State Trends

Short-Term Trends

According to the Oregon Office of Economic Analysis (OEA), the Oregon economy “is on firmer ground today following a rocky start to the year...” They emphasize, however, that the economy continues to strike the “sweet spot” despite a rocky start to 2019.⁴⁰ The OEA also reports that although the Oregon economy has been slowing down over the last couple of years and is not outpacing the nation any longer, its “growth is strong enough to keep up with a growing population but also deliver economic and income gains to Oregonians.”⁴¹

Wages in Oregon continue to remain below the national average, but they continue to rise and remain strong, staying at their highest point relative to the state’s mill closures in the 1980s.⁴² By the end of 2019, the OEA forecasts 39,800 jobs will be added to Oregon’s economy. This is an approximate 2.1% annual growth in total nonfarm employment relative to 2018 levels.⁴³ The health services, professional and business services, leisure and hospitality, retail trade, and manufacturing industries are forecasted to account for well over half of the total job growth in Oregon for 2019. Oregon continues to have an advantage in job growth compared to other states, due to its industrial sector and in-migration flow of young workers in search of jobs.

The housing market continues to recover as Oregon’s economy improves, though new supply is not keeping up with demand. As a result, prices continue to rise to considerable levels and the OEA reports housing “(in)affordability is becoming a larger risk” to Oregon’s economic outlook.⁴⁴ Oregon is seeing an increase in household formation rates, which is good for the housing market as this will “help drive up demand for new houses.”⁴⁵ Though younger Oregonians are tending to live at home with their parents longer, the aging Millennial generation (from their early 20s to mid-to-late 30s) and the state’s increase in migration will drive demand for homes in the coming years. Housing starts in 2019 are on track to reach 20,600 units and in 2020, starts are expected to increase to 21,800. Beyond 2020, the OEA forecasts an average growth of 24,000 units per year to satisfy the demand for Oregon’s growing population and to make up for the under development of housing post-recession.⁴⁶

The Oregon Index of Leading Indicators (OILI) continues to grow quite rapidly in 2019 despite a decrease in 2018. The leading indicators showing improvement are: air freight, consumer sentiment, and withholding. Indicators that are slowing down include: help wanted ads, housing permits, industrial production, initial claims, the manufacturing purchasing managers

⁴⁰ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 2. Retrieved from: <https://www.oregon.gov/das/OEA/Documents/forecast0519.pdf>.

⁴¹ *Ibid*, page 2.

⁴² *Ibid*, page 6.

⁴³ *Ibid*, page 36.

⁴⁴ *Ibid*, page 13.

⁴⁵ *Ibid*, page 12.

⁴⁶ *Ibid*, page 12.

index (PMI), new incorporations, and the Oregon Dollar Index. The one indicator not improving at this point in time is semiconductor billings. Relative to their September 2018 forecast, many economic indicators in their May 2019 forecast have changed from *improving* to *slowing*, which further illustrates the slowing down of Oregon's economy after several years of extended growth.⁴⁷

Oregon's economic health is dependent on export markets. The value of Oregon exports in 2018 was \$22.3 billion, a 2% growth from 2017. In 2018, Oregon's exports made up approximately 9.4% of its total 2018 GDP.⁴⁸ The countries that Oregon exports the most to are China (21.4% of total Oregon exports), Canada (14.4%), Japan (9.8%), South Korea (7.6%), Malaysia (6.6%), and Vietnam (5.0%).⁴⁹ With the escalating trade war occurring overseas, specifically with China, Oregon exports are left potentially vulnerable, as China is a top destination for Oregon exports.⁵⁰ The OEA notes that it is too soon to assess the disruptiveness of the trade war on global supply chains, however, developments will be tracked as it continues. An economic slowdown across many parts of Asia will have a spillover effect on the Oregon economy.

Long-term Trends

State, regional, and local trends will also affect economic development in McMinnville over the next 20 years. The most important of these trends includes: continued in-migration from other states, distribution of population and employment across the state, and change in the types of industries in Oregon.

- **Continued in-migration from other states.** Oregon will continue to experience in-migration (more people moving *to* Oregon than *from* Oregon) from other states, especially California and Washington. From 1990 to 2018, Oregon's population increased by about 1.35 million, 69% of which was from people moving into Oregon (net migration). The average annual increase in population from net migration over the same time period was approximately 32,000 persons. During the early- to mid-1990's, Oregon's net migration was highest, reaching over 60,000 in 1991, with another relatively high peak of 57,100 persons in 2017. Oregon has not seen negative net migration since the early- to mid-1980's.⁵¹
- **Forecast of job growth.** Total nonfarm employment is expected to increase from 1.95 million in 2019 to 2.04 million in 2022, an increase of 88,000 jobs. The industries with the largest growth are forecasted to be Government, Health Services, Professional and

⁴⁷ *Ibid*, page 9.

⁴⁸ U.S. Bureau of Economic Analysis. Gross Domestic Product (GDP) by State (Millions of current dollars). Retrieved from: <https://apps.bea.gov/iTable/indexregional.cfm>

⁴⁹ United States Census Bureau. State Exports from Oregon, 2015-2018. Retrieved from: <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

⁵⁰ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 2.

⁵¹ Portland State University Population Research Center. 2018 Annual Population Report Tables. April 2019. Retrieved from: <https://www.pdx.edu/prc/population-reports-estimates>.

Business Services, Leisure and Hospitality, and Retail, accounting for 89% of employment growth.⁵²

- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled \$19.4 billion in 2008, nearly doubling since 2000, and reached \$22.3 billion in 2018. The majority of Oregon exports go to countries along the Pacific Rim, with China, Canada, Japan, South Korea, Malaysia, and Vietnam as top destinations. Oregon's largest exports are tied to high tech and mining, as well as agricultural products.⁵³ Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.⁵⁴
- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing industries.** Since 1970, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry and concurrent growth of employment in other manufacturing industries, such as high-technology manufacturing (Industrial Machinery, Electronic Equipment, and Instruments), Transportation Equipment manufacturing, and Printing and Publishing.⁵⁵
- **Income.** Oregon's income and wages are below that of a typical state. However, Oregon wages continue to grow and remain strong, and they are at their highest point relative to the mill closures resulting from the early 1980's recession. In 2018, the average annual wage in Oregon was \$53,058, and in 2017, the median household income in Oregon was \$60,212 (compared to national average wages of \$57,265 in 2018, and national household income of \$60,336 in 2017).⁵⁶ Total personal income (all classes of income, minus Social Security contributions, adjusted for inflation) in Oregon is expected to increase by 22%, from \$219.5 billion in 2019 to \$267.6 billion in 2023.⁵⁷ Per capita income is expected to increase by 16% over the same time period, from \$51,700 (thousands of dollars) in 2019 to \$60,200 in 2023 (in nominal dollars).⁵⁸

⁵² Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 36.

⁵³ United States Census Bureau. State Exports from Oregon, 2015-2018. Retrieved from: <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

⁵⁴ Oregon Employment Department. *Employment and Wages by Industry (QCEW)*. 2018 Geographic Profile, Manufacturing (31-33). Retrieved from: qualityinfo.org.

⁵⁵ Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for about 37% of employment in manufacturing in Oregon in 2018, with the most employment in Food Manufacturing (29,900) and Wood Product Manufacturing (23,400) (QCEW).

⁵⁶ Average annual wages are for "Total, all industries," which includes private and public employers. Oregon Quarterly Census of Employment and Wages, 2018. Retrieved from: <https://www.qualityinfo.org>; Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2017; Total, U.S. Census American Community Survey 1-Year Estimates, 2017, Table B19013.

⁵⁷ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 36.

⁵⁸ *Ibid*, page 36.

- **Small businesses continue to account for a large share of employment in Oregon.** While small firms played a large part in Oregon’s expansion between 2003 and 2007, they also suffered disproportionately in the recession and its aftermath (64% of the net jobs lost between 2008 and 2010 was from small businesses).

In 2016, small businesses (those with 100 or fewer employees) accounted for 95% of privately-owned businesses in Oregon. Said differently, most businesses in Oregon are small (in fact, 76% of all businesses have fewer than 10 employees), but the largest share of Oregon’s employees work for medium-to-large businesses (those with 100 or more employees).⁵⁹

The average annualized payroll per employee for small businesses was \$37,958 in 2016, which is considerably less than that for large businesses (\$57,488) and the statewide average for all businesses (\$47,746).⁶⁰ Younger workers are important to continue growth of small businesses across the nation. More than one-third of Millennials (those born between 1980 - 1999) are self-employed, with approximately half to two-thirds interested in becoming an entrepreneur. Furthermore, in 2011, about 160,000 startup companies were created each month; 29% of these companies were founded by people between 20 to 34 years of age.⁶¹ According to the Kauffman Indicators of Entrepreneurship, in 2018, about 79% of startups nationwide were still active after one year. On average, startups nationwide created approximately 5.2 jobs in their first year (when normalized by population).⁶² However, it is typically the case that startups are important for job creation on a longer time horizon, well beyond their first year, as “fewer than half of all startups in America are still in business after five years.”⁶³

- **Entrepreneurship in Oregon.** The creation of new businesses is vital to Oregon’s economy as their formations generate new jobs and advance new ideas and innovations into markets. They also can produce more efficient products and services to better serve local communities. The Kauffman Foundation reports several statistics at the state level related to entrepreneurship. They report: the rate of new entrepreneurs, the opportunity share of new entrepreneurs (new entrepreneurs who created a business by choice instead of necessity), startup early job creation (the average number of jobs created by startups in their first year, normalized by population), and startup early survival rate (the percent of startups that are still active after one year).

According to Kauffman’s indicators, Oregon’s opportunity share of new entrepreneurs is at its highest relative point post-recession, reaching approximately 80% in 2017, up

⁵⁹ U.S. Census Bureau, 2016 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States.

⁶⁰ *Ibid.*

⁶¹ Cooper, Rich, Michael Hendrix, Andrea Bitely. (2012). "The Millennial Generation Research Review." Washington, DC: The National Chamber Foundation. Retrieved from: <https://www.uschamberfoundation.org/sites/default/files/article/foundation/MillennialGeneration.pdf>.

⁶² Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. Indicators: Startup Early Job Creation and Startup Early Survival Rate. Information retrieved on December 19, 2019 from: <https://indicators.kauffman.org/data-table>

⁶³ Nish Acharya. “Small Business Are Having A Bigger Impact on Job Creation Than Large Corporations.” Forbes, May 5, 2019. <https://www.forbes.com/sites/nishacharya/2019/05/05/who-is-creating-jobs-in-america/#5c74c156597d>

from its post-recession low of 71% in 2012. Startup early job creation also continues to increase. In 2017, the average number of jobs created by startups in their first year reached 5.24, which is comparable to the national average of 5.27. Relative to Oregon's post-recession low of 3.80 in 2010, the average number of startup jobs have increased approximately 38%. However, the two remaining entrepreneurial indicators, the rate of new entrepreneurs and startup early survival rate, are declining somewhat in Oregon. In 2017, the rate of new entrepreneurs decreased by 0.02 percentage points, from 0.34% in 2016 to 0.32% in 2017, though Oregon's 2017 rate aligns closely with the national average of 0.33%. For Oregon's startup early survival rate, it declined to 78.4% in 2017 from a post-recession peak of 80.1% in 2015. Though this decline is not substantially large, the downward trend suggests startups, on average, are not persisting as well as they used to relative to two years ago. Oregon's startup early survival rate in 2017 is 1.4 percentage points below the national average of 79.8%.⁶⁴

Moreover, in 2018, the Oregon OEA reports new business applications in Oregon are increasing. They do, however, simultaneously note startup businesses "are a smaller share of all firms than in the past."⁶⁵ Though this measurement of economic activity does not constitute a full understanding of how well entrepreneurship is performing, it does provide an encouraging signal.

Regional and Local Trends

Throughout this section and the report, McMinnville is compared to Yamhill County and the State of Oregon. These comparisons are to provide context for changes in McMinnville's socioeconomic characteristics.

Availability of Labor

The availability of trained workers in McMinnville will impact development of its economy over the planning period. A skilled and educated populace can attract well-paying businesses and employers and spur the benefits that follow from a growing economy. Key trends that will affect the workforce in McMinnville over the next 20 years include its growth in its overall population, growth in the senior population, and commuting trends.

Growing Population

Population growth in Oregon tends to follow economic cycles. Oregon's population grew from 2.8 million people in 1990 to nearly 4.2 million people in 2018, an increase of over 1,350,000 people at an average annual growth rate of 1.4%. Oregon's growth rate slowed to 1.1% annual growth between 2000 and 2018.

⁶⁴ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship. State Profile: Oregon*. Retrieved from: <https://indicators.kauffman.org/state/oregon>

⁶⁵ Lehner, Josh. (August 2018). "Start-Ups, R&D, and Productivity." Salem, OR: Oregon Office of Economic Analysis. Retrieved from: <https://oregoneconomicanalysis.com/2015/03/13/start-ups-and-new-business-formation/>.

McMinnville’s population increased by 15,916 residents over 1990 to 2018, nearly doubling in size. This growth is reflected in its average annual growth rate (AAGR) of 2.3% (and notably, the growth rate used for the 2000-2020 period in the 2002 McMinnville Housing Needs Analysis), which is 0.9 percentage points higher than the State’s rate of 1.4%. Similar to McMinnville, Yamhill County’s population grew more rapidly than the State, averaging 1.8% growth year-over-year. The County added 41,864 residents over 1990 to 2018 and McMinnville accounts for about 38% of this growth.

Exhibit 12. Population Growth, McMinnville, Yamhill County, and Oregon, 1990 – 2018

Geography					Change, 1990 - 2018		
	1990	2000	2010	2018	Number	Percent	AAGR
McMinnville	17,894	26,499	32,930	33,810	15,916	89%	2.3%
Yamhill County	65,551	84,992	95,925	107,415	41,864	64%	1.8%
Oregon	2,842,337	3,421,399	3,844,195	4,195,300	1,352,963	48%	1.4%

Source: U.S. Census Bureau, 1990, 2000, and 2010. Portland State University Population Estimates, 2018.

Age Distribution

The number of people aged 65 and older in the U.S. is expected to increase by nearly three-quarters by 2050, while the number of people under age 65 will only grow by 16%. The economic effects of this demographic change include a slowing of the growth of the labor force, need for workers to replace retirees, aging of the workforce for seniors that continue working after age 65, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.⁶⁶

Exhibit 13 through Exhibit 16 show the following trends:

- McMinnville’s population is aging slightly faster than Yamhill County’s population. Populations of both McMinnville and Yamhill County are aging faster than Oregon’s population with respect to each region’s growth in median age.
- Over the 2000 to 2013-2017 period, those in the age groups of 45 to 64 and 65 years and older in McMinnville increased by 59% and 48%, respectively. These age groups grew substantially more than all other age categories. This suggests that McMinnville may be retaining residents throughout their mid-to-late careers as they age and/or attracting more people in their mid-to-late careers.
- Yamhill County’s population is expected to continue to age, with people 60 years and older increasing from 23% of the population in 2017 to 28% of the population in 2035. This is consistent with statewide trends. McMinnville and Yamhill County may continue to attract mid-life and older workers over the twenty-year planning period. While the share of retirees in these respective areas may increase over the next 20 years, availability of people nearing retirement (e.g., 55 to 70 years old) is likely to increase.

⁶⁶ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2017, *The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, July 13, 2017. *The Budget and Economic Outlook: Fiscal Years 2018 to 2028*, April 2018.

People in this age group may provide sources of skilled labor, as people continue to work until later in life. These skilled workers may provide opportunities to support business growth in these areas.

McMinnville’s median age increased by about 4.6 years between 2000 and 2013-2017.

This change is slightly larger than Yamhill County’s increase of 4.1 years. Median age increases for both regions exceeded Oregon’s change of 2.8.

Exhibit 13. Median Age, McMinnville, Yamhill County, and Oregon, 2000 to 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census, Table P013; American Community Survey 2013-2017 5-year estimates, Table B01002.

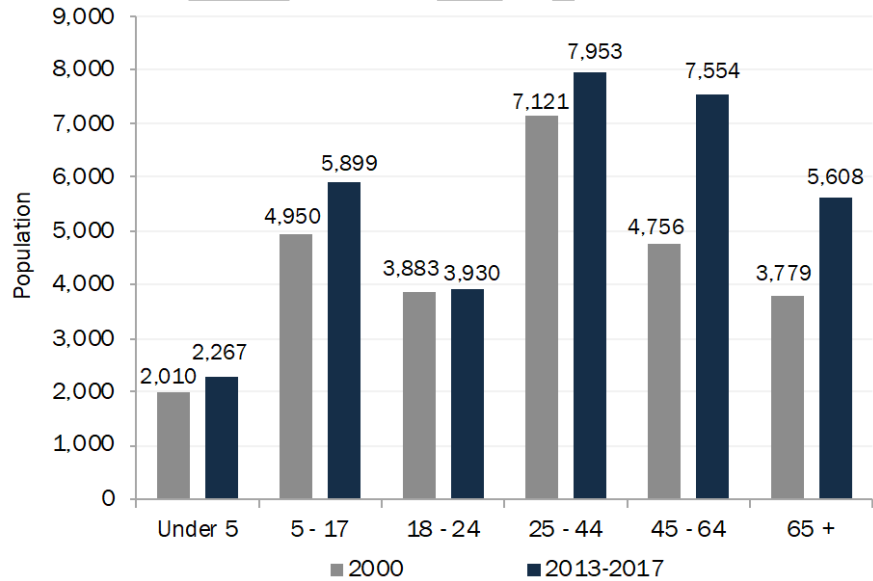
2000	31.5 McMinnville	34.1 Yamhill County	36.3 Oregon
2013-17	36.1 McMinnville	38.2 Yamhill County	39.2 Oregon

Over the 2000 to 2013-2017 period, McMinnville’s largest population increase was for those 45 to 64 (59%) and those aged 65 and older (48%).

This is consistent with statewide trends, where the aforementioned age categories increased the most relative to younger age categories. The Oregon population of those 45 to 64 years of age increased by 30% and those 65 and older increased by 50%.

Exhibit 14. McMinnville Population Change by Age Group, 2000 to 2013-2017

Source: U.S. Census Bureau, 2000 Summary File; American Community Survey 2013-2017 5-year estimates, Table B01001.



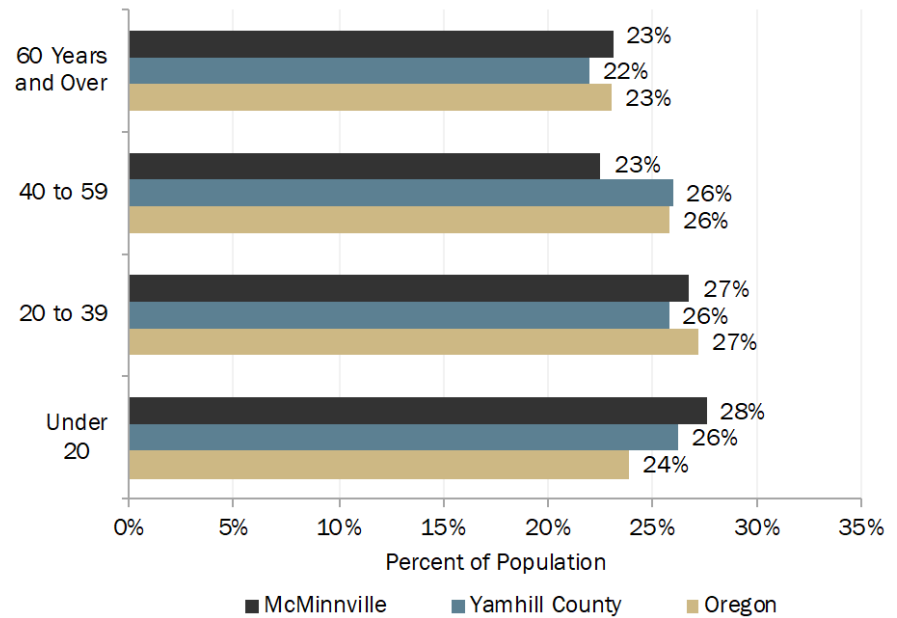
During the 2013-2017 period, the age distribution of McMinnville residents was roughly even across each category, with a slightly smaller proportion of middle-to-older aged adults (40 and older) relative to those 39 years of age and younger.

About 46% of McMinnville residents are 40 years and older and 54% are 39 and younger.

Additionally, the proportion of McMinnville residents under 20 years of age was four percentage points higher than Oregon.

Exhibit 15. Population Distribution by Age, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey, 2013-2017 5-year estimate, Table B01001.

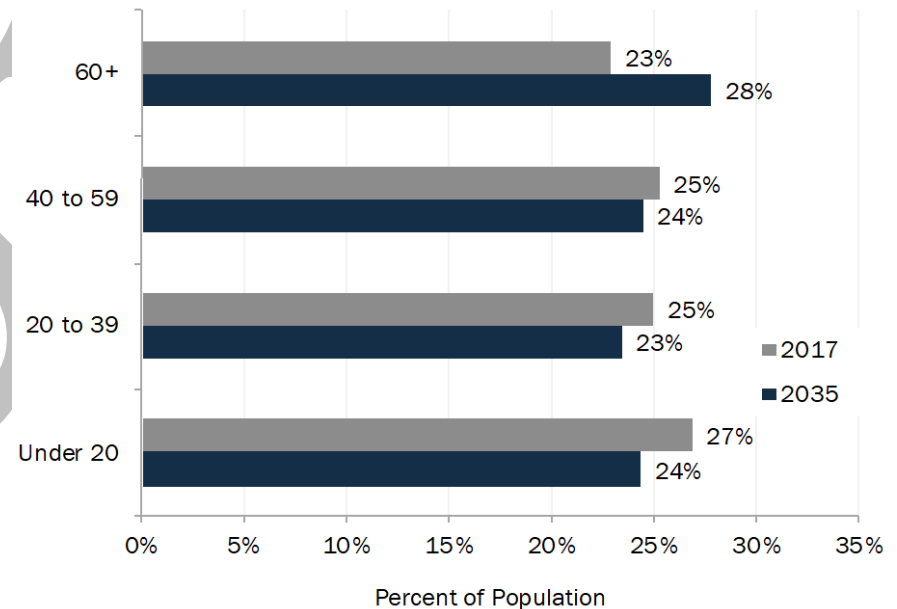


By 2035, Yamhill County will have a larger share of residents older than 60 than it does today. The population forecast for all other age groups projects smaller County population shares by 2035.

The share of residents aged 60 years and older will account for 28% of Yamhill County's population, compared to 23% in 2017.

Exhibit 16. Population Growth by Age Group, Yamhill County, 2017 - 2035

Source: Oregon Population Forecast, 2017.



Income

Income and wages affect business decisions for locating in a city. Areas with higher wages may be less attractive for industries that rely on low-wage workers. McMinnville’s median household income (\$50,299) was below the County median (\$58,392) during the 2013-2017 period. Average wages at businesses in McMinnville (\$40,105) were lower than the County average (\$42,315).⁶⁷

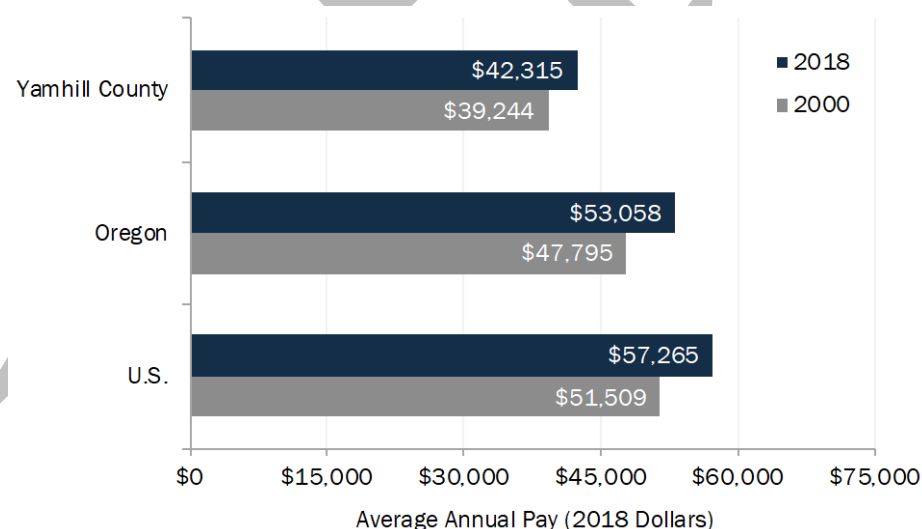
Between 2000 and 2018, Yamhill County’s average wages increased as they also did in Oregon and the nation. When adjusted for inflation to 2018 dollars, average annual wages grew by 8% in Yamhill County, 11% in Oregon, and 11% in the nation.

From 2000 to 2018, average annual wages rose in Yamhill County, Oregon, and the nation.

In 2018, average annual wages were \$42,321 in Yamhill County, \$53,058 in Oregon, and \$57,265 across the nation.

Exhibit 17. Average Annual Wage, Covered Employment, Yamhill County, Oregon, and the U.S., 2000 to 2018, Inflation-adjusted 2018 Dollars

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.
Note: 2018 average annual pay estimates are preliminary, according to the BLS.



Over the 2013-2017 period, the median household income in McMinnville was below that of Yamhill County and Oregon by 14% and 10%, respectively.

Exhibit 18. Median Household Income (MHI),⁶⁸ 2013-2017, Inflation-adjusted 2017 Dollars

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19013.

\$50,299	\$58,392	\$56,119
McMinnville	Yamhill County	Oregon

⁶⁷ According to the Census, Household income includes the income of the householder and other income earners ages 15 or older, thus the mix of sources of income ranges in reporting of household income. Average wage is calculated using Quarterly Census of Employment and Wages data, based on payroll information and number of employees by establishment.

⁶⁸ The Census calculated household income based on the income of all individuals 15 years old and over in the household, whether they are related or not.

McMinnville median family income during the 2013-2017 period, similar to median household income, was below the median family income of both Yamhill County and Oregon by 12% and 15%, respectively.

Exhibit 19. Median Family Income,⁶⁹ 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19113.

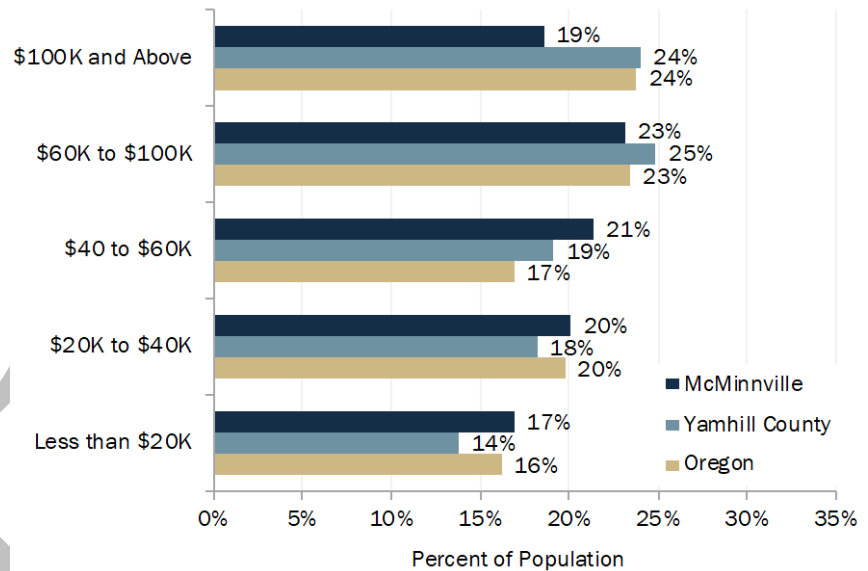
\$58,620 McMinnville	\$66,732 Yamhill County	\$69,031 Oregon
--------------------------------	-----------------------------------	---------------------------

During the 2013-2017 period, 37% of McMinnville households earned less than \$40,000 annually, compared to 32% of Yamhill County households and 36% of Oregon households.

Over the same period, McMinnville households had a lower proportion of higher income earnings (\$100,000 and above) relative to Yamhill County and Oregon.

Exhibit 20. Household Income by Income Group, McMinnville, Yamhill County, and Oregon, 2013-2017, Inflation-adjusted 2017 Dollars

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19001.



⁶⁹ The Census calculated family income based on the income of the head of household, as identified in the response to the Census forms, and income of all individuals 15 years old and over in the household who are related to the head of household by birth, marriage, or adoption.

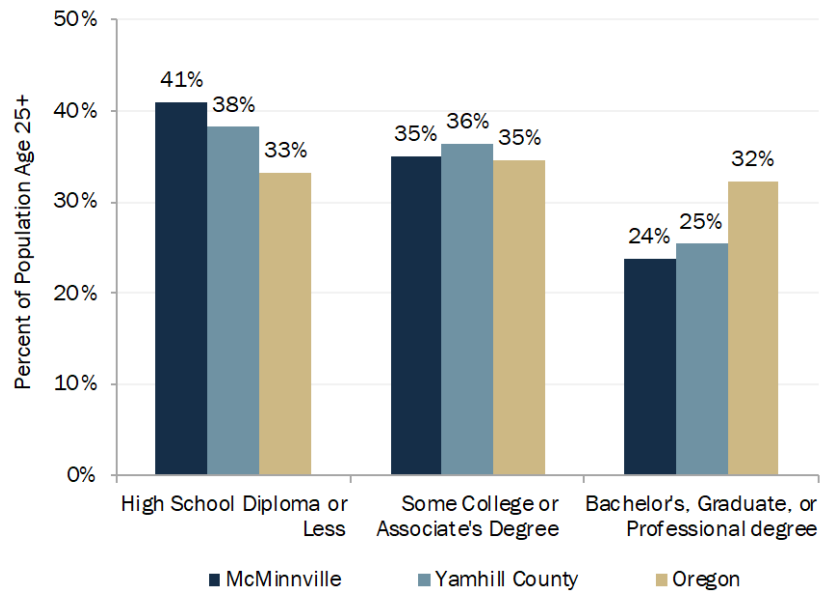
Educational Attainment

The availability of trained, educated workers affects the quality of labor in a community. Educational attainment is an important labor force factor because firms need to be able to find educated workers.

McMinnville's residents are consistent with residents statewide regarding their completion of some college or attainment of an Associate degree; however, attainment of a Bachelor's degree or a professional degree is lower for McMinnville's residents relative to statewide trends.

Exhibit 21. Educational Attainment for the Population 25 Years and Over, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B15003.



Labor Force Participation and Unemployment

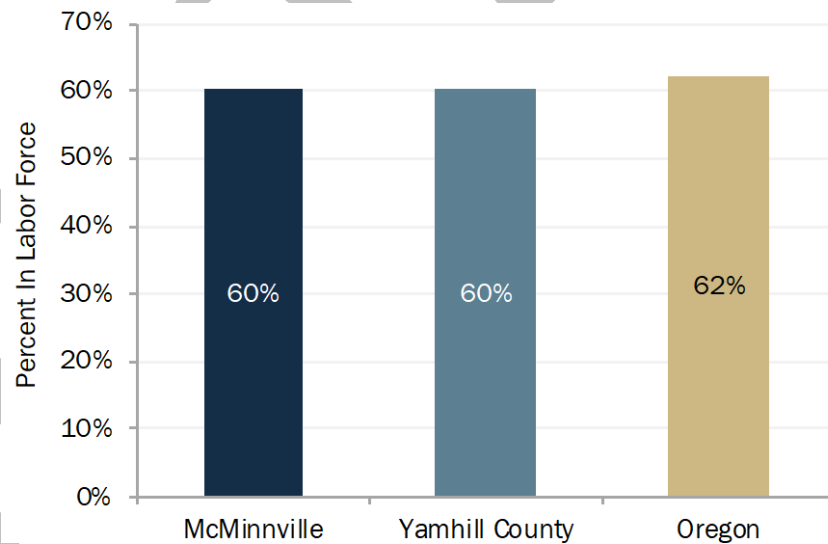
The current labor force participation rate is an important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2013-2017 American Community Survey, Yamhill County had more than 49,000 people in its labor force during that period and McMinnville had close to 15,500 people in its labor force.

In 2017, the Oregon Office of Economic Analysis reported that 64% of job vacancies were difficult to fill. The most common reason for difficulty in filling jobs included a lack of applications (30% of employers' difficulties), lack of qualified candidates (17%), unfavorable working conditions (14%), a lack of soft skills (11%), and a lack of work experience (9%).⁷⁰ These statistics indicate a mismatch between the types of jobs that employers are demanding and the skills that potential employees can provide.

McMinnville's labor force participation rate for the 2013-2017 period is comparable to Yamhill County.

Exhibit 22. Labor Force Participation Rate, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B23001.



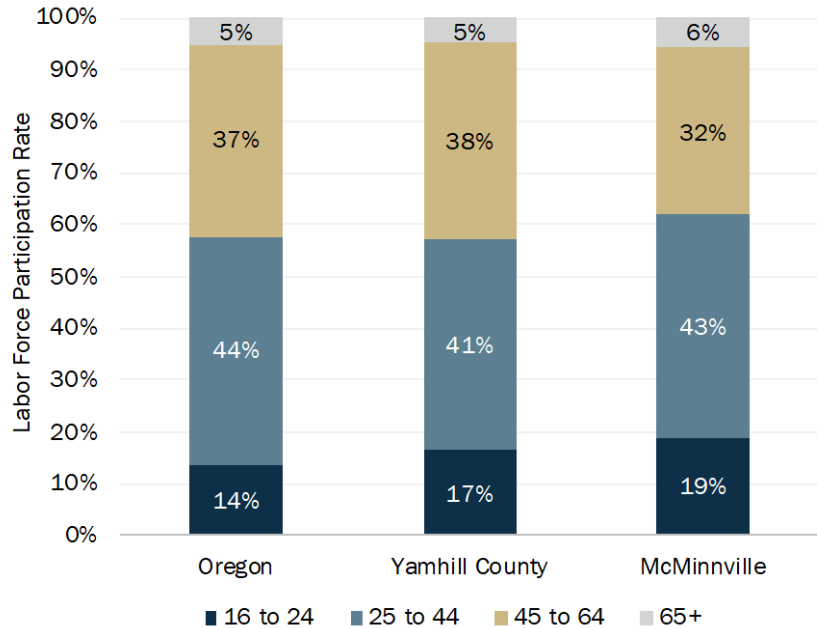
⁷⁰ Oregon's Current Workforce Gaps: Difficult-to-fill Job Openings, Oregon Job Vacancy Survey, Oregon Employment Department, June 2018.

By age group, McMinnville has a larger share of residents aged 16 to 24 participating in the labor force relative to Yamhill County and Oregon.

In contrast, McMinnville has a smaller share of residents aged 45 to 64 participating in the labor force compared to Yamhill County and Oregon.

Exhibit 23. Labor Force Participation Rate, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table S2301.

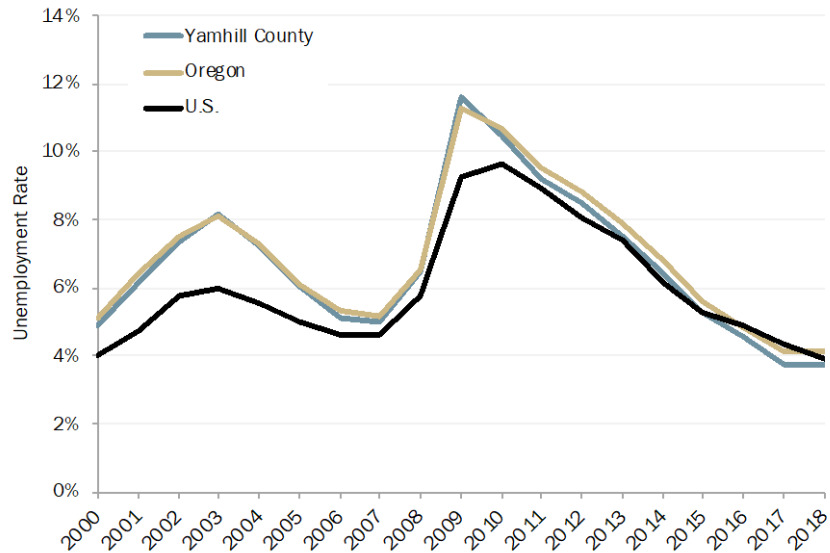


The unemployment rates in Yamhill County, Oregon, and the nation have declined below their respective 2000 rates.

Yamhill County closely follows Oregon's unemployment rate. In 2018, the unemployment rate in Yamhill County was 3.8%. In Oregon, the rate was 3.9%, and in the nation, 4.2%.

Exhibit 24. Unemployment Rate, Yamhill County, Oregon, and the U.S., 2000 - 2018

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics and Labor Force Statistics.



Commuting Patterns

Commuting plays an important role in the McMinnville's economy because employers in these areas are able to access workers from people living in cities across Yamhill County and from the broader Mid-Willamette Valley Region.

Exhibit 26 shows that 38% of people who work in McMinnville reside in McMinnville, 4% commute from Salem, 3% commute from Portland, and 3% from Newberg. The remaining workers commute from various other cities located across the Region.

McMinnville is part of an interconnected regional economy.

Of the approximate 15,080 persons employed in McMinnville (as of 2017), 62% of workers commute to their jobs from outside of the City. The remaining 38% of workers both live and are employed in McMinnville.

Exhibit 25. Commuting Flows, McMinnville, 2017

Source: U.S. Census Bureau, Census On the Map.



As of 2017, about 38% of all people who work in McMinnville also live in McMinnville.

Exhibit 26. Places Where McMinnville Workers Lived,⁷¹ 2017

Source: U.S. Census Bureau, Census On the Map.

38%	4%	3%	3%	3%
McMinnville	Salem	Portland	Newberg	Sheridan

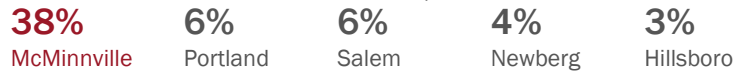
⁷¹ In 2017, 15,080 people worked at businesses in McMinnville, with 38% (5,721) people both employed and working in McMinnville.

About 38% of residents who live in McMinnville also work in McMinnville.

Six percent of McMinnville residents commute to Portland for work and another six percent commute to Salem.

Exhibit 27. Places Where McMinnville Residents were Employed,⁷² 2017

Source: U.S. Census Bureau, Census On the Map.



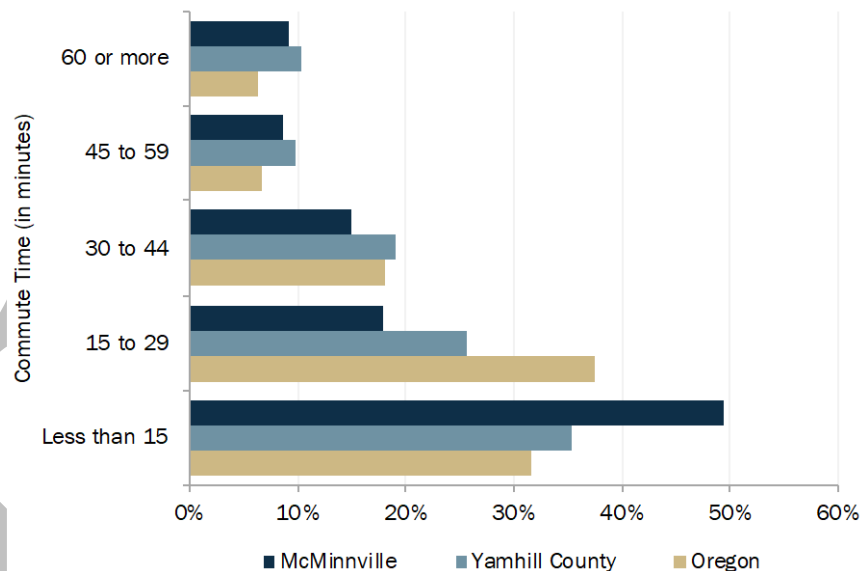
During the 2013-2017 period, about 49% of McMinnville workers had a commute of less than 15 minutes, compared to 35% of Yamhill County workers and 32% of Oregon workers.

Relative to Yamhill County and Oregon workers, McMinnville workers tend to have shorter commute times.

Where the majority (55%) of Oregon workers have commutes between 15 to 44 minutes, only 33% of McMinnville workers have commute times of that length. However, at the higher end of commuting times (45 minutes or more), almost one-fifth (18%) of McMinnville workers spend a sizable amount of time on the road.

Exhibit 28. Commute Time by Place of Residence, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B08303.



⁷² In 2017, 5,569 residents of McMinnville worked, with 38% of McMinnville residents (5,569 people) both living and employed in McMinnville.

Tourism in the Willamette Valley Region and Yamhill County

Longwoods International provides regional statistics on travel. The following information is from Longwoods International's 2017 Regional Visitor Report for the Willamette Valley Region, which is defined as Benton, Lane (eastern, non-coastal region), Linn, Marion, Polk, and Yamhill counties.⁷³ Broadly, travelers to the Willamette Valley Region accounted for:⁷⁴

- 5.5 million overnight trips in 2017, or 16% of all Oregon overnight travel that year.
- The primary market area for travelers over 2016 and 2017 were Oregon, California, and Washington.⁷⁵ 48% of Willamette Valley visitors came from Oregon, 19% came from California, and 14% came from Washington.
- About 53% of visitors stayed 2 or fewer nights over 2016 and 2017 in the Willamette Valley, 32% stayed 3 to 6 nights, and 15% stayed 7 or more nights. The average nights spent in the Willamette Valley Region was 4.3.
- The average per person expenditures on overnight trips in 2017 ranged from \$9 on recreation, sightseeing, and entertainment to \$35 per night on lodging.
- About 75% of visits to the Willamette Valley Region over 2016 and 2017 were via personally-owned automobiles/trucks, 18% were by rental car, and 13% were via an online taxi service (such as Lyft or Uber).
- Over 2016 and 2017, visitors tended to be middle-to-older aged adults, with the average age being about 48.7. Those aged 18 to 34 made up 24% of overnight visits, 34% were between 35 and 54, and 42% were 55 and older. About 56% of visitors graduated college or completed a post-graduate education. Additionally, 44% of visitors earned less than \$50,000 in household income, 37% earned between \$50,000 and \$99,999, and 19% earned more than \$100,000. The average household income for Willamette Valley visitors was about \$64,560.

⁷³ Travel Oregon. "Oregon 2017: Regional Visitor Report, Willamette Valley Region," Longwoods International, October 2018. Retrieved from: <http://industry.traveloregon.com/research/archive/willamette-valley-oregon-overnight-travel-study-2017-longwoods-international/>.

⁷⁴ Longwoods International issues caution in interpreting these tourism estimates in the Willamette Valley Region as the sample size for the marketable trips this region is low. For this reason, the data reported is a combination of survey data from 2016 and 2017.

⁷⁵ The data reported in this bullet as well as other bullets noting years "2016 and 2017" are based on *marketable trips*. Longwoods International states marketable trips "are defined as those trip types that can be influenced by marketing efforts and include leisure and business-leisure trips."

Yamhill County's direct travel spending increased 139% from 2000 to 2018.

The Willamette Valley Region's direct travel spending increased by 100% over the same period.

Exhibit 29. Direct Travel Spending (\$ millions), 2000 and 2018

Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2018.

2000	\$1,000	\$56.7
	Willamette Valley Region	Yamhill County
2018	\$2,000	\$135.7
	Willamette Valley Region	Yamhill County

Yamhill County's lodging tax receipts increased 653% over 2006 to 2018.

Exhibit 30. Lodging Tax Receipts (\$ millions), 2006 and 2018

Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2018.

2006	\$111.0
	Yamhill County
2018	\$835.8
	Yamhill County

Yamhill County's largest visitor spending for purchased commodities is accommodation and food services.

Exhibit 31. Largest Visitor Spending Categories (\$ millions), Yamhill County, 2018

Source: Dean Runyan Associates, Oregon Travel Impacts.

\$27.9	\$6.3	\$3.9
Accommodations and Food Services	Arts, Entertainment, and Recreation	Retail

Yamhill County's largest employment generated by travel spending is also in the accommodations and food services industry.

Exhibit 32. Largest Industry Employment Generated by Travel Spending (thousands), Yamhill County, 2018

Source: Dean Runyan Associates, Oregon Travel Impacts.

1.1 jobs	0.5 jobs	0.1 jobs
Accommodations & Food Services	Arts, Entertainment, and Recreation	Retail

The number of person nights spent in Yamhill County increased from 1,706,000 in 2017 to 1,773,000 in 2018, an increase of 67,000 overnight stays, or 4%. Over the last nine years, from 2010 to 2018, person nights increased approximately 19%.

4. Economic Development Potential

The fundamental purpose of Goal 9 is to make sure that a local government plans for economic development. The planning literature provides many definitions of economic development, both broad and narrow. Broadly,

“Economic development is the process of improving a community’s well-being through job creation, business growth, and income growth (factors that are typical and reasonable focus of economic development policy), as well as through improvements to the wider social and natural environment that strengthen the economy.”⁷⁶

That definition acknowledges that a community’s wellbeing depends in part on narrower measures of economic wellbeing (e.g., jobs and income) and on other aspects of quality of life (e.g., the social and natural environment). In practice, cities and regions trying to prepare an economic development strategy typically use a narrower definition of economic development; they take it to mean business development, job growth, and job opportunity. The assumptions are that:

- Business and job growth are contributors to and consistent with economic development, increased income, and increased economic welfare. From the municipal point of view, investment and resulting increases in property tax are important outcomes of economic development.
- The evaluation of tradeoffs and balancing of policies to decide whether such growth is likely to lead to overall gains in wellbeing (on average and across all citizens and businesses in a jurisdiction, and all aspects of wellbeing) is something that decision makers do after an economic strategy has been presented to them for consideration.

That logic is consistent with the tenet of the Oregon land-use planning program: all goals matter, no goal dominates, and the challenge is to find a balance of conservation and development that is acceptable to a local government and the State. Goal 9 does not dominate, but it legitimizes and requires that a local government focus on the narrower view of economic development regarding economic variables.

In that context, a major part of local economic development policy is about local support for business development and job growth; that growth comes from the creation of new firms, the expansion of existing firms, and the relocation or retention of existing firms. Specifically, new, small businesses (those with fewer than 100 employees) are accounting for a larger share of the job growth in the United States.⁷⁷ This shift toward a focus on entrepreneurship, innovation, and small businesses presents additional options for local support for economic development

⁷⁶ *An Economic Development Toolbox: Strategies and Methods*, Terry Moore, Stuart Meck, and James Ebenhoh, American Planning Association, Planning Advisory Service Report Number 541, October 2006.

⁷⁷ According to the 2018 Small Business Profile from the US Small Business Office of Advocacy, small businesses account for over 99 percent of total businesses in the United States, and their employees account for nearly 50% of American workers. <https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf>

beyond firm attraction and retention. Thus, a key question for economic development policy is: *What are the factors that influence business and job growth, and what is the relative importance of each?* Specifically, OAR 660-009-0015(4) requires that cities conduct an assessment of community economic development potential, as part of the EOA. This assessment considers: market factors, infrastructure and public facility availability and access, labor, proximity to suppliers and other necessary business services, regulations, and access to job training.

The local factors that form McMinnville’s competitive advantage are summarized in the subsections below.

Factors Affecting Community Economic Development Potential

OAR 660-009-0015(4) stipulates that relevant economic advantages and disadvantages considered with the EOA “may include but are not limited to” factors of: location, size and buying power of markets; availability of transportation facilities for access and freight mobility; public facilities and public services; labor market factors; access to suppliers and utilities; necessary support services; limits on development due to federal and state environmental protection laws; and educational and technical training programs.” This 2020 EOA update is organized to address these considerations together with other factors distinctive to economic development in McMinnville.

Location, Size & Buying Power of Markets. Location is an economic factor that is prominently mentioned in prior planning documents. The 2019 *MAC-Town 2032 Economic Development Strategic Plan* identifies both strengths and weaknesses related to McMinnville’s location and associated transportation factors. Comparative advantages and disadvantages and their implications for economic opportunity in McMinnville are drawn from the 2013 EOA together with more recent MEDP, SEDCOR, and related industry analyses, summarized as follows.⁷⁸

Advantages:

- *Ease of access – with proximity to Portland, Salem & the Oregon coast.* McMinnville is only 40 miles from Portland, 27 miles from Salem, and 51 miles from Lincoln City on the Oregon coast.⁷⁹
- *Central location to serve local community and regional employment and commercial service needs.* McMinnville is well situated to serve the employment and commercial needs of the local community and a larger market area of approximately 75,000 residents, according to the Three Mile Lane market analysis. The City’s market area encompasses

⁷⁸ The 2020 EOA update provides updated information related to comparative advantages and disadvantages, while keeping the structure of the 2013 EOA. Factors that are no longer relevant to McMinnville were removed.

⁷⁹ Source is www.maps.google.com.

North Willamette Valley region—comprised of Yamhill-Carlton, Chehalem Mountains, McMinnville, Ribbon Ridge, Dundee Hills, and Eola-Amity Hills – has been identified with 503 wineries and 20,279 acres of grapes as of 2018.

In addition to recognition as the leading production area for Oregon’s wine industry, Yamhill County agricultural production adds to both local and visitor appeal. The area is known for quality fresh-to-market products including berries, nuts, milk, eggs, fruits and vegetables – and increasingly for custom/organic livestock production. Nursery crops, grass and legume seeds, Christmas trees, grain and hay add to the diversity of Yamhill County agricultural production – as the 6th leading county in terms of value of production in Oregon in 2017.⁸³

The Evergreen Air Museum attracted an estimated 88,400 visitors in 2018. With over 3 million annual visitors, the Spirit Mountain Casino located 24 miles from downtown McMinnville is widely cited as one of the top visitor draws in the state.⁸⁴

McMinnville also is recognized statewide for its remarkable comeback and current vitality of its historic downtown core area. Promoted as “Oregon’s favorite main street,” the McMinnville Downtown Association characterizes the appeal of downtown in these terms:

“Quaint boutiques, unique shops, and local galleries abound. Music fills the air from our farmers’ market performers and outdoor concerts all summer long, and pours out of our restaurants and pubs on winter evenings.”⁸⁵

Disadvantages:

- *Retail sales leakage occurring due to lack of major comparison retail.* As described by the Three Mile Lane market analysis, there is a considerable retail sales leakage of an estimated \$208 million annually throughout the McMinnville Market Area. Factoring in household growth projections, the market analysis forecasts demand for an additional 539,000 square feet of retail development in the McMinnville market area over the coming decade, with 150,000 square feet (or about 28%) being captured in the Three Mile Lane area.⁸⁶

Sites in the McMinnville UGB offer the potential to serve a local and regional market extending to Sheridan/Willamina, Polk County and even some coastal communities – with improved opportunity to serve the Newberg-Dundee area as a result of the recently completed bypass construction. Centrally located sites with good highway access and street visibility can be instrumental to attract commercial businesses that may require market areas of 50,000-100,000+ population.

⁸³ U.S. Census of Agriculture. Yamhill County Profile. 2017.

⁸⁴ As cited by Memorandum #2, Market Study Current Conditions, prepared as part of Northeast Gateway Plan by Leland Consulting Group for the City of McMinnville, May 23, 2011.

⁸⁵ As cited by www.downtownmcminnville.com, as of September 2012.

⁸⁶ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

- *Need for additional value-added opportunities for visitors.* A key challenge for the future is to provide more and better value-added opportunities for visitors to spend more time and money while visiting the McMinnville area.

Also, the 2019 *Willamette Valley Winery Association Visitor Profile Study* reported that about 53.8% of domestic visitors to the area are non-Oregon residents. Survey respondents noted difficulty of travel to the Willamette Valley as a key factor in not returning to the area. The study also stated that the typical Oregon resident wine tourist spends about \$151.63 per person per day, while the typical non-Oregon resident spends about \$416.43 per person per day.

Note: The 2013 EOA noted the following disadvantage at that time:

“Limited duration of tourism visitation & low expenditure capture. While the McMinnville area and Yamhill County can now boast some of the state’s top tourism attractions, visitor spending does not appear to match visitation. This is because visitors tend not to stay overnight (but are often day visitors) and do not appear to be making substantial expenditures while in the area.”

This has changed substantially. Visit McMinnville reports that visitor spending in Yamhill County has doubled in the last ten years. Lodging statistics in McMinnville are up across the board, including demand, rate, length of stay, occupancy, revenue, and number of properties & inventory of rooms.

Availability of Transportation Facilities for Access & Mobility. Location, size and buying power of markets are substantially affected by current and planned transportation facilities. This is particularly the case in Yamhill County which increasingly has experienced the negative economic development effects of highway congestion on the 99W corridor. However, completion of Phase 1 of the Newberg-Dundee Bypass in January of 2018 has partially reduced congestion, especially for local residents of the region.

Economic development opportunities may be substantially enhanced with further plans for transportation improvements—as with the second phase of the Newberg-Dundee bypass, which is currently in its design phase. A broader look at the role transportation plays in shaping McMinnville’s economic opportunities is outlined as follows.

Advantages:

- *Western & mid-valley cross-roads.* McMinnville is directly served by Highway 99W – as a historically significant central organizing spine to access commercial and industrial businesses throughout the community. Highway 18 has come to play an increasingly important role, not only as a by-pass route for through traffic traveling between the Oregon coast and the Portland metro area but also as a means of accessing more local and regional employment/institutional uses as well as the McMinnville airport. While not directly in McMinnville, Highway 22 (via 99W) provides access to Salem and to Interstate 5 (within approximately 30 miles).

- *Changing traffic patterns.* While serving as one indicator of overall economic activity, this is of particular importance for retail and service businesses as well as tourism oriented destinations reliant on high traffic counts. As of 2018, an estimated 22,900 vehicles per day traveled Highway 18 in the vicinity of the McMinnville airport – an increase of 44% over 2005 counts.⁸⁷

On Highway 99W, up to an estimated 21,900 vehicles traveled daily through McMinnville in 2018, (representing an increase in 99W in-town traffic with 18,900 vehicles in 2013).⁸⁸

- *Air and rail accessibility.* As a general aviation airport, McMinnville Municipal Airport has the capacity to handle corporate jet aircraft – together with availability of aircraft rentals, flight instruction, aircraft maintenance, and fuel. The Portland International Airport (PDX) is located 36 miles from McMinnville, offering daily direct flights with passenger and freight service to Asia, Europe, and Mexico as well as cities throughout the U.S.

The Willamette and Pacific Railroad maintains freight service to McMinnville industrial users. This short-line carrier connects to the Burlington Northern Santa Fe and Union Pacific carriers for transcontinental shipments to and from McMinnville.

Disadvantages:

- *Poor linkages to Interstate freeway access.* Congestion on the 99W corridor in the area of Dundee and further north is cited as a disincentive to business investment from existing and prospective new firms in documents including the 2019 *MAC-Town 2032 Economic Development Strategic Plan*. Of particular concern is the approximate 30-mile distance from McMinnville to the Interstate 5 corridor, exacerbated by substantial congestion affecting connecting routes during much of the business day, especially for the segment of the 99W corridor extending from the Highway 18 merge north of McMinnville through Newberg. The *MAC-Town 2032 Economic Development Strategic Plan* notes that the development of the Highway 99 bypass will likely “improve access to McMinnville.”
- *Challenging Air & Rail Service.* While the distance to PDX for scheduled air service is less than 50 miles, regional roadway congestion makes travel times unpredictable during business hours and about half this distance from McMinnville occurs on two-lane roadways. With increasing regional traffic congestion, access to Portland International Airport is ever more problematic both for freight shippers and employees who must travel for their jobs.

As described by the 2001 EOA, “lack of convenient and efficient access to Portland International Airport was one factor cited by Hewlett-Packard in its decision to leave McMinnville, and it may discourage other existing or prospective firms from expanding

⁸⁷ Annual Average Daily Traffic counts (point near McMinnville Airport). Oregon Department of Transportation. <https://gis.odot.state.or.us/transgis/>

⁸⁸ Annual Average Daily Traffic counts (point near McMinnville High School). Oregon Department of Transportation. <https://gis.odot.state.or.us/transgis/>

or locating in McMinnville.” Also noted is that rail traffic bound for Portland has been routed south, then north, due to the unsuitability of existing trackage north of McMinnville.

The Oregon Department of Transportation (ODOT) completed construction of Phase 1 of the Newberg-Dundee Bypass and has proceeded into the design phase for Phase 2, which will affect economic opportunities in the coming years. Per the fact sheet associated with Phase 1 of the Bypass project, congestion was reduced by approximately 20% in downtown Newberg and by 40% in downtown Dundee. Freight traffic was also reduced by approximately 45% in Newberg and 68% in Dundee. These congestion reductions have the added benefit of increasing safety on 99W and simultaneously diminishing travel time during peak commute periods.⁸⁹ The Phase 2 improvement (currently in a design phase) is expected to have the effect of further reducing travel times on the 99W corridor north of McMinnville to Newberg via an extension of the Phase 1 Bypass.

Public-Private Facilities, Services & Environmental Factors. This discussion combines related items of OAR 660-009-0015(4) as related to public facilities and public services, access to suppliers and utilities, necessary support services, and environmental limitations. This is due to the inter-connected roles of these factors in affecting overall economic activity for both industrial and commercial business activities.

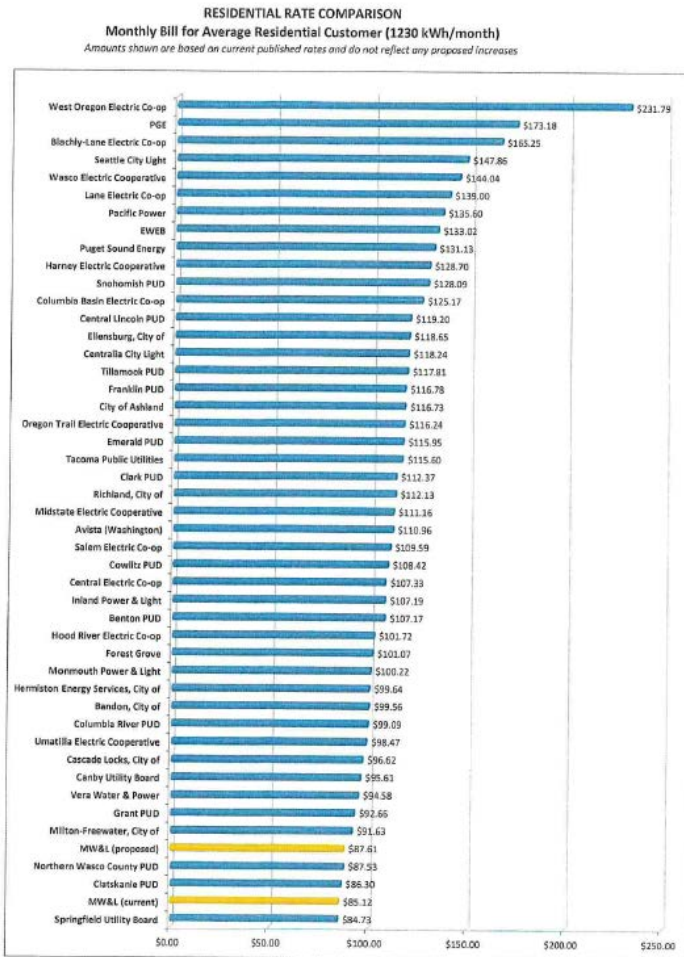
The availability and cost of both public and private support services can affect the costs of living or doing business in McMinnville. Environmental factors can similarly serve to constrain or, in some cases, benefit economic development investments. A firm’s location decision may reflect consideration of the comparative value versus cost of doing business in McMinnville or other potentially viable locations in Oregon or elsewhere.

Advantages:

- *Low public utility rates.* McMinnville is recognized as offering low electricity and water rates compared with other public and private utilities region-wide and statewide (Exhibit 34). The public utility provider, McMinnville Water and Light (MW&L), was founded in 1889 and continues to provide low cost, reliable water and power services.

⁸⁹ Oregon Department of Transportation. 2014. *Newberg-Dundee Bypass Project*. Retrieved from: <http://oregonjta.org/region2/files/highway99w/docs/overall-fact-sheet-for-web-dec-2014.pdf>

Exhibit 34. Residential Rate Comparison for Oregon Utility Services



Source: McMinnville Water and Light.

- Water & sewer capacity for growth.
 - Water supply and water rights. Water supply is from the Yamhill and Nestucca River basins. In 2005, MW&L completed expansion of McGuire Reservoir, more than doubling reservoir capacity, providing ample water supply through at least 2025. Beyond 2025, MW&L has sufficient capacity for water rights and supply to meet needs through at least 2075. This will address needs for the City's 20-year planning horizon of 2041 and the longer 2067 planning horizon.
 - Treatment capacity. In 2010, MW&L completed expansion of the Water Treatment Plant (WTP). This increased capacity from 13 MGD to 22 MGD. The WTP can be expanded from the current 22 MGD to a maximum of 30 MGD. MW&L's 2010 master plan projects that this will provide treatment capacity through 2045. This addresses needs through the City's 20-year planning horizon through 2041, and MW&L can either expand treatment capacity at this location or supplement with new treatment capacity from the new intake on the Willamette to meet needs beyond 2045 through the 2067 planning horizon.

- *Long-Term Water Supply.* Previously noted as a disadvantage in the 2013 EOA, recent actions have turned long-term water supply into an advantage. While recent expansions to McGuire Reservoir are expected to provide ample supply through about 2025, actions are also being undertaken to address longer-term needs. A 2008 Yamhill County Water Supply Analysis concluded that most providers in Yamhill County have adequate water rights to meet projected maximum day demands to 2050; exceptions are noted for Dayton, Lafayette, McMinnville Water and Light (MWL), and Yamhill. As a result, MWL is partnering with the Cities of Carlton, Dayton and Lafayette in an application to the state to secure a water permit to the Willamette River as a potential second municipal source. In addition, this will provide McMinnville with a secondary source, as well as adequate supply and water rights through 2075.

In 2011, the Yamhill Regional Water Authority (YRWA) acquired a water right on the Willamette River with a 2011 priority date. In 2016, MW&L acquired an additional right with a priority date of 1982. In 2017, MW&L purchased a site on the Willamette River for a future intake and pump station. In 2018, MW&L procured the services of Carrollo Engineering to verify that the site would support facilities for a 50 MGD intake and pump station. In 2019, MW&L signed an agreement to supply water to the City of Lafayette. Engineering Design of the inter-tie is underway with construction in 2020. Tentative plans are to start supplying Lafayette with water in the summer of 2020. In 2020, MWL anticipates acquiring an additional senior water right from the Willamette for 4.8 MGD. For McMinnville, this means there will be adequate supply and water rights to meet needs through at least 2075.

- *Internet Services.* In the 2019 strategic plan, goal 1.4.3, which is to "identify and complete high-priority infrastructure projects that serve McMinnville's current and future business community," details a potential project where City staff will evaluate a 10GB fiber network with local Internet Service Provider, Online Northwest.
- *Local business entrepreneurship – with a record of technological innovation.* Focus groups conducted in 2007 for the MEDP strategic economic development plan coupled with interviews for the Marion-Polk-Yamhill County regional economic development strategy have pointed to this factor as a major distinctive strength of the mid-Willamette Valley region. The *MAC-Town 2032 Economic Development Strategic Plan* dedicates one of its target sector goals to foster opportunities in technology and entrepreneurship. This goal is comprised of four strategies, which include making McMinnville a location for small- and medium-sized technology firms to relocate and grow, provide co-working and other work arrangements enabled by telecommunications technology, incubate new businesses and start-ups, and create new talent pipelines for tech-related occupations.⁹⁰

⁹⁰ City of McMinnville. *MAC-Town 2032: Economic Development Strategic Plan*. Retrieved from: <https://www.mcminnvilleoregon.gov/sp/page/mac-town-2032-economic-development-strategic-plan>

Perhaps less readily recognized is the diversity of other small manufacturing and industrial companies that serve global markets through technological innovation and astute market positioning. Examples range from area aerospace and metals component manufacturers to technology companies to wineries.

- *Comparative property tax rates.* While the significance of property and other taxes to business investment decisions is debated nationally and regionally, there is no question that McMinnville's relative tax burden has changed appreciably in a more favorable direction in recent years.
- *Economic development assistance.* A public services advantage noted with the 2001 EOA is the presence of the McMinnville Downtown Association, providing economic development assistance for businesses locating or expanding in the historic downtown. Since its formation in 1976, the association has been recognized for successful downtown revitalization and leadership among Oregon Main Street communities. Formed in 2006, the public-private organization, McMinnville Economic Development Partnership (MEDP), continues to serve as a single point of contact for economic development assistance for industrial and other firms throughout the McMinnville community. Further, the 2019 *MAC-Town 2032 Economic Development Strategic Plan* identified a "positive business climate perceptions and a sense of civic leadership" as a strength in McMinnville.

Disadvantages:

- *Environmental Effects on Land Supply.* The City of McMinnville has identified lands in steep slopes (of 15% or greater), floodplains, and wetlands identified in the National Wetlands Inventory (NWI) as environmental constraints. Lands with any of these characteristics are considered as constrained or unbuildable and have been deducted from lands identified as available whether vacant or partially vacant.

Labor Market Factors (including Training). This discussion combines two factors listed by OAR 660-009-0015(4) – notably items (d) labor market factors and (h) education and technical training programs – due to their mutual interdependence.

The availability of adequate, qualified labor is critical for economic development. This labor force is not limited to local McMinnville residents as local firms can draw workers from surrounding communities situated within a reasonable commute distance. Similarly, a portion of the McMinnville adult population may find employment in other communities – both nearby as well as extending into the Salem and Portland metro areas.

While direct information on the quality of the workforce is not always readily available, demographic characteristics that are typically used to indicate the quality of the labor force include age distribution, educational attainment, employment by occupation or industry, and race/ethnicity. Also of importance are opportunities for workforce training.

Advantages:

- *Favorable workforce demographics.* As detailed with the comparative demographic and economic data in Chapters 2 and 3 of this EOA update, factors conducive to adequacy of abundant labor supply in McMinnville include above average population growth rates, low median age of population, and high proportion of McMinnville residents who are able to find work locally. A well-represented Latino population also offers advantages for businesses that benefit from greater cultural diversity in accessing customers in a more diverse marketplace both regionally and nationally.
- *Ability to access much larger metro area workforce pool.* With an in-city labor pool of over 15,000, McMinnville employers have ready access to a countywide labor market of nearly 50,000. For some specialty positions in which the local market may not have adequate depth, there is an even larger regional Mid-Valley labor pool on which to draw – much of which is located within a 20-40 mile drive from McMinnville. However, employers have noted the immediately available labor pool in McMinnville as an issue.
- *Moderate local & countywide unemployment.* The 2013 EOA noted that McMinnville unemployment in McMinnville (in 2010) was 9.3%—above the U.S. rate of 9.0% and below the statewide rate of 10.4%. Comparatively, unemployment has improved since the recession. In 2018, the unemployment rate in Yamhill County was 3.8%.
- *The Linfield/Chemeketa Community College connection.* As a top-ranked U.S. News & World Report college in the western U.S., Linfield College has established a west coast if not national reputation for academic excellence and value. In December 2019, Linfield was ranked #117 among national liberal arts colleges by the national magazine U.S. News & World Report.⁹¹ A question for the future may be how best to leverage this reputation for greater community and economic benefit.

The Chemeketa Community College – Yamhill Campus offers increasing opportunity for linkages with economic development, particularly through workforce training targeted to the needs of local employers. Another example of a partnership opportunity would be the creation of an entrepreneurship program – marketed cooperatively to area businesses. The Yamhill Valley Campus was expanded to a new location directly adjacent to the Highway 18 corridor in 2011.

- *Workforce training resources.* Workforce recruitment programs are available through the McMinnville WorkSource Center (Oregon’s public workforce system), Express Employment Professionals, and the Oregon Employment Department. For young professionals, career centers at Linfield College, Chemeketa Community College (Yamhill Valley Campus), George Fox University, Portland Community College (Newberg), and McMinnville High School, provide support for improving skills and

⁹¹ U.S. News. *Best Colleges Rankings*. Linfield College, 900 S.E. Baker St., McMinnville, OR. Rank information retrieved on December 19, 2019 from: <https://www.usnews.com/best-colleges/linfield-college-3198>

connecting them with businesses in the broader Yamhill County region.⁹² Additionally, the MDEP operates a summer internship program named McMinnville WORKS, which assists in connecting local businesses with talented collegiate youth.⁹³

Disadvantages:

- The most significant labor force disadvantage is indicated by relatively low rates of college graduates. Only 24% of McMinnville adults have college degrees, compared to 25% in Yamhill County and 32% in Oregon, according to 2013-2017 ACS 5-year estimates.
- A related disadvantage may lie with relatively high proportions of service workers – as compared with the entire county, Mid-Valley region, entire state and U.S. This is one reason that McMinnville household incomes are also below those of the comparison geographies.

However, in some cases this available labor force will constitute a comparative advantage for firms that depend on service occupations. This is especially the case if local work force skills can also be enhanced over time to allow for improved wages and career options.

Other Factors. In addition to the factors identified in conjunction with OAR 660-009-0015(4), there are other factors of importance specifically to the McMinnville community. These relate to local demographics and also land availability. Key advantages and disadvantages as noted from this and other similar analyses pertinent to McMinnville are outlined below.

Advantages:

- *Diverse industry mix.* McMinnville has a relatively diverse mix of industry for a community its size, a factor noted by the 2001 EOA. This diverse employment base is attributed, in part, to the actions of McMinnville Economic Development Partnership (MEDP). Also noted by the 2001 EOA, the 2007 MEDP Strategic Plan, and more recently in the 2019 *MAC-Town 2032 Economic Development Strategic Plan*, is that the local diversity of employment is due in part to the perceived quality of life in McMinnville. This factor is important to attracting businesses and entrepreneurs seeking quality communities for themselves and their employees.
- *A relatively young & diverse population – with increased Latino presence.* Median age of McMinnville residents is three years less than that of the entire state of Oregon. Higher proportions of residents are found locally for all age cohorts from childhood to young adults (to age 39). Companies looking for youthful workforce can find it in McMinnville.

⁹² McMinnville Economic Development Partnership (MDEP), Find Your Workforce. <https://www.mcminnvillebusiness.com/workforce>

⁹³ MDEP, The McMinnville WORKS Summer Internship Program. <https://www.mcminnvillebusiness.com/mcminnville-works-internship-program>

McMinnville is at the leading edge of Oregon's population transformation. The community's Latino population increased from less than 15% of the city-wide total in 2000 to 22% in 2013-2017 (well above the statewide proportion of 13%). Throughout the entire mid-Willamette Valley region as well as statewide, the Hispanic/Latino population is expected to represent an increasingly important component of the next generation of workers and of customers for commercial services. McMinnville has an opportunity to lead the way – providing new career options for Latino workers and business development options for Hispanic-owned businesses.

- *Small-town residential charm including a walkable downtown.* While quality of life is often considered difficult to quantitatively assess, perceptions of quality of life relative to other communities can affect business location and expansion decisions. This is especially the case for entrepreneurial and other individually owned, non-corporate enterprises.

The 2018 Economic Development Strategic Plan's mission states, "Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville's high quality of life... As we evolve, we prize our small-town roots and we maintain McMinnville's character."⁹⁴ As described by the website of the McMinnville Area Chamber of Commerce, "McMinnville is located in the western portion of Oregon's agriculturally rich Willamette Valley on U.S. Highway 99W."

The quiet, friendly city enjoys a central location to Pacific Ocean beaches (50 miles), the big city (Portland - 30 miles to the northeast), and the state capitol (Salem - 25 miles southeast), with an easy scenic drive to Mt. Hood and other ski areas. "McMinnville offers small-town charm in a full-service city."⁹⁵

- *Adequacy of buildable industrial land.* The previous EOA process concluded that the McMinnville UGB had a surplus of buildable industrial land during a 20-year planning period. The 2020 EOA update shows that McMinnville continues to have a surplus of industrial land, with 323 unconstrained buildable industrial acres. About 266 of those acres are on lots greater than 10 acres. Further discussion of the industrial land supply and forecast is provided with Chapter 5 of this report.

Disadvantages:

- *Restricted population growth.* Since 2000, population has been increasing somewhat more rapidly than the state, but at an approximate 1.4% per year average rate. In the past, City services have been able to match without experiencing major fiscal issues. However, continued population growth at a somewhat reduced coordinated population growth rate averaging about 1.2% per year is now forecast through 2067. Constrained land supply is restricting growth and the cost of services is increasing faster than increases in assessed values.

⁹⁴ MAC-Town 2032 Economic Development Strategic Plan. 2019. p.10.

⁹⁵ Cited from www.mcminnville.org, as of September 2012.

- *Vulnerability to eroding incomes & standard of living.* As of 2013-2017, median household incomes for McMinnville are 14% below Yamhill County and 10% below statewide medians. Average wages for the McMinnville UGB are comparable to Yamhill County but below comparable regional, statewide and national figures.

As is occurring statewide and nationally, wages are now accounting for less than a 50% share of total personal income. Yamhill County residents also are more dependent on transfer payments than is the case regionally or nationally.

Future prosperity may be jeopardized to the extent that non-wage sources of income are subject to changing federal policies and the status of national/global investment markets – combined with social service needs for those dependent on transfer payments. Improving the ratio of wage to non-wage income will be influenced directly through the combination of providing more jobs and better paying job opportunities locally.

- *Tentative integration of Latino population into community & business leadership.* As noted with the 2007 MEDP Strategic Plan, in many communities with rapidly growing Hispanic populations, it has proven challenging to effectively draw Latinos into positions of community leadership and business ownership. The result can be lost opportunity for Latino business patronage and a more dynamic cultural environment that draws new blood, new ideas and new investment. A foundational strategy in the *MAC-Town 2032 Economic Development Strategic Plan* is to “improve systems for economic mobility and inclusion,” with emphasis on training, resources, and support for underrepresented entrepreneurs and workers.
- *Inadequacy of commercial buildable land.* The 2001/03 and 2013 EOA processes all concluded that the McMinnville UGB would experience a deficit of buildable commercial land over a 20-year time horizon. The 2013 EOA resulted in a 36-acre deficit for the 2013 to 2033 planning period, while the results in Chapter 5 show a 179-acre deficit of commercial land for the 2021 to 2041 planning period.

McMinnville's Strengths, Weaknesses, Opportunities, and Threats

As part of the *MAC-Town 2032 Economic Development Strategic Plan*, McMinnville community members completed a SWOT analysis for economic development in McMinnville. It describes McMinnville's Strengths, Weaknesses, Opportunities, and Threats.

<p>Strengths</p> <ul style="list-style-type: none"> • High quality of life to boast about and attract investment • Strong, widely-recognized downtown • Robust wine and tourism economy, as well as cultural (e.g. Air and Space Museum) and recreational amenities that bring visitors • Well known regionally and nationally as a destination for wine and food, with some supporting tourist assets • Balanced employment across industry sectors • Presence and involvement of postsecondary educational institutions (Linfield College and Chemeketa Community College) • Location advantages: • Good location in proximity to major metro area • High quality soils in surrounding areas, climate suited for agriculture • Natural environment assets nearby, including Yamhill River, access to the ocean and mountains • Inexpensive power and water, with sustainable sources • Major infrastructure assets: major highways, freight rail, airport • Various parks and recreational assets • Positive business climate perceptions and a sense of civic leadership 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Relatively low educational attainment • A limited labor pool for local companies and those looking to relocate • Difficult access to and from I-5 and no near near-term possibility of a more direct connection • End-of -the-line location for wine country visitors coming from the Portland area • Lack of housing options • Low levels of professional and office office-using employment • Comparatively high poverty rates and low median household income
<p>Opportunities</p> <ul style="list-style-type: none"> • Proximity to Portland allows McMinnville to capitalize on urban infrastructure and amenities • Local airport has comparative advantages over other regional airports • Highway 99 bypass : future completion will improve access to McMinnville • A stronger framework for regional collaboration , improved opportunity in surrounding communities • Opportunity sites for new downtown development • New housing development – higher density , diversity of types, live live-work units • Improved connections to the University of Oregon and Oregon State University • Stronger branding and improved gateways into McMinnville • Innovation in agriculture and food systems • Wine -oriented makerspace • Food hub • \$6M gift to Linfield College's wine program • Expanded culinary and craft beverage retail offerings 	<p>Threats</p> <ul style="list-style-type: none"> • Limited land availability for residential, commercial and industrial development • Regulatory challenges associated with UGB expansion • Worsening housing affordability • Brain drain due to local graduates leaving for other job markets • Absorption of projected growth without detrimental impacts to character, congestion, affordability • Future oversaturation of wine/tourism and increasing concentration of low-wage service industry jobs • Need to find a sustainable solution to homelessness • Future impacts of climate change on agriculture and related industries, including tourism

Target Industries

The characteristics of McMinnville will affect the types of businesses most likely to locate in the city. McMinnville's attributes that may attract firms are: McMinnville's access to land and resources; recreational opportunities; and quality of life.

2013 Updated Cluster Targets

The 2013 EOA recommended a short list of cluster target industries, described as:

- **Advanced Manufacturing.** Corresponds to an industry cluster pivotal to the Oregon Business Plan and Business Oregon (the Business Development Department). In McMinnville, this cluster is exemplified by major McMinnville employers including Cascade Steel, Meggitt Polymers and Composites, NW Unmanned Aerial Systems, Betty Lou's, Inc., and Freelin-Wade Co. Also included are agricultural producers ranging from employers in the emerging breweries to small boutique wineries as in the Granary district which also serve to complement the Yamhill County Agri-Business Economic and Community Development Plan.
- **Healthcare/Traded Sector Services.** Aimed to facilitate continued competitiveness and future expansion of non-manufacturing businesses that serve area residents plus customers located beyond the immediate McMinnville/Yamhill County community. Willamette Valley Medical Center and associated health care facilities can be expected to continue to experience employment growth in the years ahead. Examples of traded sector service activities are diverse, ranging from Linfield College to Evergreen International Airlines to Oregon Mutual Insurance. Also included is a significant component of small firms as the export-focused portion of McMinnville's fast growing and entrepreneurial service business sector such as Precision Analytical, Hurst Berry Farms Corporate Headquarters, and NW Rapid Manufacturing.

MAC-Town 2032 Economic Development Strategic Plan Target Sectors

Furthermore, Goals 4-8 of the *MAC-Town 2032 Economic Development Strategic Plan* outline the "target sector goals and strategies," as well as potential tasks and projects, as follows:

- **4. Sustain and Innovate within Traditional Industry and Advanced Manufacturing**
 - 4.1 Ensure workforce availability in trades and other mid-skill positions.
 - Encourage expansion and allocate resources for middle, high school, and community and technical college programs that encourage career exploration and skills development in trades and mid-skill occupations
 - Convene a panel of business leaders from traditional industry and advanced manufacturing employers in McMinnville to pioneer a collaborative approach to expanding apprenticeships and volunteering employee time to teach in-demand skills to individuals evaluating trade-based careers.

- 4.2 Connect traditional industry and advanced manufacturing to innovation resources for sustainable growth.
 - Highlight industrial innovation in McMinnville through periodic events, posts and other marketing, connecting innovators through storytelling and innovation partnerships.
 - Plan and participate in an industrial innovation working group or recurring social event to facilitate idea sharing and cross-pollination among business leaders.
 - Connect business leaders with regional innovation resources through Business Oregon and other innovation-oriented organizations.
 - Consider an international sister city program to share innovative practices.
- 4.3 Expand and market land availability for industrial activities.
 - Promote and market the McMinnville Industrial Park as a target area for advanced manufacturing investment within Yamhill County.
 - Coordinate with McMinnville Industrial Promotion to ensure leadership succession and continued engagement.
- **5. Foster Opportunity in Technology and Entrepreneurship**
 - 5.1 Become a place where small and medium technology firms can relocate and grow.
 - Foster physical connections to existing tech and entrepreneurship hubs through low-cost air services.
 - Market McMinnville as a destination for young and aspiring employees to find opportunity in business, entrepreneurship, computer and software engineering and other programs in Oregon's post-secondary institutions.
 - Survey local "tech" employers to identify current regulatory shortcomings or infrastructural needs for business relocation and expansion.
 - Promote the concept of McMinnville's "tech terroir" to emphasize McMinnville's potential assets to entrepreneurs, business owners and others involved in tech-oriented occupations.
 - Explore opportunities to improve connections to and otherwise better leverage McMinnville's dark fiber ring for business use.
 - Hire an innovation officer and/or complete a comprehensive strategy around smart cities and innovation in urban sustainability.
 - Create an "Invest in the Future" grant program that is targeted towards private investment and business development with living wage job outcomes.

- 5.2 Provide opportunities for co-working, teleworking, and other arrangements enabled by telecommunications technology.
 - Collaborate to develop a coworking space to foster entrepreneurship, innovation and to enable convenient telecommuting to regional employers in Portland or elsewhere. Explore unique partnership opportunities for cooperative or pop-up telecommuting spaces.
- 5.3 Incubate new businesses and start-ups.
 - Maintain a list of funding sources for start-up and expansion grants for locally-owned businesses.
 - Coordinate with partners to improve access to funding and resources available through local foundations, non-profits and other funders in McMinnville to empower local capacity-building efforts.
 - Study the feasibility of aggregators or cooperatives to efficiently distribute locally-made products from McMinnville businesses to larger metropolitan markets.
- 5.4 Create new talent pipelines for tech-related occupations.
 - Connect business leaders with interested local educators to develop extracurricular activities and to improve current curricula and align education and training with emerging employer needs.
 - Cultivate relationships with post-secondary institutions to ensure awareness of job opportunities in McMinnville, and ensure that McMinnville job opportunities are represented on school job boards, in job fairs, and other promotional events.
- **6. Be a Leader in Hospitality and Place-Based Tourism**
 - 6.1 Make downtown the best it can be.
 - Evaluate current zoning, historical districts and designations, and existing land use patterns, including underutilized parcels, to ensure that key downtown parcels offer the highest and best use for their location.
 - Communicate with County officials to explore the potential for a purpose-built County facility, outside of downtown, that includes a courthouse, commissioners offices, and clerks office.
 - Continue to evaluate new downtown events to diversify downtown events and activities and publicize emerging retailers or other non-retail organizations.
 - Evaluate the feasibility of improving or expanding the provision of public restrooms in the downtown area.
 - 6.2 Become the preferred destination for wine-related tourism.

- Collaborate to expand marketing of McMinnville and Yamhill Valley products and to improve national and international recognition of local wine.
 - Connect hoteliers and other hospitality professionals in Oregon and elsewhere to local opportunities for high-quality additions to McMinnville’s current hospitality offerings.
 - Collaborate with Travel Oregon to host a tourism workshop for McMinnville business owners to establish and leverage competitive advantages of over similar regional offerings.
 - Leverage Linfield’s wine studies program to identify opportunities to increase visitation to the Willamette Valley region and to the viticultural areas immediately surrounding McMinnville
 - 6.3 Diversify tourism destinations beyond wine.
 - Create branded itineraries for a range of activities and distribute online and in hard copy throughout McMinnville and at local and regional airports to offer pre-planned adventures for visitors.
 - Optimize social media performance by continuing and expanding the use of hash tags, branded icons, slogans, and other techniques to highlight and encourage sharing of McMinnville-based experiences.
 - Conduct a feasibility study to identify the potential costs and economic and fiscal impacts of building an indoor sports complex for local recreation and regional event use.
 - Engage the Wings and Waves water park to identify and pursue opportunities for growth and expansion.
 - Become a national destination for bicycle tourism and other recreational and leisure activities.
 - 6.4 Market and promote McMinnville.
 - Develop and maintain robust relationships with Travel Oregon, and seek promotion opportunities accordingly.
 - Document and track the economic impact of tourism and outdoor recreation to Yamhill Valley communities.
 - Work with visit McMinnville and local hoteliers to identify gaps in available conference space and to establish a plan to expand McMinnville’s offerings for small and large conferences.
- **7. Align and Cultivate Opportunities in Craft Beverages and Food Systems**
 - 7.1 Maintain prominence in wine while looking for opportunities to innovate within supply chains, viticulture and production.

- Convene a technical assistance panel to identify new opportunities in urban wine-making and distribution and to establish a framework for collaboration and innovation in wine-making that best leverages public and private resources and identifies critical public/private partnerships.
 - Expand programming at IPNC to include a technical component for knowledge sharing between wine-makers and other professionals in viticulture and oenology.
 - Encourage collaborative research at Linfield and Chemeketa CC and facilitate connections between these schools and other viticulture programs nationally.
 - Proactively recruit beverage-makers that complement existing wineries and breweries, such as cideries and distilleries.
- 7.2 Locate higher job-density food and beverage activities within McMinnville.
- Ensure the sufficiency of regulations in applicable zones to accommodate urban wine-making and other non-retail aspects of the wine industry, including transportation and distribution.
 - Encourage further clustering of wine-oriented business in the Granary/Alpine District.
 - Contact wineries throughout the region to identify growth-oriented operations needing new or larger space, and target marketing and recruitment efforts accordingly.
 - Recruit food processing and production companies that offer synergies with wineries, such as charcuterie and cheese companies.
 - Coordinate with educational institutions to anticipate needs and ensure that McMinnville remains a hub for wine education while expanding culinary education and training locally
 - Hire an Agriculture Coordinator or Resource Officer to connect producers with resources and coordinate efforts to innovate within wine and agriculture.
 - Convene a group of wine-makers and entrepreneurs to evaluate the feasibility of a wine maker-space or similarly collaborative wine-making space for small producers, experimental products, or research.
 - Conduct a feasibility study and potentially complete a business plan for an integrated food hub and permanent, year-round farmer's market.
 - In partnership with other Oregon cities and counties, commission a study of value-added industry successes and best practices related to agriculture in western U.S. and Canadian communities.

- Liaise with researchers at OSU’s Small Farms Program and other similar agricultural programs throughout the state and the region.
 - Invite educators in the region to conduct research and teaching based in the Yamhill Valley, including possible distance learning and online college course options.
 - Explore opportunities for expanded agricultural production using hydroponics, aquaponics and other similar cultivation methods
- 7.4 Open new markets for local agricultural products.
 - Establish a branding and marketing program for local agricultural products, such as “Yamhill County Grown” or similar.
 - Develop and market a local Farm-to-Table program by connecting Yamhill Valley farmers with local restaurants.
 - Explore the potential for a cooperative distribution model to move McMinnville’s agricultural products to restaurants in the Portland metro.
- 7.5 Encourage a holistic approach to local food culture, improving connections to the local producers and cultivating a community of exceptional restaurants and culinary establishments.
 - Create a forum for local restaurateurs to connect with local agricultural producers and improve culinary offerings.
 - Work with stakeholders to establish a local demonstration or innovation kitchen that can be rented to test new recipes, host small events, or otherwise incubate local culinary endeavors.
 - Publicize local food offerings across all price levels through a branded guide to local cuisine, and distribute at and regional hotels, wineries, airports and other places frequented by travelers.
 - Partner on development of a “Farm-for-a-Day” agri-tourism program connecting local farming operations to paying guests.
 - Evaluate alignment of current food cart regulations with community goals.
- 7.6 Preserve natural assets while ensuring long-term stability in agricultural production.
 - Espouse an approach to environmental stewardship and encourage participation and support by local farmers for initiatives in keeping with this approach.
 - Establish and facilitate a business leadership group to identify solutions to sustainability challenges.

- Establish local resiliency infrastructure and training through programs like FEMA’s Community Emergency Response Teams (CERT) or other community-based models
- **8. Proactively Assist Growth in Education, Medicine and Other Sciences**
 - 8.1 Leverage institutional land assets and support planning for institutional growth and clustering.
 - Ensure that the Willamette Valley Medical Center can accommodate future growth through a master plan that includes supportive zoning, targeted capital improvements and other tools.
 - Use regulatory tools and constructive dialogue with businesses to encourage clustering of medical-professional uses near the Willamette Valley Medical Center and to create a regional anchor for health care.
 - Engage McMinnville’s large institutions in a dialogue about proactive planning for large and underutilized land assets.
 - Assess the desirability and potential feasibility of the creation of a “university district” or similar near one or more of McMinnville’s college campuses.
 - 8.2 Assist in recruitment and training to fill specific workforce needs.
 - Identify and fill gaps in education and training opportunities at local educational institutions for in-demand skills in “Eds and Meds” occupations.
 - Connect employers in education and health care to national skilled workforce pools through branding, recruitment, relocation incentives and other tools.
 - Explore public-private and other partnerships to improve amenities for students and employees, potentially including an expanded supply of student housing or housing appropriate for students on or near Linfield and Chemeketa campuses, and improved transportation to campuses and other institutions.
 - 8.3 Support the expansion of programmatic offerings at local institutions.
 - Work with Linfield College and Chemeketa CC to assess demand for education and training in health care and related services and to expand programming accordingly.
 - Engage Chemeketa CC leadership in a dialogue to explore the creation an on-site culinary and hospitality program.
 - Collaborate with leadership at the school district and at Linfield and Chemeketa to better engage Oregon’s four-year public universities.

- Connect local students with opportunities to work with OSU Extension, in labs or to participate in other UO and OSU programs prior to high school graduation.
- Explore the creation of an aviation education program that leverages McMinnville's existing infrastructure and workforce assets.
- Identify opportunities to bring programming offered at other Chemeketa Community College campuses to McMinnville, particular when serving established local industries.
- Foster R&D opportunities for existing and emerging industries.
- 8.4 Improve and expand connections between key institutions and the City of McMinnville.
 - Create safer and more intuitive physical connections to McMinnville from Linfield and Chemeketa, including better sidewalks, lighting and public transportation, particularly along Davis Street.
 - Proactively engage students in community events to improve dialogue between permanent residents and college attendees.

5. Forecast Employment and Land Needs

Goal 9 requires cities to prepare an estimate of the amount of commercial and industrial land that will be needed over a 20-year planning period. The estimate of employment land need and site characteristics for McMinnville is based on expected employment growth and the types of businesses that are likely to locate in McMinnville over the 5-, 10-, 20-, and 46-year periods. This chapter presents the buildable land inventory, analysis of target industries that build from recent economic trends, an employment forecast and associated land needs, and other land needs that aren't accounted for by the employment forecast.

EOA Update Process

The updated employment forecast and land needs estimates started with discussion of the assumptions used in the 2013 EOA. The project team conducted a detailed review of the 2013 assumptions and presented the assumptions, along with updated and new data to the Project Advisory Committee (PAC) for review and discussion during the September and October PAC meetings. The information generated considerable discussion at the PAC and ultimately resulted in PAC recommendations regarding the assumptions. The employment forecasts and land need estimates presented in this chapter reflect the PAC recommendations.

Buildable Lands Inventory

The buildable lands inventory is intended to identify commercial and industrial lands that are available for development for employment uses within the McMinnville UGB. The inventory is sometimes characterized as *supply* of land to accommodate anticipated employment growth. Population and employment growth drive *demand* for land. The amount of land needed depends on the type of development and other factors.

This chapter presents results of the commercial and industrial buildable lands inventory for the McMinnville UGB. The results are based on analyses of Yamhill County GIS property data and State of Oregon GIS employment data by ECONorthwest and reviewed by City staff. The remainder of this chapter summarizes key findings of the draft buildable lands inventory.

The general steps in the buildable lands inventory are:

1. Generate UGB "land base"
2. Classify lands by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

A key step in the buildable lands analysis is to classify each tax lot into a set of mutually exclusive categories based on development status. For the purpose of this study, all commercial

and industrial tax lots in the UGB are classified into one of the following categories and based on a tax lot's status as of January 2019:

- *Vacant land.* Vacant land is defined as tax lots either (a) Equal to or larger than on half-acre not currently containing permanent buildings or improvements; or (b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements. This is consistent with OAR 660-009-005(14).
- *Partially vacant land.* Partially vacant land is defined as tax lots between one and five acres occupied by a use that could still be further developed based on the zoning. The final determination of partially vacant land was based on a visual assessment of aerial imagery and City staff verification.
- *Developed land.* OAR 660-009-0005(1) defines developed land as “Non-vacant land that is likely to be redeveloped during the planning period.” Lands not classified as vacant, partially-vacant, or public or exempt are considered developed.
- *Public or exempt land.* Lands in public or semi-public ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches, institutions, and other semi-public organizations, and properties with conservation easements. Public lands were identified using the Yamhill County Assessment property tax exemption codes and City staff verification.

The next section provides a summary of the results of the commercial and industrial buildable lands inventory for the McMinnville UGB in both tabular and map formats. Appendix A presents the detailed methodology for developing the inventory.

Buildable Lands Inventory Results

Exhibit 35 summarizes all land included in the employment land base (e.g., lands with plan designations that allow employment) in the McMinnville UGB. ECONorthwest used this land base in the buildable lands inventory for McMinnville. The land base includes traditional employment designations within the McMinnville UGB, which includes about 1,388 acres in 958 tax lots in total.⁹⁶

Exhibit 35. Tax lots and total acres in employment land, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Zone/Plan Designation	Number of taxlots	Percent	Total taxlot acreage	Percent (total)
Commercial	708	74%	580	42%
C-1 Neighborhood Business	1	0%	1	0%
C-2 Travel Commercial	3	0%	13	1%
C-3 General Commercial	641	67%	487	35%
O-R Office Residential	58	6%	12	1%
Commercial Plan Des.	4	0%	54	4%
EF-80 (County Zone)	1	0%	13	1%
Industrial	250	26%	809	58%
M-1 Light Industrial	43	4%	74	5%
M-2 General Industrial	199	21%	594	43%
M-L Limited Light Industrial	2	0%	115	8%
Industrial Plan Des.	6	1%	25	2%
Total	958	100%	1,388	100%

Development Status

Exhibit 36 shows commercial and industrial land in McMinnville by development status. Of the 1,388 total acres, about 861 acres (62%) are in classifications with no development capacity (or, “committed acres”). Of the remaining 527 acres, 111 acres (8%) are constrained and 416 acres (30%) are buildable land with development capacity. Appendix A provides more detail about the constraints associated with employment land, as recommended by the PAC.

Exhibit 36. Employment acres by classification and plan designation, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

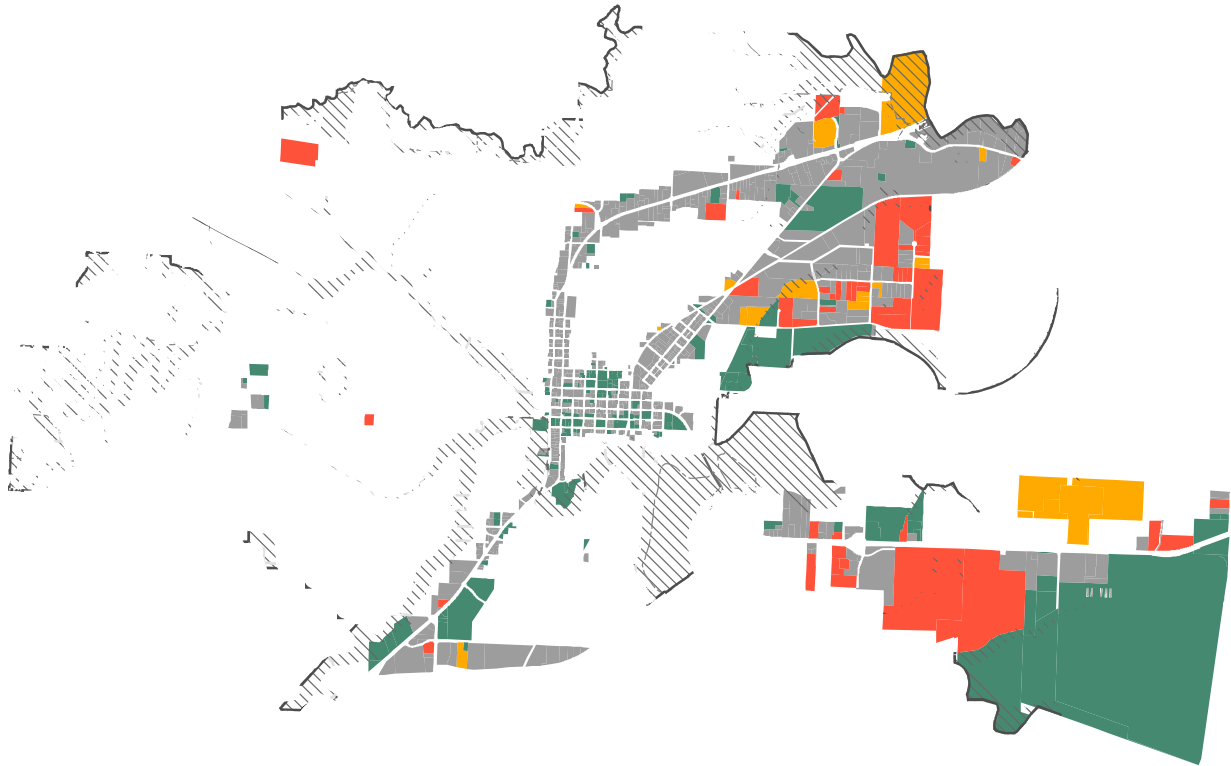
⁹⁶ Note: the 2013 EOA reported a total acreage that included land with a public or semi-public (i.e., institutional) use. Since the 2020 update accounted for public and semi-public land need separately, the resulting total acreage of employment land is lower.

Zone/Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
Commercial	580	432	54	94
C-1 Neighborhood Business	1	1	0	-
C-2 Travel Commercial	13	0	-	12
C-3 General Commercial	487	418	6	63
O-R Office Residential	12	11	0	-
Commercial Plan Des.	54	1	48	5
EF-80 (County Zone)	13	-	-	13
Industrial	809	429	57	323
M-1 Light Industrial	74	55	5	14
M-2 General Industrial	594	347	26	221
M-L Limited Light Industrial	115	25	3	88
Industrial Plan Des.	25	2	22	-
Total	1,388	861	111	416

Draft

Exhibit 37. Employment land by classification with development constraints, McMinnville UGB, 2019

Status



Vacant Buildable Land

The next step in the commercial and industrial buildable land inventory was to net out portions of vacant tax lots that are unsuitable for development. Areas unsuitable for development fall into three categories: (1) developed areas of partially vacant tax lots, (2) areas with service constraints, (3) areas with physical constraints (areas with wetlands, floodways, floodplain, and steep slopes as summarized in Appendix A).

Exhibit 38 shows unconstrained buildable acres for vacant and partially vacant land by zone (or plan designation). The results show that McMinnville has about 416 unconstrained buildable acres in commercial and industrial designations. Of this, 22% (94 acres) is in commercial designations, and 78% (323 acres) is in industrial designations.

Also, in McMinnville, it is common that development applications include approvals for “Planned Developments” which may modify the underlying zoning regulations, and may include an associated master plan for a property. Permitted uses in zoning districts may be amended to include other uses on a portion of the property, or certain uses otherwise permitted in the underlying zoning may be precluded by the Planned Development overlay regulations. For example, while the Evergreen property is zoned C-3 General Commercial, it is subject to a Planned Development overlay that restricts uses to certain tourism-related uses.

Exhibit 38. Employment land with unconstrained development capacity (vacant and partially vacant) by plan designation, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Zone/Plan Designation	Total buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant
Commercial	94	60	33
C-1 Neighborhood Business	-	-	-
C-2 Travel Commercial	12	12	-
C-3 General Commercial	63	35	28
O-R Office Residential	-	-	-
Commercial Plan Des.	5	-	5
EF-80 (County Zone)	13	13	-
Industrial	323	305	17
M-1 Light Industrial	14	12	2
M-2 General Industrial	221	206	15
M-L Limited Light Industrial	88	88	-
Industrial Plan Des.	-	-	-
Total	416	366	50

Exhibit 39 shows the size of lots by plan designations for buildable employment land. McMinnville has 18 lots between 0.5 and 1 acres (12.7 acres of land), 34 lots between 1 and 5 acres in size (72.4 acres of land), 10 lots between 5 and 10 acres in size (64.6 acres of land), 3 lots between 10 and 20 acres in size (39.9 acres), and 4 lots over 20 acres in size (226.7 acres of land).

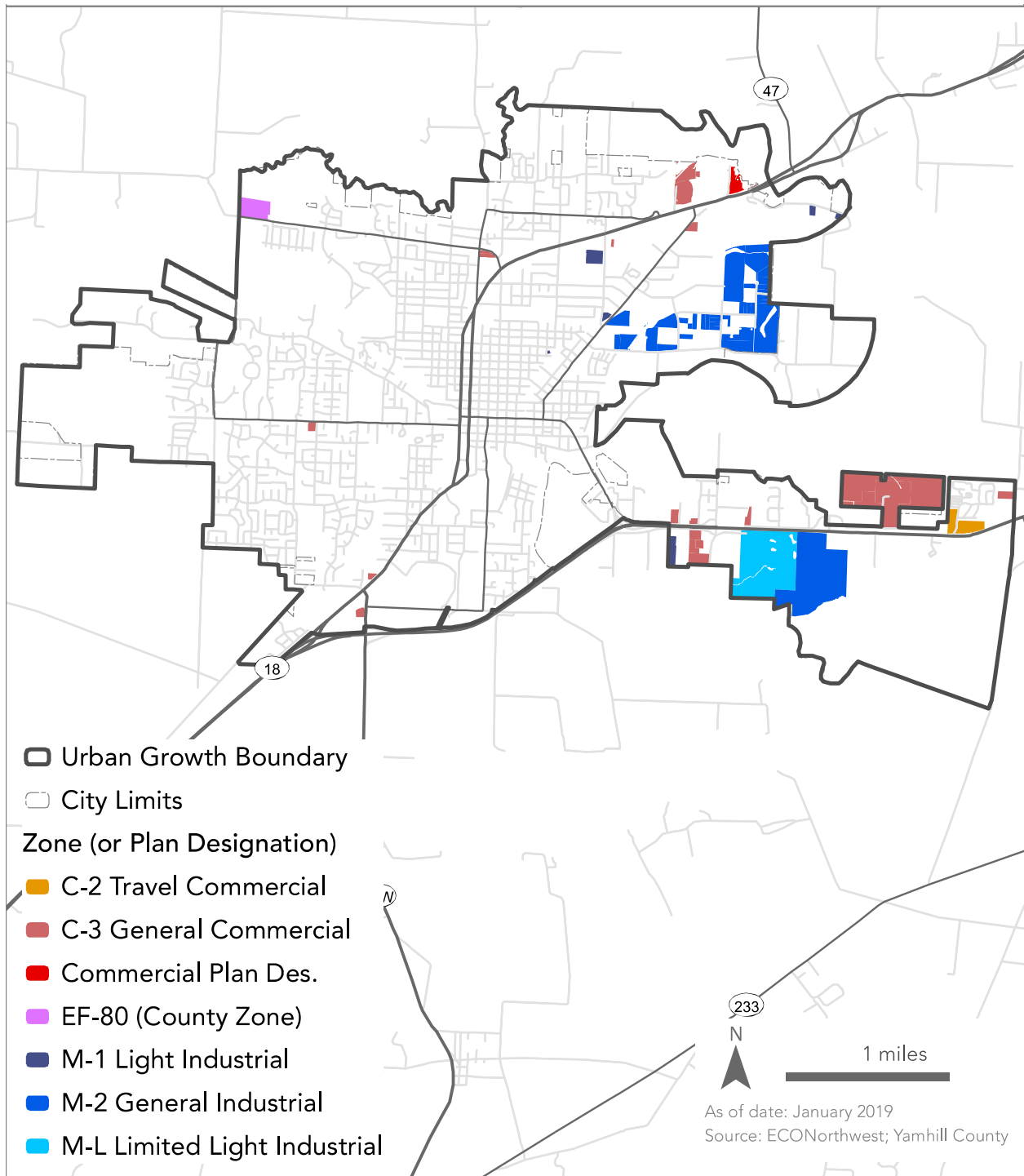
Exhibit 39. Lot size by plan designation, buildable acres, McMinnville UGB, 2019

	Buildable acres in taxlots								Total
	<0.50 acre	0.50-0.99 acres	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00- 19.99 acres	20.00- 49.99 acres	50.00+ acres	
Buildable acres on partially vacant tax lots									
<i>Commercial</i>	0.4	0.8	1.5	4.5	13.8	12.1	-	-	33
C-3 General Commercial	0.4	0.8	1.5	4.5	8.8	12.1	-	-	28
Commercial Plan Des.	-	-	-	-	5.0	-	-	-	5
<i>Industrial</i>	0.5	3.5	5.0	8.1	-	-	-	-	17
M-1 Light Industrial	0.1	-	2.3	-	-	-	-	-	2
M-2 General Industrial	0.4	3.5	2.7	8.1	-	-	-	-	15
Buildable acres on vacant tax lots									
<i>Commercial</i>	-	2.0	7.5	24.6	12.9	13.5	-	-	60
C-2 Travel Commercial	-	-	-	5.0	7.2	-	-	-	12
C-3 General Commercial	-	2.0	7.5	19.7	5.6	-	-	-	35
EF-80 (County Zone)	-	-	-	-	-	13.5	-	-	13
<i>Industrial</i>	-	5.4	15.8	5.3	37.9	14.4	49.5	177.1	305
M-1 Light Industrial	-	1.0	-	-	10.9	-	-	-	12
M-2 General Industrial	-	4.4	15.8	5.3	27.0	14.4	49.5	89.6	206
M-L Limited Light Industrial	-	-	-	-	-	-	-	87.5	88
Acreage subtotal	0.9	11.8	29.8	42.6	64.6	39.9	49.5	177.1	416
Number of partially vacant taxlots with buildable acreage									
<i>Commercial</i>	1	1	1	1	2	1	-	-	7
C-3 General Commercial	1	1	1	1	1	1	-	-	6
Commercial Plan Des.	-	-	-	-	1	-	-	-	1
<i>Industrial</i>	2	5	4	2	-	-	-	-	13
M-1 Light Industrial	1	-	2	-	-	-	-	-	3
M-2 General Industrial	1	5	2	2	-	-	-	-	10
Number of vacant taxlots with buildable acreage									
<i>Commercial</i>	-	3	5	8	2	1	-	-	19
C-2 Travel Commercial	-	-	-	1	1	-	-	-	2
C-3 General Commercial	-	3	5	7	1	-	-	-	16
EF-80 (County Zone)	-	-	-	-	-	1	-	-	1
<i>Industrial</i>	-	6	11	2	6	1	2	2	30
M-1 Light Industrial	-	1	-	-	2	-	-	-	3
M-2 General Industrial	-	5	11	2	4	1	2	1	26
M-L Limited Light Industrial	-	-	-	-	-	-	-	1	1
Lot subtotal	3	15	21	13	10	3	2	2	69

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Buildable Lands Inventory

Vacant and Partially Vacant Commercial and Industrial Land



Forecast of Employment Growth and Commercial and Industrial Land Demand

Demand for industrial and commercial land will be driven by the expansion and relocation of existing businesses and by the growth of new businesses in McMinnville. The employment projections in this section build off of McMinnville's existing employment base, assuming overall future growth is similar to Yamhill County's long-term historical employment growth rates.

The employment forecasts do not take into account a major change in employment that could result from the location (or relocation) of one or more large employers in the community during the planning period that would account for a substantial portion of the overall forecast. Such a major change in the community's employment would exceed the growth anticipated by the city's employment forecast and its implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are difficult to include in a study of this nature. The implications, however, are relatively predictable: more demand for land (of all types) and public services.

The 2013 EOA defined the process of projecting demand for industrial and commercial land as a series of 10 steps. The table below outlines these steps and identifies the recommendations, if applicable, decided by the PAC during meetings held between July and November of 2019. Generally, the PAC started with a discussion of the assumptions used in the 2013 EOA, and reviewed alternatives for the 2020 update.

Exhibit 41. Steps to project demand for commercial and industrial land in McMinnville

Step	Purpose	Options	Recommended Option
Step 1. Set Forecast Time Period	Establish the 20-year planning period; select a base year	2021-2041 with adjustments to account for 2019-21	The state requires a 20-year planning period; 2021-41 is used for consistency with the Housing Needs Analysis
Step 2. Population Forecast	The population forecast does not serve a direct purpose other than being the basis for one of the safe harbor employment forecast methods.	Use the required PSU forecast.	State policy allows no flexibility in this process.
Step 3. Evaluate UGB Employment Trend	Inform allocations of employment to land use types.	This is an analytical step and does not require assumptions.	
Step 4. Evaluate and Select Job Forecast	Develop a 20- and 46-year employment forecast.	Option 1 (low-growth, 1.13%): OED safe harbor method Option 2 (medium-growth, 1.36%): PSU safe harbor population forecast Option 3 (high-growth, 1.70%): Non-safe harbor method used as the baseline in the 2013 EOA.	Option 2
Step 5. Allocate Job Growth by Land Use Type Scenarios	Allocate jobs to land using land use types.	Option 1: 2013 EOA Method Option 2: Four land use types (service commercial, retail, industrial, govt) Option 3: Five land use types (the four above plus a tourism category).	Option 3
Step 6. Allocate Job Growth by Land Development Status	This step makes deductions for employment that will not require vacant land.	Option 1: 17% (per 2013 EOA) Option 2: Alternative assumption justified by PAC.	5% for all land use types
Step 7. Apply Job Density Factors	Analyze existing job densities to inform density factors (expressed in employees per acre - EPA)	Option 1: use factors from the 2013 EOA Option 2: use modified factors based on analysis	11 employees per acre for industrial land use type 23 employees per acre for commercial land use types
Step 8. Estimate 20-Year Employment Land Demand	Apply all of the assumptions to the land demand model to estimate 20- and 46- year land demand.	No options - this is an analytical step	n/a
Step 9. Estimate Additional Land Need Not Determined in Forecast	This step accounts for other types of employment land need including exogenous other needed sites and retail leakage.	Option 1: Do not assume additional need Option 2: Provide findings and analysis that supports additional land needs.	Option 2.
Step 10. Compare Land Demand to Supply	Compare land need to the supply as documented in the buildable land inventory. Conduct one further step of assessing land suitability.	No options - this is an analytical step	n/a
Step 11. Evaluate Policy Options and Objectives	This update will not include a top to bottom review of policy options and objectives - those were assessed in the 2013 EOA and in the 2019 EDSP. Some modifications may be required to reflect changing conditions.		

Employment Base for Projection

This section addresses Step 1: Set Forecast Time Period, Step 2: Population Forecast, and Step 3: Evaluate UGB Employment Trend.

The purpose of the employment projection is to model future employment land need for general employment growth. The forecast of employment growth in McMinnville starts with a base of employment growth on which to build the forecast. Exhibit 42 shows ECONorthwest's estimate of total employment in McMinnville in 2017.

To develop the figures, ECONorthwest started with estimated covered employment in the McMinnville UGB from confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Based on this information, McMinnville had about 14,964 covered employees in 2017.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that *covered* employment reported by the Oregon Employment Department for Yamhill County is only about 76% of *total* employment reported by the U.S. Department of Commerce.⁹⁷ We evaluated this ratio for each industrial sector for Yamhill County and used the resulting ratios to determine the number of non-covered employees. This allowed us to determine the total employment in McMinnville. Exhibit 42 shows McMinnville had an estimated 20,990 *total* employees within its UGB in 2017.

The PAC approved the use of the covered to total employment ratios shown in Exhibit 42.

⁹⁷ **Covered** employment includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as "1099 employees"), or some railroad workers. Covered employment data is from the Oregon Employment Department.

Total employment includes all workers based on data from the U.S. Department of Commerce. Total employment includes all covered employees, plus sole proprietors and other non-covered workers.

Exhibit 42. Estimated total employment by sector, McMinnville UGB, 2017

Sector	Generalized Land Use Type	Covered Employment	Estimated Total Employment	Covered % of Total
Agriculture, Forestry, and Mining	Industrial	356	356	100%
Construction	Industrial	585	852	69%
Manufacturing	Industrial	2,277	2,549	89%
Wholesale Trade	Industrial	127	180	71%
Retail Trade	Retail Commercial	2,170	2,842	76%
Transportation and Warehousing and Utilities	Industrial	140	250	56%
Information	Office & Commercial Services	127	211	60%
Finance and Insurance	Office & Commercial Services	459	912	50%
Real Estate and Rental and Leasing	Office & Commercial Services	113	867	13%
Professional and Technical Services	Office & Commercial Services	367	998	37%
Management of Companies	Office & Commercial Services	117	161	73%
Admin. and Support/Waste Mgmt/Remediation Serv.	Office & Commercial Services	584	1,044	56%
Health Care and Social Assistance; Private Education Serv.	Office & Commercial Services	3,159	4,457	71%
Arts, Entertainment, and Recreation	Tourism Services	168	458	37%
Accommodation and Food Services	Tourism Services	1,503	1,666	90%
Other Services	Office & Commercial Services	630	1,105	57%
Government	Government	2,082	2,082	100%
Total Non-Farm Employment		14,964	20,990	76%

Source: 2017 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.

Forecast growth rates

This section addresses Step 4: Evaluate and Select Job Forecast.

The employment forecast covers the 2021 to 2067 period, with increments of 5, 10, 20, and 46-years. This forecast requires an estimate of total employment for McMinnville in 2021. While there is no required method for employment forecasting, OAR 660-024-0040(9) sets out some optional “safe harbors”⁹⁸ that allow a city to determine employment land need. The PAC evaluated three options for the forecast, including use of two safe harbors from OAR 660-024.

- **Low-growth scenario (1.13%).** The low-growth option uses the safe harbor that allows a city to base their employment forecast on regional employment projections from the Oregon Employment Department (OED).⁹⁹ The regional employment projection for the

⁹⁸ A safe harbor is an assumption that a city can use in a housing needs analysis that the State has said will satisfy the requirements of Goal 14. OAR 660-024 defines a safe harbor as, “... an optional course of action that a local government may use to satisfy a requirement of Goal 14. Use of a safe harbor prescribed in this division will satisfy the requirement for which it is prescribed. A safe harbor is not the only way or necessarily the preferred way to comply with a requirement and it is not intended to interpret the requirement for any purpose other than applying a safe harbor within this division.”

⁹⁹ OAR 660-024-0040(9) states: “The following safe harbors may be applied by a local government to determine its employment needs for purposes of a UGB amendment under this rule, Goal 9, OAR chapter 660, division 9, Goal 14 and, if applicable, ORS 197.296.

(a) A local government may estimate that the current number of jobs in the urban area will grow during the 20-year planning period at a rate equal to either:

(A) The county or regional job growth rate provided in the most recent forecast published by the Oregon Employment Department; or

Mid-Valley Area (Linn, Marion, Polk, and Yamhill Counties) for the 2017 to 2027 period shows that employment will grow at an average annual growth rate of 1.13%.

- **Medium-growth scenario (1.36%).** The medium-growth option is another safe harbor, based on the rate of growth from the current population projections from Portland State University. The coordinated population forecast for the McMinnville UGB between 2021 and 2041 shows that population will grow at an average annual growth rate of 1.36%, and long-term average annual growth rate between 2021 and 2067 of 1.19%.
- **High-growth scenario (1.70%).** The high-growth option aligns with the moderate (referred to as “baseline”) forecast rate used in the 2013 EOA. The 2013 EOA evaluated low, moderate, and high growth alternative scenarios. At the time the 2013 EOA was completed, the OED forecast for the Mid-Valley region was the “low-growth” scenario at 1.5%, and the “high-growth” scenario of 1.9% was based on the OED forecast for the Portland metro area. This option does not conform to the safe harbors in OAR 660-024-0040(9) and would require substantial evidence as a factual basis for choosing a non-safe harbor growth rate. Examples of substantial evidence to justify a non-safe harbor growth rate include adopted and relevant economic development policies or site needs considerations.

Exhibit 43 shows employment growth in McMinnville between 2021 and 2041, as well as 2021 and 2067, based on the average annual growth rate of each forecast scenario. The estimated number of employees for the beginning of the planning period is extrapolated from the estimate of total employment in 2017 from Exhibit 42 (20,990 employees), using the appropriate forecast rate for each scenario.

For the 2021 to 2041 period, the low-growth scenario would result in an increase of 5,544 employees; an increase of 6,885 employees in the medium-growth scenario; and an increase of 9,003 employees in the high-growth scenario.

(B) The population growth rate for the urban area in the appropriate 20-year coordinated population forecast determined under rules in OAR chapter 660, division 32.

Exhibit 43. Employment growth scenarios, total employment, McMinnville UGB, 2021–2067

Year	Low-growth (based on OED forecast)	Medium-growth (based on PSU population forecast)	High-growth (based on 2013 EOA moderate forecast)
2021	21,957	22,157	22,454
2026	23,228	23,708	24,429
2031	24,573	25,367	26,577
2041	27,501	29,042	31,457
2067	36,853	38,158	48,759
Change 2021 to 2041			
Employees	5,544	6,885	9,003
Percent	25%	31%	40%
AAGR	1.13%	1.36%	1.70%
Change 2021 to 2067			
Employees	14,896	16,001	26,305
Percent	68%	72%	117%
AAGR	1.13%	1.19%	1.70%

Source: ECONorthwest

The PAC recommended using the medium-growth option (1.36% AAGR) for the employment forecast for the 2021-2067 planning period. The results of the employment forecast presented in the EOA reflect this growth rate.

Allocation to land use types

This section addresses Step 5: Allocate Job Growth by Land Use Type Scenario

The next step in forecasting employment is to allocate future employment to broad categories of land use. Firms wanting to expand or locate in McMinnville will look for a variety of site characteristics, depending on the industry and specific circumstances. For example, small retail stores may look for an existing space in a shopping center in an area with high visibility for attracting customers, while a new food product manufacturer may need a mid-sized site of 5 to 10 acres in an area with direct access to a state highway.

At direction from the PAC, ECONorthwest grouped employment into five broad proposed categories of land use based on North American Industrial Classification System (NAICS): industrial, retail commercial, office and commercial services, tourism services, and government.¹⁰⁰ This approach differs from the 2013 EOA, which defined three land use types—commercial, industrial, and institutional. The primary difference in the proposed updated categories is a separation of different types of commercial land into retail, office, and tourism commercial. Some of these land use types might have different site needs considerations, and these land use types better align with the City’s economic development goals, such as a focus on tourism-related employment. This was based on identifying commercial sub-types associated with the target industries in the Economic Development Strategy, to assess whether land needs

¹⁰⁰ The generalized land use type categories are defined by the NAICS sectors listed in Exhibit 42.

might differ for these commercial sub-types. ECONW informed the PAC that the sub-types could ultimately be recombined at the end of the analysis if the differentiation didn't prove useful. Ultimately, the three commercial subtypes were recombined into a single commercial category, as the employment sectors didn't necessarily correlate to distinct land uses that would be differentiated through zoning. For example, the NAICS codes included in the tourism category included food and beverage, which are typically permitted in the same zones as retail commercial. Ultimately, the land uses almost exclusively related to destination tourism uses that weren't consistent with the [employment forecast and](#) employment density factors were instead addressed as [other needed sites and](#) that is addressed in more detail in the respective section in this chapter.

Exhibit 44 shows the expected share of employment by land-use type in 2021 and the forecast of employment growth by land-use type in 2041 in the McMinnville UGB, and Exhibit 45 shows employment growth for all growth increments. The PAC recommended the future share of land use types will align with both projections from the Oregon Employment Department (OED) for the Mid-Valley Area, as well as economic development goals and policies as stated in the *MAC-Town 2032 Economic Development Strategic Plan* and *Three Mile Lane Area Plan*.

OED projects that in the 2017 to 2027 period, the share of future employment in industrial sectors will increase; the share of retail commercial as well as government employment will decrease; and the share of office and commercial services and tourism services will increase.¹⁰¹ These trends closely align with McMinnville's future economic development goals, though the *MAC-Town 2032 Economic Development Strategic Plan* estimates growth in office employment, as well as an emphasis on tourism-related services, advanced manufacturing (i.e., industrial), and food and beverage manufacturing target industries.

The values highlighted in green in Exhibit 44 show the future share of total new employment for each land use type in 2041, based on the information summarized above. **The green highlighted percentages in the 2041 “% of Total” column are assumptions recommended by the PAC.**

Exhibit 44. Forecast of employment growth by land use type, McMinnville UGB, 2021–2041

Land Use Type	2021		2041		Change 2021 to 2041
	Employment	% of Total	Employment	% of Total	
Industrial	4,431	20%	6,099	21%	1,667
Retail Commercial	3,102	14%	3,485	12%	383
Office & Commercial Services	10,192	46%	13,650	47%	3,458
Tourism Services	2,216	10%	3,485	12%	1,269
Government	2,216	10%	2,323	8%	108
Total	22,157	100%	29,042	100%	6,885

Source: ECONorthwest

¹⁰¹ Oregon Employment Department Industry Employment Forecast 2017-2027, Mid-Valley Area (Linn, Marion, Polk, and Yamhill Counties). Published June 26, 2018.

Exhibit 45. Forecast of employment growth by land use type, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	New Employment Growth			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	417	834	1,667	3,582
Retail Commercial	96	192	383	1,477
Office & Commercial Services	864	1,729	3,458	7,742
Tourism Services	317	635	1,269	2,363
Government	27	54	108	837
Total	1,721	3,443	6,885	16,001

Source: ECONorthwest

Estimate of Demand for Commercial and Industrial Land

The next step in the employment forecast is to estimate the demand of commercial and industrial land.

The estimate of demand for commercial and industrial land included three components: (1) employment forecast and employment density assumptions, with deduction for employment that won't require vacant employment land, (2) recapture of existing retail leakage, and (3) [exogenous other needed sites](#) which are not accounted for in the [employment forecast and average](#) employment density factors; these are target industries and uses in the *MAC-Town 2032 Economic Development Strategic Plan*. In addition, employment for public/semi-public uses was backed out of the employment forecast and land needs were calculated separately.

The employment forecast includes all new employment in the McMinnville UGB. Some of this employment, however, will not be located on vacant commercial or industrial land. Other lands that will accommodate new employment growth include residential land and redevelopment sites. Another factor in estimating the demand for commercial and industrial land is consideration for employment density, or employees per acre. Appendix B provides additional background information developed for the PAC to make recommendations for new employment on vacant commercial and industrial land, as well as employment density. Government employment was also backed out of the forecast because government land need was addressed as part of the public/semi-public land need process.

The next section describes the approach for (1) estimating employment on vacant commercial and industrial land with considerations for employment on redevelopment sites, and (2) estimating employees per acre by land use type.¹⁰²

¹⁰² Note: the government land use type is excluded from the remaining employment forecast calculations, as we account for government employment in calculations for other land needs. Deductions for private education were also made in the office and commercial services category, based on employment reported (IPEDS data) for Linfield College of 360 employees. Adjustments for future employment at Linfield assumed the share of Linfield employment would remain the same.

Employment that does not require vacant commercial and industrial land

This section addresses Step 6: Allocate Job Growth by Land Development Status

Some employment growth in McMinnville will not require vacant (or partially vacant) employment land over the planning period. This includes redevelopment of areas with existing employment, where redevelopment increases the intensity of employment uses (i.e., more employees are accommodated on the same amount of land). The 2013 EOA assumed that 17% of employment for each land use type would not require vacant commercial or industrial land.¹⁰³ **Based on the information presented in Appendix B, the PAC determined that a reasonable assumption would be 5% refill/redevelopment for both commercial and industrial employment.**

Exhibit 46 shows the estimate of employment on vacant commercial and industrial land by land use type for each scenario, using the 5% assumption for employment that will occur through redevelopment, refill, or on non-employment sites. The table (reading left to right) starts with the number of new employment growth calculated over the planning period; then calculates the amount of employment that does not require vacant employment land based on 5% of the new employment growth; and results in the amount of new employment growth on vacant industrial and commercial land. From this point in the analysis forward, the commercial land use types (i.e., retail commercial, office and commercial services, and tourism services) were combined as the land needs for these land use types overlap.

Exhibit 46. Estimate of employment on vacant land by land use type, McMinnville UGB, 2021–2041

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	83	1,584
Commercial	4,998	249	4,749
Total	6,665	332	6,333

Source: ECONorthwest Note: As described above, government employment is calculated separately and is not included in Exhibits 45-48.

Exhibit 47. Estimate of employment on vacant land by land use type, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	Employment on Vacant Land			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	396	792	1,584	3,403
Commercial	1,187	2,373	4,749	10,756
Total	1,582	3,165	6,333	14,159

Source: ECONorthwest

¹⁰³ The 2013 EOA used a 17% assumption, based on a PAC recommendation. The 2001/03 EOA assumed 14-17%, depending on the land use type. This EOA updated used 5% based on empirical analysis that showed refill and redevelopment rates didn't achieve employment densities that would be associated with 17% refill/redevelopment on employment land.

Employment density

This section addresses Step 7: Apply Job Density Factors and Step 8: Estimate 20-Year Employment Land Demand.

This section shows the resulting demand for vacant (including partially vacant) land in McMinnville over the 20-year period, accounting for potential variations in employment density. The assumptions about employment density are based on the 2013 EOA, as stated in text excerpt below. Based on information provided in Appendix B, the PAC recommended using an employment density of 11 employees per acre for industrial employment and 23 employees per acre for commercial employment (i.e., retail commercial, office and commercial services, and tourism services). Further explanation of employment density and the conversion of net to gross acres is provided below.

- **Employment density.** Employees per acre is a measure of employment density based on the ratio of the number of employees per acre of employment land that is developed for employment uses. Employment densities factor in all employment on a site, whether full or part time or different shifts in a workday. Thus, employment at a given site may overrepresent the number of employees at a site at a specific time. For example, retail service locations often have many part-time employees who work different shifts. Despite the potential for overestimating the number of employees on site at a given time, the data do provide a reasonable estimate of total employment on a site and therefore total employees per acre, and this is reflected in the analysis of historic employment density, too.
- **Conversion from net-to-gross acres.** The data about employment density is in *net* acres, which does not include land for public right-of-way.¹⁰⁴ Future land need for employment should include land in tax lots needed for employment plus land needed for public right-of-way. One way to estimate the amount of land needed for employment, including public right-of-way, is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for public right-of-way.¹⁰⁵ A net-to-gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

Based on empirical evaluation of McMinnville’s existing net-to-gross ratios, ECONorthwest uses a net-to-gross conversion factor of 6% for industrial and 18% for commercial, retail, and tourism.

Using these assumptions, the forecasted growth of 6,333 new employees between 2021 and 2041 will result in the following demand for vacant (and partially vacant) employment land: 153

¹⁰⁴ The 2013 EOA does not describe a method for converting net to gross acres.

¹⁰⁵ OAR 660-024-0010(6) uses the following definition of net buildable acre. “Net Buildable Acre” consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

gross acres of industrial land and 252 gross acres of commercial land (Exhibit 48). Exhibit 49 shows the demand for vacant land to accommodate employment growth in the 5-, 10-, 20-, and 46-year planning periods.

Exhibit 48. Demand for vacant land to accommodate employment growth, McMinnville UGB, 2021–2041

Land Use Type	New Emp. on Vacant Land	Employees per Acre		Land Demand (Net Acres)	Land Demand (Gross Acres)
			(Net Acres)		
Industrial	1,584		11	144	153
Commercial	4,749		23	206	252
Total	6,333			351	405

Source: ECONorthwest

Exhibit 49. Demand for vacant land to accommodate forecasted employment growth, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	Land Demand (Gross Acres)			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	38	77	153	329
Commercial	63	126	252	570
Total	101	202	405	899

Source: ECONorthwest

Estimated Land Need 2019-2021

The buildable lands inventory (BLI) shows employment land status as of January 2019, while the forecast of need for employment land begins in 2021. We estimated land needed for employment between 2019 and 2021 using the same assumptions as the other planning periods. McMinnville employment in 2019¹⁰⁶ was about 21,566 employees, resulting in an increase of 591 employees between 2019 and 2021. About 496 of these 591 employees will require vacant commercial or industrial land. Using data on vacant unconstrained land from Exhibit 38, Exhibit 50 shows that McMinnville has supply of 323 gross acres of industrial land and 93 gross acres of commercial land. Between 2019 and 2021, the McMinnville UGB has a demand for 11 gross acres of industrial land and 20 gross acres of commercial land. This results in a surplus of 312 gross acres of industrial and 73 gross acres of commercial land as of 2021. These values are used as the land supply in the land sufficiency calculations starting in 2021.

¹⁰⁶ 2019 total employment was extrapolated from the 2017 Quarterly Census of Employment and Wages, using the methods described in the “Employment Base for Projection” section. We assumed the 20-year growth rate of 1.36%.

Exhibit 50. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2019-2021

Land Use Type	Land Supply		Land Sufficiency (Deficit)
	(Suitable Gross Acres)	Land Demand (Gross Acres)	
Industrial	323	11	312
Commercial	93	20	73

Source: ECONorthwest

Retail Leakage

In 2018, the city of McMinnville initiated development of a plan for the Three Mile Lane Area Plan (3MLAP). The project updates the 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The 3MLAP will integrate a wide range of land uses and a multi-modal transportation system that serves both local and state transportation needs and provides active connectivity within the plan area as well as to the City’s downtown core. Leland Consulting Group performed the market analysis for the project.

The project analyzed a market area that represents the area from which the most demand for residential, commercial, and industrial uses will originate, and where most of the competitive development is located. The market area (shown in Exhibit 1 and Exhibit 33) is roughly bounded by the Willamette River to the east, Tillamook State Forest to the west, and Polk County to the south—although the market does extend into Polk County, there are few residents or jobs located in this area—and the City of Yamhill to the north. The study includes a retail leakage analysis, with the express intent that the city would capture some of the retail spending that is occurring in the larger Salem, Portland, and I-5 corridor markets.¹⁰⁷

Leland characterizes retail leakage as follows:

“Retail sectors in which household spending is not fully captured are called “leakage” categories, while retail categories in which sales are higher than estimated household demand generated by existing residents are called “surplus” categories. A retail sales surplus indicates that a community pulls consumers and retail dollars in from outside the trade area, thereby serving as a regional market. Conversely, when local demand for a specific product is not being met within a trade area, consumers are going elsewhere to shop, creating retail leakage.”¹⁰⁸

The study reports overall demand for 529,000 square feet of retail space in the study area for a 10-year period (Table ES-3, pg 4). The study also shows a breakdown of the 10-year demand broken out by demand from household growth, leakage recapture, and replacement space (Figure 38, pg 51). Data provided by Leland show that the leakage

¹⁰⁷ Note: As discussed in Chapter 3, while retail environments are changing at a national level, the extent to which e-commerce will replace all types of retail is unclear and unlikely. The need for certain types of retail will persist both nationwide and in places like McMinnville.

¹⁰⁸ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

recapture component of the 10-year demand is 131,808 square feet. This is an element of retail land need that is not reflected in the employment forecast.

Exhibit 51 shows an estimate of land needed to accommodate recapture of retail leakage. The analysis builds from the Leland estimates and assumes 470 square feet per employee. The square feet per employee assumption comes from Metro’s Employment Density Study (pg 17). Dividing recapturable existing leakage by square feet per employee provides an estimate of the amount of employment generated by the space; dividing that by the PAC approved assumption of 23 employees per acre yields the land need assumption. The results show that McMinnville needs an additional 12.2 acres of land to accommodate recapture of retail leakage.

Exhibit 51. Demand for Regional Commercial and Office Space

Sector	Recapture-able Existing Leakage (s.f.)	SF/Emp	Employees (20 years)	Employees Per Acre (EPA)	Acres
Furniture & Home Furnishings	6,257	470	13	23	0.6
Electronics and Appliance	4,450	470	9	23	0.4
Building Material, Garden Equip	-	470	-	23	-
Food & Bev. (grocery)	0	470	-	23	-
Health & Personal Care	-	470	-	23	-
Clothing & Accessories	9,600	470	20	23	0.9
Sporting Gds, Hobby, Books, Music	6,076	470	13	23	0.6
General Merchandise	83,278	470	177	23	7.7
Misc. Store Retailers	-	470	-	23	-
Food & Drinking Places	21,611	470	46	23	2.0
Other (incl. cinema, prof./med office, banks)	538	470	1	23	0.0
Totals	131,808		280		12.2

Source: Demand estimates by Leland Consulting Group; sq ft per employee assumptions from the Metro Employment Density Study; EPA assumptions from EOA PAC

Land Needs Not Addressed in the Average Employment Densities (Other Needed Sites)

This section addresses Step 9: Estimate Additional Land Need Not Determined in Forecast

Statewide planning Goal 9 requires cities to “Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies.”¹⁰⁹ McMinnville has identified several employment land needs that ~~are exogenous (outside of, or not reflected in) to the employment forecast~~ have other needed sites. These related to target industry sectors identified in the *MAC-Town 2032 Economic Development Strategic Plan*. These are addressed in the respective subsections below, describing these land needs and the factual basis for each need.

¹⁰⁹ <https://www.oregon.gov/lcd/OP/Documents/goal9.pdf>

Other Needed Sites Calculated Separately from Average Employment Densities

The City's Economic Development Strategic Plan provides the City's economic development opportunities, vision, and strategy. The City need not be bound by history and past trends, but can rather seek to achieve the community's economic vision, supported by data, and realistically achievable given competitive advantage, as supported by data and emerging trends.

Statewide Planning Goal 9 states that comprehensive plans for urban areas shall: "Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies." This indicates that cities have some degree of flexibility in determining land needs as long as (1) they are consistent with plan policies, and (2) are justifiable. The land needs described in this section are all identified in existing city plans, but are not considered in the employment forecast.

~~Cities have found that when there are large firms seeking sites that aren't available in a region, this precludes economic development organizations such as Business Oregon and MEDP from marketing the area to these prospects. Attracting such activities to the region may be newly identified in the economic development strategy and additive to past economic development efforts. An otherwise Goal 9-compliant Economic Opportunities Analysis based on projected growth reflective of traditional patterns may not account for these new efforts, and attraction of a large site user would be considered an exogenous impact to these projections. This often applies to industrial users, but also applies to uses such as destination tourism uses that can require unique sites.~~

The needs analysis also needs to account for these "~~exogenous sites~~" other needed sites for uses anticipated as part of the Economic Development Strategy. Below are some examples of ~~exogenous~~ other needed sites in McMinnville and other Oregon communities:

- For example, when McMinnville's UGB was established in the early 1980s, it wasn't anticipated that there would be a need for a large site for the Evergreen Museum or water park. These facilities occupy approximately 70 acres of their sites. These have substantial economic benefits to the McMinnville economy. In 2018, they had over 88,000 visitors. They also require large sites, differ from traditional employment uses, don't fit neatly within an employment ~~forecast~~ density assumptions, and they consume a significant amount of the land supply in the UGB.
- Another example of a needed site for tourism is the US Cellular Park in Medford. The park is 132 acres with 15 sports fields. The 2018 Annual Report shows that in 2018 it generated \$11.5 million estimated economic impact, surpassing \$100 million cumulative local economic impact since its inception in 2008, helping to sustain 110 jobs in the local economy based on the direct spending of visiting teams.¹¹⁰

¹¹⁰ U.S. Cellular Community Park Annual Report. Medford Parks, Recreation & Facilities. 2018. <https://www.sportsmedford.com/Assets/48/2018%20USCCP%20Annual%20Report.pdf>

- The City of Redmond is expanding its UGB to add nearly 949 acres for several employment uses. This allows the Deschutes County Fair and Expo Center to build out and become more of a regional player (with an additional 120 acres), while providing a new home for the Oregon National Guard’s Redmond Armory (approximately 40 acres). It also provides nearly 700 acres for large industrial projects.¹¹¹
- The Allison Inn and Spa in Newberg takes advantage of place-based tourism. It is on a 35 acre site in the City of Newberg. It is situated adjacent to rural land with surrounding views of wine country and farmland. It includes accommodations, restaurant and bar, spa and meeting and event center. This could be considered an adaptation of one of the prototypes described in the agri-tourism plan described below, but adapted for an urban location interfacing with a rural setting, rather than located in a rural location.
- Over a decade ago, a County-wide plan was undertaken related to agri-tourism. It identified six prototype projects, each with specific assumptions about characteristics. These were predominantly rural prototypes, but the opportunities for these prototypes haven’t been realized.¹¹²

The Economic Development Strategic Plan identifies 57 items that potentially have site-related needs. Based on further review and discussions, we assume the approximately 47 other items not included in the list of ten site needs below would be addressed through traditional sites needs within the [standard site needs and average employment density calculations. work completed on the employment forecast and/or public/semi-public land needs analysis.](#) Exhibit 52 summarizes the land needs for these [exogenous other needed sites.](#)

¹¹¹ “Fairground expansion, armory and more coming to SE Redmond.” Stephen Hamway. The Bulletin. Feb 3, 2019. <https://www.bendbulletin.com/localstate/6884610-151/fairgrounds-expansion-armory-and-more-coming-to-se-redmond>

¹¹² *Yamhill County Agri-Business Economic and Community Development Plan Summary Report.* Barney & Worth, Inc. June 2009. https://www.co.yamhill.or.us/sites/default/files/Summary_Report_-_Yamhill_County_Agri-Business.pdf

Exhibit 52. Land needs identified in the MAC-Town 2032 Economic Development Strategic Plan (EDSP): Other needed sites that are not represented in the employment forecast have special site needs not reflected in average employment density calculations

Draft

Use	Description or Example*	Land Need	Employment Adjustment (Source)	EDSP or Other Reference
1. Community Center/Recreation Facility	Update, improve, expand and add recreational facilities that serve the community's needs <u>including a</u> (Community Center and Aquatic Center).	10 acres	<u>22 FTE</u> (Source: Parks Director)	3.2.2
2. Outdoor Stage/ Amphitheater	<u>Britt, Jacksonville</u> <u>Cuthbert, Eugene</u> <u>Bi-Mart, Central Point</u> <u>Les Schwab, Bend</u>	5 acres plus parking	<u>30 FTE</u> (Source: Britt Festival - 2,200 seating capacity)	3.2.1.
3. See Ya Later Foundation – Champions Center	The Champions Center is planned as a youth and family recreational and educational complex.	28 acres (4 acres for buildings, 6 acres for parking, 12 acres for 6 athletic fields, 6 acres for associated facilities)	<u>20 FTE</u> (Source: See Ya Later Foundation Proposal)	See Ya Later Foundation UGB Application
4. Arts and culture focused event center	Chehalem Cultural Center, Newberg)	3.5 acres	<u>9 FTE</u> (Source: Chehalem Cultural Center)	3.3
5. Evergreen Aviation and Space Museum and Yamhill County Heritage Museum	Support existing facilities; <u>based on facilities in master plan</u>	27 acres	<u>30 FTE</u> (Source: Evergreen Master Plan)	<u>3.3</u>
6. Wings and Waves	Opportunities for growth and expansion	Location-specific land need at existing partially vacant site	<u>Included in Evergreen Master Plan, see above</u>	6.3.
7. Conference Center:	40,000 sf conference space, accommodation, and parking:	5 acres	<u>13 FTE</u> (Source: Feasibility Analysis)	6.4
8. Equestrian center with supporting commercial activity inside UGB	Would include facilities that cannot be developed on EFU land	20 acres in UGB, larger footprint outside	<u>80 FTE</u> (Source: Comparable feasibility studies)	(6.3)
9. Food hub and public market	Focused on local craft foods & beverages	3.5 acres	<u>13 FTE</u> (Source: USDA Regional Food Hub Resource Guide)	3.2.2.
10. Makerspace/innovation hub/ fabrication center	Supports local innovation & entrepreneurial ecosystem	2 acres	<u>3 FTE</u> (Source: Talent Maker City)	6.3.
TOTAL		104 acres		
NET	<u>Deduct 220 employees @ 23 emp/ac = 10 ac</u>	<u>104 ac – 10 ac = 94 net additional acres</u>		

*Additional examples are provided in the following narrative.

1. COMMUNITY CENTER/RECREATION FACILITY

Strategy 3.2.2 of the MAC-Town 2032 EDSP seeks to cultivate partnerships to develop and market McMinnville’s recreation amenities. A specific action in that section is to add recreational facilities that serve the community’s needs including a Community Center and Aquatic Center.

The McMinnville Parks Department is in the process of completing a feasibility analysis for a facility and is currently estimating demand of 10 acres. Further information is expected to be available in February 2020.

This is consistent with other examples reviewed by ECONorthwest. ECONorthwest reviewed characteristics of comparable community centers. These include two facilities run by the Salvation Army (Kroc centers in Salem and Coeur d’Alene), and three city-managed facilities in Eugene, Portland, and Federal Way Washington. Exhibit 53 provides a summary of the facilities.

Exhibit 53. Community Center Characteristics

Facility	Facility Size (sq ft)	Site Size (acres)	Description
Salem Kroc Center	91,500	22.0	LEED certified with a waterpark (including a Jr. Olympic competition pool, water slide, lazy river, hot tub, and splash pad), Fitness Center, Gymnasium, Game Room, Art Studio, Library/Media Center, Amphitheater, Chapel/Performing Arts Center, 4000 ft ² of Event Space
Coeur d’Alene Kroc Center	132,000	12.0	Competition and leisure pools, health and wellness center, gym and climbing wall, game room, and classrooms
East Portland Community Center	45,000	5.7	Full-size gymnasium with retractable bleachers Transverse bouldering wall Fitness center with cardiovascular and circuit strength equipment Exercise studio with sprung wood floor and mirrors Multi-purpose, and poolside rooms Outdoor courtyard Indoor 4-lane Pool Indoor zero-depth entry leisure pool with current channel, waterslide, splashdown
Federal Way Community Center	72,000	10.0	Aquatics center, three gyms, fitness center, climbing pinnacle and Splash Café
Eugene Amazon Community Center	n/a	12.0	Outdoor pool, two community centers with many amenities, parking

Based on information from the Parks Department, and consistent with review of comparable facilities, the land need for this use is assumed to be 10 acres.

2. OUTDOOR STAGE/AMPHITHEATER

Strategy 3.2.1 of the MAC-Town 2032 EDSP seeks to update City Plans to evaluate and prioritize investments in recreation infrastructure. The strategy specifically identifies the desire to “add an outdoor stage or amphitheater to one of McMinnville’s existing parks.” The following list provides capacity and site sizes for amphitheatres in other Oregon cities.

- Les Schwab Amphitheater, Bend ~8,000 capacity ~5 acres plus parking (parking co-located with other uses)
- Bi-Mart Amphitheater, Central Point: ~6,000+ total capacity (~1985 fixed seats plus lawn), (parking co-located with other uses); ~5+ acres, plus parking & other support areas
- Britt Festival, Jacksonville: 2,200 total capacity (1,000 fixed seating plus lawn), parking co-located with other uses); Approximately 4 acres plus parking, (includes main stage, small stage, concession buildings, seating, staging area)
- Cuthbert Amphitheater, Eugene: 5,000 total capacity; parking co-located with Alton Baker Park; Approximately 4.3 acres without patron parking (includes main stage, seating, concession areas, and performer/equipment parking).

Based on review of comparable facilities, the land need for this use is assumed to be 5 acres. Assume shared parking, otherwise additional land will be needed for dedicated parking.

Note: This is calculated separate from the See Ya Later Foundation Champion Center. While that facility proposed an amphitheater. That site plan identified an amphitheater, but the concept is a different facility than what is identified in the Economic Development Strategic Plan. The Champion center would rely on use of two athletic fields for area comparable to above facilities ranging from 2,200-8,000 capacity (plus parking).

3. SEE YA LATER FOUNDATION-CHAMPIONS CENTER

In 2015, the See Ya Later Foundation (SYLF) proposed a UGB amendment for a sports complex which was not further pursued at that location given access constraints. The Foundation is still moving forward with the concept and envisions a 165,000 sf indoor recreational and educational building with the following amenities:

- Six athletic fields
- Sport fields, court gyms, fitness equipment
- Art, music, technology, and mentoring
- Outdoor amphitheater and regulation sports courts (for large-scale events, drawing visitors and dollars to McMinnville year-round)
- Meeting rooms and facilities for use by non-profits and social service organizations
- Non-denominational prayer room
- Great hall for events, commercial kitchen, coffee shop, variety of meeting facilities
- Parking (shared for uses)

To accommodate these facilities, SYLF requires a 28-acre site that meets specific suitability requirements and is accessible to the school-aged children it is intended to serve. A year-round site on the west side of McMinnville is preferred - recognizing that Joe Dancer Park is closed

from November to March, and the west side is rapidly growing with two additional planned schools.

Based on the 2015 application, we assume a land need of 28 useable acres (4 acres for buildings, 6 acres for parking, 12 acres for 6 athletic fields, 6 acres for associated facilities (walkways, landscaping, bleachers, campus open space, and driveways)).

Note: The ESDP identifies needs for regional athletic events and an indoor sports complex. These uses are assumed as part of a single site complex as represented in the Se Ya Later Foundation Champions Center described above. Therefore, these are not calculated separately. Other examples of these types of facilities of various scale and scope include the following:

- Facility for regional athletic events: 132 acres (US Cellular Park, Medford), 15 sports fields: 3 full-size baseball, 7 softball/baseball, 5 soccer/football
- Separate indoor sports complex: 5-8 acres

4. ARTS AND CULTURE FOCUSED EVENT CENTER

Strategy 3.3 (Leverage arts and culture amenities) of the MAC-Town 2032 EDSP identifies the desire for an arts and culture focused center. Specifically, the plan states “Initiate a conversation between local artists, arts organizations, philanthropies and other parties to identify the potential for an arts and culture-focused event center in McMinnville.” The strategy also includes the need for a community art space “Evaluate the feasibility of a public private partnership to create a community art space or collaborative studio and cooperative gallery.” Following is a summary of similar cultural centers:

- Chehalem Cultural Center, Newberg – is located in a historic building and houses a fine arts gallery and exhibition hall, three multipurpose arts studio classrooms, a state-of-the-art clay studio, a recording studio with four music practice studios, meeting space, and a 5,200 square foot grand ballroom for public and private events.

Based on review of comparable facilities, the land need for this use is assumed to be 3.5 acres.

5. OPPORTUNITIES TO SUPPORT EVERGREEN AVIATION AND SPACE MUSEUM-AND YAMHILL COUNTY HERITAGE MUSEUM

This opportunity is identified as part of Strategy 3.3 – Leverage arts and culture amenities. Specifically, the project is to establish periodic, formal dialogue with the Evergreen Aviation and Space Museum ~~and the Yamhill County Heritage Museum~~ to anticipate their needs and identify opportunities to provide support.

This expansion is consistent with the adopted Evergreen Master Plan and would build out about 27 additional buildable acres of the property (with constrained areas left intact –wetlands, ravine, etc.) The master plan also includes an adventure course and associated features that extend would outside the UGB. The use of the site is limited by the Planned Development Ordinance to the master plan unless the PD Ordinance is amended.

This opportunity assumes expansion onto ownership of partially vacant land of 27 acres. This deduction is included as part of the ~~exogenous land need~~ other needed sites since a portion of the site (27 acres) was inventoried as vacant in the buildable lands inventory.

6. WINGS AND WAVES OPPORTUNITIES FOR GROWTH AND EXPANSION

This opportunity is related to Strategy 3.3 and is part of McMinnville’s overall tourism strategy. The Waterpark was bought by The Falls Event Center in 2017, and is now run as a separate organization.

This opportunity assumes expansion onto ownership of partially vacant land.

7. CONFERENCE SPACE

This opportunity relates to Strategy 6.4 – Market and promote McMinnville. The plan includes a project to “Work with visit McMinnville and local hoteliers to identify gaps in available conference space and to establish a plan to expand McMinnville’s offerings for small and large conferences.” Towards that end, Visit McMinnville retained Johnson Consulting to complete a market analysis for conference facilities. The January 2018 report, titled *McMinnville Conference Center and Destination Analysis*, identifies need for a 40,000 sq ft conference space not including accommodations and parking. We looked at the following comparable facilities:

- Washington County Event Center: 89,000 sf; ~8 acres with parking
- Seaside: 25,000 sf, 10 meeting rooms; 4 acres with parking
- Pendleton: 28,000 sf, 9 meeting rooms; 12.5 acres with parking
- Blair County Convention Center, PA. 2 levels, ~50,000 sf; 11 acres with parking
- Blue Water Convention Center, MI: ~40,000 sf; 12 acres

Based on review of comparable facilities, the land need for this use is assumed to be 5 acres.

8. EQUESTRIAN CENTER

In 2012, developer JW Millegan proposed a major equestrian center in Yamhill County. The concept was not further pursued, due in part to restrictions on EFU lands. As proposed, the facility would require approximately 325 acre and would include a gallop track, polo fields, steeplechase facilities, plus resort, RV park, distillery, brewpub, and cobblestone plazas. In effect, this would be a rural/urban interface tourism use with supporting commercial activity inside UGB.

Due to land use restrictions, elements such as resort, RV park, distillery, brewpub, would need to be sited within the UGB at a location interfacing with rural lands.

Other equestrian facilities in the region include:

- Hunter Creek Equestrian Park, 14441 SW Wilsonville Rd, Wilsonville, (120 ac site)
- Wilsonville Equestrian Center, 24040 SW 8nd Avenue, Tualatin
- Swan Training/Whip ‘n Spur, 16091 SW Wilsonville Rd

- Arbor Grove Equestrian Center, 7359 Hwy 219 NE, Woodburn

An example of an RV Park near McMinnville includes:

- Willamette Wine Country RV Park and the Vintages are 191 sites on 14.5 acres

Based on the facility concept, and review of comparable facilities, the portion of the land need within the UGB for this use is assumed to be 20 acres.

9. CRAFT FOOD AND BEVERAGE FOOD HUB/FARMERS MARKET

McMinnville wants to develop an integrated food hub and year-round farmers market. Farmers markets are physical retail marketplaces intended to sell foods directly by farmers to consumers. Food hubs offer a combination of aggregation, distribution, and marketing services at an affordable price. Food hubs make it possible for many producers to gain entry into new larger-volume markets that boost their income and provide them with opportunities for scaling up production. Combining food hubs and farmers markets creates opportunities to better integrate local food value chains. Examples of farmers markets and food hubs include:

- Olympia Farmers Market, Olympia WA - supports local sustainable agriculture by connecting the public with local farmers, artisans, and other producers in an economically viable marketplace, has over 100 vendors and an estimated 400,000 visitors per year; 4.7 acres
- Bellingham Farmers Market, Bellingham WA – promotes and encourages the development of local, small scale agriculture and ensure a market balance for small, local growers and has over 100 vendors and is co-located at a transit station in downtown Bellingham; 1.5 acres
- Fallon Food Hub Co-op, Fallon NV – has the mission of educate residents about the benefits of eating seasonally and healthfully in order to create a thriving and expanding local food scene resulting in increased opportunities for area producers; 2.2 acres
- Catskills Food Hub, Sullivan County NY – a non-profit organization working to strengthen local agriculture, increase access to fresh food, and improve health outcomes for Sullivan County and the region; 2.7 acres
- Puget Sound Food Hub, Mt. Vernon WA – supports the relationship between regional farmers and their customers, enabling a values-based supply chain for food safety and transparency; 3.2 acres

Based on review of comparable facilities, the land need for this use is assumed to be 3.5 acres.

10. MAKERSPACE/INNOVATION HUB/ FABRICATION CENTER

Most industrial land demand is already reflected in the employment forecast. McMinnville wants to develop additional strategies to bolster the local maker community and the entrepreneurial ecosystems. Makerspace and fabrication laboratories are strategies that communities are pursuing. Makerspaces are community-operated, often nonprofit, workspaces

where people with common interests, such as computers, machining, technology, science, digital art, or electronic art, can meet, socialize and collaborate. CraterWorks Makerspace, located in Central Point, also includes a commercial kitchen and market space. It is about 2 acres in size.

Based on review of comparable facilities, the land need for this use is assumed to be 2 acres.

Site Characteristics and Needed Sites

OAR 660-009-0015(2) requires the EOA to “identify the number of sites by type reasonably expected to be needed to accommodate the expected [20-year] employment growth based on the site characteristics typical of expected uses.” The Goal 9 rule does not specify how jurisdictions conduct and organize this analysis.

The rule, OAR 660-009-0015(2), states that “[i]ndustrial or other employment uses with compatible site characteristics may be grouped together into common site categories.” The rule suggests, but does not require, that the City “examine existing firms in the planning area to identify the types of sites that may be needed.” For example, site types can be described by: (1) plan designation (e.g., heavy or light industrial), (2) general size categories that are defined locally (e.g., small, medium, or large sites), or (3) industry or use (e.g., manufacturing sites or distribution sites). For purposes of the EOA, McMinnville groups its future employment uses into three general categories based on land use types: (1) commercial (includes retail commercial, office & commercial services, and tourism services)¹¹³; (2) industrial; and (3) sites needed to meet specific economic development objectives (e.g., other land needs not addressed in the employment forecast as discussed above).

In short, in addition to estimating the acreage needed to accommodate current and future employment, it is necessary for the city to determine if it has sites with characteristics suitable for the development to address needs and opportunities. This includes site size, topography, access, utilities, and other characteristics such as location and proximity to other uses and amenities.

As a first step, ECO analyzed the size distribution of developed employment sites in McMinnville by land use type. Exhibit 54 shows the results. The majority of commercial lots are small – 89% of commercial lots are less than 1 acre, and 43% of the commercial land (in acres) is in lots less than 1 acre. No developed commercial lots are larger than 20 acres. (Some shopping centers include multiple tax lots).

¹¹³ At early stages of the EOA, McMinnville broke commercial out into separate land use categories, but found that many overlap and do not have distinct site needs from other commercial categories by NAICS sector.

Industrial sites show a different pattern. Seven industrial sites (about 2 percent of all industrial sites) are greater than 20 acres but account for 25% of all industrial land in acres. While McMinnville has 126 industrial sites less than 1 acre, those sites account for only 7% of developed industrial land (in acres). Some industrial users occupy multiple buildings and/or tax lots.

Exhibit 54. Size distribution of developed employment sites by land use type, McMinnville UGB, 2019

Land Use Type	Developed acres size								Total
	<0.50 acre	0.50-0.99 acres	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00- 19.99 acres	20.00- 49.99 acres	50.00+ acres	
Commercial									
Acres	99	54	57	90	26	34	-	-	360
Percent of Acres	28%	15%	16%	25%	7%	9%	0%	0%	100%
Tax Lots	524	80	41	30	4	3	-	-	682
Percent of Tax Lots	77%	12%	6%	4%	1%	0%	0%	0%	100%
Industrial									
Acres	13	19	43	87	91	61	25	79	418
Percent of Acres	3%	4%	10%	21%	22%	15%	6%	19%	100%
Tax Lots	100	26	32	29	13	5	1	1	207
Percent of Tax Lots	48%	13%	15%	14%	6%	2%	0%	0%	100%

In addition to basic logistical considerations, there are workforce considerations for locating within a community. For example, in the Three Mile Lane study, it was found that employers located to the area because there were sites that had land needed for expansion; however, employees preferred to be in amenity-rich locations. Employers have had to adjust business practices to accommodate employees in these locations absent the presence of amenities, such as those which were available in prior locations before relocating to accommodate space needs. This largely illustrates the need for the city's growth management strategy of balanced land uses that provide for a nearby mix of uses and opportunities to reduce vehicle miles travelled.

For certain development types, there is a standardized taxonomy and these types have specific site characteristic needs. The City's economic development vision and strategy may deviate from some of these typical prototypes in order to promote an authentic place-based experience, but the real estate principles must still function properly. Exhibit 55 and Exhibit 56 show taxonomies for industrial and commercial categories. It should be noted that certain development types need larger sites that must be planned and located all at one time, even if future phases within the development build out over time. Therefore, those sites need to be accounted for up-front, rather than incrementally. Other land uses have needs that don't fit into these broad categories but have other programmatic needs that define the site needs. Examples of these ~~exogenous~~ other needed sites apply to uses such as convention/ conference space, regional athletic facilities, etc. For those facilities identified in the Economic Development Strategy that have special sites needs that aren't sufficiently accounted for in the land needs calculated by the employment forecast and employment density, site characteristics have been separately described below.

Exhibit 55. Shopping Center Taxonomy, ICSC



U.S. Shopping-Center Classification and Typical Characteristics*								
Type of Shopping Center	Concept	Typical GLA Range (Sq. Ft.)	Acres	# of Anchors	% Anchor GLA	Typical Number of Tenants	Typical Type of Anchors	Trade Area Size
General-Purpose Centers								
Super-Regional Mall	Similar in concept to regional malls, but offering more variety and assortment.	800,000+	60-120	3+	50-70%	N/A	Full-line department store, mass merchant, discount department store, fashion apparel store, mini-anchor, cineplex or other large-scale entertainment attraction, and food-and-beverage service cluster.	5-25 miles
Regional Mall	General merchandise or fashion-oriented offerings. Typically, enclosed with inward-facing stores connected by a common walkway. Parking surrounds the outside perimeter.	400,000-800,000	40-100	2+	50-70%	40-80 stores	Full-line department store, mass merchant, discount department store, fashion apparel store, mini-anchor, cineplex or other large-scale entertainment attraction, and food-and-beverage service cluster.	5-15 miles
Community Center ("Large Neighborhood Center")	General merchandise or convenience-oriented offerings. Wider range of apparel and other soft goods offerings than neighborhood centers. The center is usually configured in a straight line as a strip, or may be laid out in an L or U shape, depending on the site and design.	125,000-400,000	10-40	2+	40-60%	15-40 stores	Discount store, supermarket, drug, large-specialty discount (toys, books, electronics, home improvement/furnishings or sporting goods, etc.)	3-6 miles
Neighborhood Center	Convenience-oriented.	30,000-125,000	3-5	1+	30-50%	5-20 stores	Supermarket	3 miles
Strip/Convenience	Attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the storefronts, but a strip center does not have enclosed walkways linking the stores. A strip center may be configured in a straight line, or have an "L" or "U" shape. A convenience center is among the smallest of the centers, whose tenants provide a narrow mix of goods and personal services to a very limited trade area.	< 30,000	<3	Anchor-less or a small convenience-store anchor.	N/A	N/A	Convenience store, such as a mini-mart.	<1 mile
Specialized-Purpose Centers								
Power Center	Category-dominant anchors, including discount department stores, off-price stores, wholesale clubs, with only a few small tenants.	250,000-600,000	25-80	3+	70-90%	N/A	Category killers, such as home improvement, discount department, warehouse club, and off-price stores	5-10 miles
Lifestyle	Upscale national-chain specialty stores with dining and entertainment in an outdoor setting.	150,000-500,000	10-40	0-2	0-50%	N/A	Large-format upscale specialty	8-12 miles
Factory Outlet	Manufacturers' and retailers' outlet stores selling brand-name goods at a discount.	50,000-400,000	10-50	N/A	N/A	N/A	Manufacturers' and retailers' outlets	25-75 miles
Theme/Festival	Leisure, tourist, retail and service-oriented offerings with entertainment as a unifying theme. Often in urban areas, they may be adapted from older—sometimes historic—buildings, and part of a mixed-use project.	80,000-250,000	5-20	Unspecified	N/A	N/A	Restaurants, entertainment	25-75 miles
Limited-Purpose Property								
Airport Retail	Consolidation of retail stores located within a commercial airport	75,000-300,000	N/A	N/A	N/A	N/A	No anchors; retail includes specialty retail and restaurants	N/A

*Disclaimer: While every effort is made to ensure the accuracy and reliability of the information contained in this report, ICSC does not guarantee and is not responsible for the accuracy, completeness or reliability of the information contained in this report. Use of such information is voluntary, and reliance on it should only be undertaken after an independent review of its accuracy, completeness, efficiency, and timeliness. Criteria used in the definitions above are intended to be only typical of general features, rather than covering all situations.



Exhibit 56. Industrial Development Profile Matrix, Business Oregon and Johnson Reid

	General Site	Clean Tech Campus		Heavy Industrial/	General	Food	High-Tech	Campus	Warehouse/	Call Center/
		Regional	Global	Manufacturing	Manufacturing	Processing	Manufacturing Processes	Industrial/Electronic	Distribution	Business Services
Physical Site Characteristics										
Net Contiguous Developable Area										
50-100 acres	x	x		x	x	x	x	x	x	x
101-200 acres	x	x	x	x	x	x	x	x	x	x
200+ acres	x	x	x	x	x	x	x	x	x	x
Maximum Slope	5%	5%	5%	5%	5%	5%	7%	10%	5%	12%
Infrastructure										
Transportation										
Auto/Truck	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
Interstate - Miles	10	15	10	10	20	30	15	10	5	NA
Trip Generation - ADT/Acre	65-192	76-106	76-106	42-58	76-106	76-106	76-106	76-106	65-86	144-192
Rail	Pref	Pref	Pref	Pref	Pref	Pref	NR	NR	Pref	NR
Marine	NA	Pref	Pref	Pref	Pref	Pref	NR	NR	Pref	NR
Airport - Regional Commercial	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref
Max Distance - Miles	30	60	30	60	60	60	30	30	60	60
Airport - International	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref
Distance - Miles	300	100	100	300	300	300	100	100	300	300
Water										
Min. Domestic Line Size/inches	8	10	8	8	8	10	10	10	4	4
Min. Fire Line Size/inches	10	10	10	10	10	10	10	8	10	8
High Pressure Supply	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	NR	NR
Flow/GPD	50-75,000	74,300	74,300	36,100	17,000	24,900	65,300	74,300	11,700	4,600
Sanitary Sewer	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
Min. Size/inches	8-10	10	10	8	8	10	10	8	4	4
Natural Gas/Preferred Min./inches										
		6	6	6	4	6	6	2	2	2
Electricity										
Min. Service Demand/kva	30-100 kva	50	100	30	30	30	30	30	10	30
Proximity to Substation	Pref	Req	Req	Pref	Pref	NR	Pref	Pref	NR	Pref
Secondary System Dependency	Pref	Req	Req	Req	NR	NR	Req			
Telecommunications										
High Capacity	Req	Req	Req	Pref	Pref	Pref	Req	Req	Pref	Req
Route Diversity	Pref	Req	Req	NR	NR	NR	Req	Pref	NR	Req
Fiber Optics	Req	Req	Req	Pref	Pref	Pref	Req	Req	Pref	Req
Location										
Workforce/50 Mile Radius	20,000-50,000	50,000	300,000	30,000	30,000	20,000	50,000	50,000	20,000	25,000
Executive & Workforce Housing	Pref									

Req Required
 Pref Preferred
 NR Not Required
 NA Not Applicable

Business Oregon and Johnson Reid



To meet the requirements of OAR 660-009-0015(2) to identify the number of needed sites by type, we analyzed the existing distribution of developed sites by size (Exhibit 57) and applied it to overall land need for the 2021-2041 period. Acres are converted to number of sites using average acres per tax lot (0.531.65 for commercial, and 2.023.78 for industrial).¹¹⁴ Note that this method likely underestimates the need for larger sites as many employment developments – both commercial and industrial – are on multiple tax lots.

Exhibit 57 shows that McMinnville has a deficit of sites needed in both commercial and industrial land, across most size classes. Discussions with McMinnville Industrial Promotions (MIP) also confirmed need for industrial sites in the 5 to 30 acre range. Currently, McMinnville has about nine industrial sites in this range, and an estimated need for 7 sites in this range.

Exhibit 57. Size distribution of needed employment sites compared to sites with buildable acres, by land use type, McMinnville UGB, 2021-2041

Land Use	Developed acres size							Total
	<1 acre	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00-19.99 acres	20.00-49.99 acres	50.00+ acres	
Number of Sites								
Commercial	422	29	21	3	2	0	0	477
Industrial	44	12	11	5	2	1	1	76
Total	466	40	32	8	4	1	1	553

Land Use	Acre size							Total
	0.50-0.99 acre	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00-19.99 acres	20.00-49.99 acres	50.00+ acres	
Number of Needed Sites								
Commercial	77	40	29	4	3	0	0	153
Industrial	10	12	11	5	2	0	0	40
Number of Sites with Buildable Acres								
Commercial	4	6	9	4	2	0	0	25
Industrial	11	15	4	6	1	2	2	41
Surplus (Deficit)								
Commercial	(73)	(34)	(20)	0	(1)	-	-	(128)
Industrial	1	3	(7)	1	(1)	2	2	1

Source: ECONorthwest

Land Sufficiency

This section addresses Step 10: Compare Land Demand to Supply

Exhibit 58 shows commercial and industrial land sufficiency within the McMinnville UGB. It shows:

- **Vacant or partially vacant unconstrained land** from Exhibit 50 within the UGB. Exhibit 58 shows that McMinnville will have 312 gross acres of industrial land, and 73 gross acres of commercial land in 2021.

¹¹⁴ We excluded sites less than 0.5 acres from this table based on the OAR 660-009-0005(14) definition for vacant land, which was used for the BLL. Those sites are assumed to be available to meet identified refill and development needs.

- **Demand for commercial and industrial land** from Exhibit 48. Exhibit 58 shows McMinnville will need a total of 153 gross acres for industrial uses and ~~368~~358 gross acres for commercial uses over the 2021-2041 period based on portion of demand determined through the forecast.
- Retail Leakage Additional needs, addressed previously in this Chapter, include retail leakage that is current demand that predates the employment forecast associated with new population growth(12-acre demand over the 20-year period)
- Demand for ~~additional~~ commercial land needs **with other needed sites** not identified in the forecast adequately accounted for in the average employment density calculations. Forecast commercial land includes land use types of retail commercial, office and commercial services, and tourism services. Additional needs, addressed previously in this Chapter, include retail leakage (12 acre demand over the 20 year period) and other These uses **withfor other needed sites** exogenous commercial land needs for target sectors are identified in the Economic Development Strategic Plan (104-acre demand over the 20-year period), a net difference of 94 additional acres after adjusting for associated employment.
- Needed site sizes from Exhibit 57 shows that McMinnville has a deficit of needed site sizes for commercial land for sites between 0.5 and 5 acres, as well as between 10 and 20 acres. McMinnville also has a deficit of industrial sites between 2 and 5 acres, as well as between 10 and 20 acres.

Note to reviewers: This evaluation may change depending on decision to adjust needs based on MIP and MEDP letters.

Exhibit 58 shows that McMinnville has:

- A 159-acre surplus of industrial land in 2041
- A ~~286~~95-acre deficit of commercial land in 2041.

Exhibit 58. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2021-2041

Land Use Type	Land Supply (Suitable Gross Acres)	Demand (Gross Acres)	Land Sufficiency (Deficit)
Industrial	312	153	159
Commercial	73	358	(286)
<i>Forecast</i>		252	
<i>Retail leakage</i>		12	
<i>Other needed sites</i>		94	

Land Use Type	Land Supply (Suitable Gross Acres)	Demand (Gross Acres)	Land Sufficiency (Deficit)
Industrial	312	153	159
Commercial	73	368	(295)
<i>Forecast</i>		252	
<i>Retail leakage</i>		12	
<i>Exogenous</i>		104	

Source: ECONorthwest

Summary of Land Sufficiency for Employment Land in McMinnville

This section summarizes the analysis completed in Chapter 5 and the findings related to land sufficiency for employment land in McMinnville.

Demand

McMinnville will need at least 512 gross acres (153 industrial and 358 commercial) for employment for the 2021 to 2041 period and 899 gross acres (329 industrial and 570 commercial) for the 2021 to 2067 period (Exhibit 4).

Demand was calculated in following components:

- By developing an employment forecast and assigning employment density factors to determine associated land needs, Employment forecasts indicate that McMinnville will add 6,885 jobs between 2021 and 2041 and 16,001 jobs between 2021 and 2067. For this component of the demand, McMinnville will need at least 405 gross acres (153 industrial and 252 commercial) for employment for the 2021 to 2041 period and 783 gross acres (329 industrial and 454 commercial) for the 2021 to 2067 period (Exhibit 4).

~~Demand was calculated in following components:~~

- ~~▪ By developing an employment forecast and assigning employment density factors to determine associated land needs, Employment forecasts indicate that McMinnville will add 6,885 jobs between 2021 and 2041 and 16,001 jobs between 2021 and 2067. Based on this employment forecast and employment density estimates, McMinnville will need at least 521 gross acres (153 industrial and 368 commercial) for employment for the 2021 to 2041 period and 899 gross acres (329 industrial and 570 commercial) for the 2021 to 2067 period (Exhibit 59)~~
- By removing the following employment from the employment forecast, and instead estimating land needs for these employers based on interviews with the respective entities: local government, K-12, and higher education. *These are discussed in the public and semi-public land needs section of the Urbanization Summary report, and are not discussed in the land sufficiency analysis for commercial and industrial employment.*
- By identifying the existing retail leakage identified in a market analysis, which identifies existing deficits in the base year which are not otherwise accounted for in the forecast of future employment from 2021-2041. *McMinnville will need about 12.2 acres to address existing retail leakage.*
- By estimating “exogenous” special site needs other needed sites which are not accounted for in the average density assumption employment forecast. The sites for these uses are unique and not accounted for in the employment forecast and standard employment density factors. These are target industries and uses in the Mac Town 2032 Economic Development Strategic Plan. *McMinnville will need 104 acres for exogenous-commercial land special site needs other needed sites (e.g., land needs not accounted for in the employment projections) in the 2021 to 2041 period. A net increase of 94 acres when*

[adjusting the employment forecast to reflect these unique site needs and adjustments to average density assumptions for these sites and uses.](#)

The City assumed 5% of new employment would be accommodated on sites that don't require new vacant land, through infill, redevelopment, and locations that don't require new employment land.

Draft

Supply

In 2019, within the UGB, McMinnville has 416 buildable acres of employment land, with 366 buildable acres in vacant lots and 50 buildable acres in partially-vacant lots. This includes 93 buildable acres of commercial land and 323 buildable acres of industrial land. By 2021, the forecast assumes there will have been demand for 31 gross acres of employment land: 11 gross acres of industrial land and 20 gross acres of commercial land. That leaves a 2021 supply of 385 buildable acres of employment land: 312 buildable acres of industrial land and 73 buildable acres of commercial land

- Commercial.** Of the 93 buildable acres of commercial land, about 60 acres are in vacant lots, and 33 acres are in partially-vacant lots. About 27 acres (approximately 30% of the buildable commercial land) is on the Evergreen property, which is subject to a Planned Development that limits uses to tourism-related uses consistent with the master plan. There are only about two dozen tax lots with buildable commercial acreage, and only some of these contiguous. There are only about a half dozen sites or contiguous properties that have buildable acreage over five acres, accounting for about 72% of the buildable acres.
- Industrial.** Of 323 buildable acres of industrial land, about 305 acres are in vacant lots, and 17 acres are in partially-vacant lots. About 55% of the supply (177 acres) is in two tax lots over 50 acres, about 88 and 90 acres. One site is just under 50 buildable acres (15% of the supply), and the remaining sites are below 15 buildable acres.

Sufficiency

Exhibit 59 shows the capacity of unconstrained vacant land and the demand for employment land over the 5-, 10-, 20-, and 46-year planning periods, as well as the pre-2021 period.

Exhibit 59. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2019-2021, 2021-2026, 2021-2031, 2021-2041, and 2021-2067

Land Use Type	2019-2021			5-year (2021-2026)			10-year (2021-2031)			20-year (2021-2041)			46-year (2021-2067)		
	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)
Industrial	323	11	312	312	38	274	312	77	236	312	153	159	312	329	(17)
Commercial	93	20	73	73	63	10	73	126	(53)	73	368	(295)	73	570	(498)

Source: ECONorthwest.

The next chapter provides a discussion of McMinnville's existing Comprehensive Plan goals and policies related to economic development. It suggests updates to policies that may not align with the findings of this EOA or recent updates to supporting planning work including the MAC-Town 2032 Economic Development Strategic Plan.

6. Comprehensive Plan Policies

OAR 660-009-0020 outlines requirements for industrial and other economic development policies.

Local comprehensive plans are to provide a commitment to provide a competitive short-term supply together with a commitment to provide adequate sites and facilities. With this EOA, also identified are fulfillment of community economic development objectives.

Economic Development Goals and Policies

As noted at the outset of this EOA update report, the 2019 MAC-Town Economic Development Strategic Plan states the City of McMinnville's mission related to economic development:

"McMinnville provides economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors, from steel manufacturing to technology. Economic growth is collaborative, and inclusive of individuals from diverse backgrounds. Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville's high quality of life. Our strong downtown serves residents and visitors alike, featuring unique shops and world-class restaurants that offer locally-produced food products and globally-renowned wine. As we evolve, we prize our small-town roots and we maintain McMinnville's character."

The currently adopted Comprehensive Plan also includes more detailed goal statements, and some goals include specific policies. This EOA update provides suggested changes to goals and policies that may not align with the city's current vision for economic development. The suggested changes are indicated with items to **remove** or items to consider **adding**.

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Policy:

- 21.00 Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the City. Such uses shall locate according to the goals and policies in the comprehensive plan.
- 21.01 The City shall periodically update its economic opportunities analysis to ensure that it has within its urban growth boundary (UGB) a 20-year supply of lands designated for commercial and industrial uses. The City shall provide an adequate

number of suitable, serviceable sites in appropriate locations within its UGB. If it should find that it does not have an adequate supply of lands designated for commercial or industrial use it shall take corrective actions which may include, but are not limited to, redesignation of lands for such purposes, or amending the UGB to include lands appropriate for industrial or commercial use. (Ord.4796, October 14, 2003)

- 21.02 The City shall encourage and support the start up, expansion or relocation of high-wage businesses to McMinnville.
 - 1. The City shall coordinate economic efforts with the Greater McMinnville Area Chamber of Commerce, McMinnville Industrial Promotions, McMinnville Downtown Association, Yamhill County, Oregon Economic and Community Development Department, and other appropriate groups.
 - 2. Economic development efforts shall identify specific high-wage target industries and ensure that adequately sized, serviced, and located sites exist within the McMinnville urban area for such industries. (Ord.4796, October 14, 2003)
- 21.03 The City shall support existing businesses and industries and the establishment of locally owned, managed, or controlled small businesses. (Ord.4796, October 14, 2003)
- 21.04 The City shall make infrastructure investments that support the economic development strategy a high priority, in order to attract high-wage employment. (Ord.4796, October 14, 2003)
- 21.05 Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the city. Such uses shall locate according to the goals and policies in the comprehensive plan. (Ord.4796, October 14, 2003)

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future neighborhood and community serving commercial lands and discouraging strip development.

General Policies:

- 22.00 The maximum and most efficient use of existing commercially designated lands will be encouraged as will the revitalization and reuse of existing commercial properties.
- 23.00 Areas which could in the future serve as commercial sites shall be protected from encroachment by incompatible uses.
- 24.00 The cluster development of commercial uses shall be encouraged rather than auto-oriented strip development. (Ord.4796, October 14, 2003)

Locational Policies:

- 24.50 The location, type, and amount of commercial activity within the urban growth boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord.4796, October 14, 2003)

- 25.00 Commercial uses will be located in areas where conflicts with adjacent land uses can be minimized and where city services commensurate with the scale of development are or can be made available prior to development.
- 26.00 The size of, scale of, and market for commercial uses shall guide their locations. Large-scale, regional shopping facilities, and heavy traffic-generating uses shall be located on arterials or in the central business district, and shall be located where sufficient land for internal traffic circulation systems is available (if warranted) and where adequate parking and service areas can be constructed.
- 27.00 Neighborhood commercial uses will be allowed in residential areas. These commercial uses will consist only of neighborhood oriented businesses and will be located on collector or arterial streets. More intensive, large commercial uses will not be considered compatible with or be allowed in neighborhood commercial centers.
- 28.00 A commercial planned development should be encouraged in the proximity of the intersection of Hill Road and West Second Street. Such a development should service the needs of people in western McMinnville. The development should be anchored by a grocery store.

Design Policies:

- 29.00 New direct access to arterials by large-scale commercial developments shall be granted only after consideration is given to the land uses and traffic patterns in the area of development as well as at the specific site. Internal circulation roads, acceleration/deceleration lanes, common access collection points, signalization, and other traffic improvements shall be required wherever necessary, through the use of planned development overlays.
- 30.00 Access locations for commercial developments shall be placed so that excessive traffic will not be routed through residential neighborhoods and the traffic-carrying capacity of all adjacent streets will not be exceeded.
- 31.00 Commercial developments shall be designed in a manner which minimizes bicycle/pedestrian conflicts and provides pedestrian connections to adjacent residential development through pathways, grid street systems, or other appropriate mechanisms. (Ord.4796, October 14, 2003)
- 32.00 Where necessary, landscaping and/or other visual and sound barriers shall be required to screen commercial activities from residential areas.
- 33.00 Encourage efficient use of land for parking; small parking lots and/or parking lots that are broken up with landscaping and pervious surfaces for water quality filtration areas. Large parking lots shall be minimized where possible. All parking lots shall be interspersed with landscaping islands to provide a visual break and to provide energy savings by lowering the air temperature outside commercial structures on hot days, thereby lessening the need for inside cooling. (Ord.4796, October 14, 2003)
- 34.00 The City of McMinnville shall develop and maintain guidelines concerning the size, placement, and type of signs in commercial areas.

- 35.00 The City of McMinnville shall encourage the development of a sign system that directs motorists to parking areas.

Goal IV 4: To promote the downtown as a cultural, administrative service, and retail center of McMinnville.

Downtown Development Policies:

- 36.00 The City of McMinnville shall encourage a land use pattern that:
 - 1. Integrates residential, commercial, and governmental activities in and around the core of the city;
 - 2. Provides expansion room for commercial establishments and allows dense residential development;
 - 3. Provides efficient use of land for adequate parking areas;
 - 4. Encourages vertical mixed commercial and residential uses; and,
 - 5. Provides for a safe and convenient auto-pedestrian traffic circulation pattern. (Ord.4796, October 14, 2003)
- 37.00 The City of McMinnville shall strongly support, through technical and financial assistance, the efforts of the McMinnville Downtown Steering Committee to implement those elements of Phase II of the “Downtown Improvement Plan” that are found proper, necessary, and feasible by the City. (Ord.4796, October 14, 2003)
- 38.00 The City of McMinnville shall encourage the renovation and rehabilitation of buildings in the downtown area, especially those of historical significance or unique design.
- 39.00 The City of McMinnville shall encourage and allow the development of pocket parks, landscaping, and other natural amenities to provide a visual contrast between streets and parking lots and buildings to enhance the general appearance of the downtown.
- 40.00 The City of McMinnville shall encourage and develop a policy of cooperation with federal, state, and local governments and agencies regarding the location of public administrative and service facilities in the downtown area and further encourage these same agencies to develop off-street parking opportunities and transportation alternatives for their employees.
- 41.00 The City of McMinnville shall encourage the expansion of retail and other commercial enterprises east of the railroad tracks and north and south of Third Street consistent with the adopted “Downtown Improvement Plan.” (Ord.4796, October 14, 2003)
- 42.00 The City of McMinnville shall continue to redesignate streets and traffic patterns in and around the downtown area to facilitate the movement of automobile traffic and provide for the safety and convenience of pedestrians.

- 43.00 The City of McMinnville shall allow the closing and/or vacating of streets to provide additional areas for off-street parking where such closure will not affect the ability of the police and fire departments, and public utilities to provide their designated service functions or where such closures will not negatively affect the overall traffic circulation in the downtown area.
- 44.00 The City of McMinnville shall encourage, but not require, private businesses downtown to provide off-street parking and on-site traffic circulation for their employees and customers.
- 45.00 The City of McMinnville shall study the feasibility of developing bicycle and pedestrian paths and/or lanes between residential areas and the activity centers in the downtown. (Ord.4961, January 8, 2013)
- 46.00 The City shall work to implement the recommendations of the adopted “McMinnville Downtown Improvement Plan.”
- 46.01 The City shall, through its Landscape Review Committee, develop a list of street trees acceptable for planting within the public rights-of-way, parks and open spaces, and downtown. In addition, the committee shall develop standards for the planting of these trees, particularly within the downtown area, such that sidewalk and tree root conflicts are minimized. This effort should be coordinated with McMinnville Water and Light in an effort to minimize conflicts with utility lines.
- 46.02 The City shall, as funding permits and generally in the following order, periodically inventory trees within its public rights-of-way, parks and open spaces, and downtown area in order to assess the overall health of the city’s urban forest and to determine those specific trees that may require maintenance, or removal and replacement. As a goal, the City seeks to maintain a diverse urban forest in terms of age and species.
- 46.03 The City shall take steps to minimize hardships to property owners situated adjacent to street trees that may have been found to be the cause of, but not limited to, the cracking or raising of a public sidewalk, or interfering with sewer lines that serve his/her property. In such cases, the City shall install root barriers, if practicable, or remove the offending tree(s). (Ord. 4816, December 14, 2004; Ord.4796, October 14, 2003)

Proposals:

- 6.00 A planned development overlay should be placed on the large cluster commercial development areas and the entrances to the City to allow for review of site design, on-site and off-site circulation, parking, and landscaping. The areas to be overlaid by this designation shall be noted on the zoning map and/or comprehensive plan map.
- 7.00 The City of McMinnville should study the feasibility of designating areas fronting Third Street east of the railroad tracks for retail commercial only, and designated areas on the fringes of the downtown as office residential.

- 8.00 The City of McMinnville should encourage the development of a commercial planned development center in the southwestern portion of the city large enough in scale to serve the needs of the area’s population. The center should be in proximity of the intersection of Old Sheridan Road, U.S. Highway 99W, and Oregon Highway 18.

Goal IV 5: To continue the growth and diversification of McMinnville’s industrial base through the provision of an adequate amount of properly designated lands.

Goal IV 6: To insure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

General Policies:

- 47.00 Industries that locate in the community shall meet federal, state, and local environmental standards. These standards shall be given full weight in evaluating the desirability of the industry. Criteria for evaluation shall include, but not be limited by the effect the industry would have on:
 - 1. The natural environment, including air and water quality, natural drainage ways, and soil properties and other physical characteristics of the land including topography.
 - 2. The human environment, including the amount of noise and traffic generated and the ability of the housing industry to provide sufficient dwelling units with at least an adequate level of required urban services.
 - 3. The physical facilities of the community, including the ability of sanitary and storm sewer systems, water supply and distribution system, energy supply distribution systems, police and fire, and schools to provide designated services.
- 48.00 The City of McMinnville shall encourage the development of new industries and expansion of existing industries that provide jobs for the local (McMinnville and Yamhill County) labor pools.

Locational Policies:

- 49.00 The City of McMinnville shall use its zoning and other regulatory methods to prevent encroachment into industrial areas by incompatible land uses.
- 49.01 The City shall designate an adequate supply of suitable sites to meet identified needs for a variety of different parcel sizes at locations which have direct access to an arterial or collector street without having to pass through residential neighborhoods. (Ord. 4961, January 8, 2013)
- 49.02 The location, type, and amount of industrial activity within the Urban Growth Boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord. 4961, January 8, 2013)

- 49.03 In designating new industrial properties, and in redesignating properties to industrial zoning from other designations, the City shall work to provide employment opportunities in locations that are reasonably accessible to McMinnville residents, while minimizing the need to drive through existing or planned residential neighborhoods. (Ord. 4961, January 8, 2013)
- 50.00 The City of McMinnville shall encourage industrial uses to locate adjacent to the airport and south of Three Mile Lane, adjacent to the existing Riverside Drive industrial area, and in existing industrial areas through the proper designation of lands on the comprehensive plan and zoning maps. Comprehensive plan and/or zoning map changes to industrial designations in other areas may be granted if all the applicable goals and policies of the plan can be met.
 - *The City should consider updating this policy to reflect findings of the Three Mile Lane Area Plan, which discusses potential commercial uses in this area.*
- 51.00 The City of McMinnville shall encourage the location of airport-related industrial uses only on the industrial land which is adjacent to the airport. Those lands so reserved shall be designated in the planned development overlay covering this area.
 - *The City should consider updating this policy to reflect updated goals for the area near the airport.*
- ~~52.00—The City of McMinnville shall create a new "limited light industrial" zone which shall be placed on the industrial areas on the south side of Three Mile Lane in those areas where residential development is expected on the north side of the road. The new zone will allow only those types of industrial uses that will not conflict with the residential uses.~~
- ~~53.00—The City of McMinnville shall encourage the phased development of industrial land so that a moderate rate of growth occurs. A moderate rate of growth will be considered that rate which enables the City to provide urban services in a timely, orderly, and economic fashion, and which allows the private sector to provide for the needs of the new residents.~~
- 54.00 The City of McMinnville shall establish industrial planned development ordinances which shall be placed over the future industrial areas designated on the McMinnville Comprehensive Plan Map, the industrial reserve area, and certain existing industrially designated areas within the city limits. The overlay shall also be applied to any areas which are in the future designated for future industrial use through an amendment to the comprehensive plan map. The overlays shall provide standards to control the nuisance and negative environmental effects of industries. These controls shall cover, but not be limited to, the following areas:
 - 1. Landscaping and screening
 - 2. Noise suppression
 - 3. Light and heat suppression
 - 4. Pollution control for air, water, and land

- 5. Energy impacts
- 6. Traffic impacts
- 55.00 Deleted as per Ord. 4796, October 14, 2003.
- 56.00 Deleted as per Ord. 4796, October 14, 2003.
- 57.00 Agricultural activities shall be encouraged on industrially designated lands until such time as the lands are utilized for industrial purposes.

Draft

Appendix A. Buildable Lands Inventory

ECONorthwest prepared a Goal 10 compliant Economic Opportunities Analysis (EOA) for the City of McMinnville to assess whether the city has sufficient land within its Urban Growth Boundary (UGB) to accommodate population and employment growth forecast for the 20-year period between 2021 and 2041, as well as 5-, 10-, and 46-year planning periods. A key component of this study is the buildable lands inventory (BLI).

The legal requirements that govern the BLI for the City of McMinnville are defined in Statewide Planning Goal 10, OAR 660-009-0005, and OAR 660-009-0015(3). This Appendix summarizes the methods ECONorthwest used to conduct employment buildable lands inventory.

Study Area

The Commercial and Industrial BLI for McMinnville includes all commercial and industrial land within the McMinnville UGB. From a practical perspective, this means that all lands within tax lots identified by the Yamhill County Assessment and Taxation Office that fall within a commercial or industrial plan designation were inventoried. Note that tax lots do not generally include road or railroad rights-of-way or water. ECONorthwest used a July 2018 tax lot shapefile (the same data used for the residential BLI) from Yamhill County for the analysis, as well as previous information used for the 2013 EOA. The inventory then builds from the tax lot-level database to estimates of buildable land by plan designation.

Methods for Inventory of Commercial and Industrial Lands

For commercial and industrial land, the general structure is similar to the residential lands process with a few differences. The buildable lands inventory uses methods and definitions that are consistent with OAR 660-009 and OAR 660-024. Following are the administrative rules that provide guidance on the commercial and industrial BLI.

OAR 660-009-0005:

(1) "Developed Land" means non-vacant land that is likely to be redeveloped during the planning period.

(2) "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

(11) "Site Characteristics" means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight

facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

(12) "Suitable" means serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed use.

(13) "Total Land Supply" means the supply of land estimated to be adequate to accommodate industrial and other employment uses for a 20-year planning period. Total land supply includes the short-term supply of land as well as the remaining supply of lands considered suitable and serviceable for the industrial or other employment uses identified in a comprehensive plan. Total land supply includes both vacant and developed land.

(14) "Vacant Land" means a lot or parcel:

(a) Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or

(b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.

Unlike with residential lands, the rules for employment lands include the concept of "suitability" which can be affected by factors other than the physical attributes of land. (See OAR 660-009-0005 (11) and (12) above.) The proposed BLI methods do not fully address the suitability factors, rather, they more narrowly assess whether a parcel is buildable based solely on attributes of the land. ECONorthwest had additional discussions with City staff about the assumptions embedded in the BLI as well as whether to apply additional suitability factors to employment lands, and if so, what factors to use.

Inventory Steps

The steps in the inventory of commercial and industrial buildable lands are:

1. Generate UGB "land base"
2. Classify lands by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

Step 1: Generate UGB "land base"

The commercial and industrial inventory used all of the tax lots in the McMinnville UGB with the appropriate plan designations. Specific designations that were used include:

- Commercial
- Industrial

Step 2: Classify lands

In this step, ECONorthwest classified each tax lot with a plan designation of Commercial or Industrial (based on the lot's status as of January 2019) into one of five mutually exclusive categories based on development status:

- Developed land
- Vacant land
- Partially vacant land
- Public or exempt land

ECONorthwest initially identified buildable land and classify development status using a rule-based methodology. The rules are described below.

Development Status	Definition	Statutory Authority
Vacant Land	<p>A tax lot: (a) Equal to or larger than on half-acre not currently containing permanent buildings or improvements; or (b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements</p> <p>For the purpose of criteria (a) above, lands with improvement values of \$0 were be considered vacant.</p>	OAR 660-009-005(14)
Partially Vacant Land	Partially vacant tax lots are those between one and five acres occupied by a use that could still be further developed based on the zoning. This determination is based on a visual assessment and City staff verification.	No statutory definition
Public or Exempt Land	Lands in public or semi-public ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches and other semi-public organizations and properties with conservation easements. Public lands are identified using the Yamhill County Assessment property tax exemption codes.	No statutory definition
Developed Land	<p>OAR 660-009-005(1) defines developed land as "Non-vacant land that is likely to be redeveloped during the planning period."</p> <p>Lands not classified as vacant, partially-vacant, undevelopable, or public or exempt are considered developed.</p>	OAR 660-009-005(1)

Step 3: Identify constraints

The commercial and industrial inventory uses development constraints consistent with guidance in OAR 660-009-0005(2). Most of the development constraints are the same as those used for residential lands. (The exception is steep slopes, which are defined as 15% or greater for employment lands and 25% or greater for residential lands.) Note that the previous EOA in 2013 used the 25% threshold for steep slopes. In the 2020 update, the PAC recommended using 15% to better reflect needs for development of employment land.

Constraint	Statutory Authority	Threshold	File name
Goal 5 Natural Resource Constraints			
Regulated Wetlands	OAR 660-009-0005(2)	Within National Wetlands Inventory	NWI
Natural Hazard Constraints			
Floodways	OAR 660-009-0005(2)	Lands within FEMA FIRM identified floodway	Floodplains_and_Floodways
100 Year Floodplain	OAR 660-009-0005(2)	Lands within FEMA FIRM 100-year floodplain	Floodplains_and_Floodways
Steep Slopes	OAR 660-009-0005(2)	Slopes greater than 15%	TBD

These areas were treated as prohibitive constraints (unbuildable). All constraints were merged into a single constraint file, which was then used to identify the area of each tax lot that is constrained. These areas were deducted from lands that were identified as vacant or partially vacant.

Step 4: Verify inventory results

As with the residential BLI, ECONorthwest used a multi-step verification process. This included review of aerial imagery, discussion and verification with City staff, and review of 2013 EOA results.

Step 5: Tabulate and map results

The results of the commercial BLI are presented in tabular and map format in Chapter 5.

Appendix B. Employment on Other Land and Employment Density

This appendix presents research and findings that ECONorthwest completed to provide rationale for employment density and “refill” and redevelopment assumptions for the 2020 update of the City of McMinnville’s EOA. It presents empirical analysis of existing employment densities in McMinnville and information on assumptions used for EOAs in comparison cities noted in *Exhibit 1*.

Exhibit 1. Cities used for comparison to the City of McMinnville by population and county

City	Population (2018 PSU Estimate)	County
Ashland	20,815	Jackson
Newberg	23,795	Yamhill
Redmond	29,190	Deschutes
Grants Pass	37,285	Josephine
Albany	53,145	Linn & Benton
Corvallis	59,280	Benton
Bend	89,505	Deschutes

In addition, with the 2013 EOA, the City also previously collected comparative data from other cities and the 2001/03 EOA for employment density and “refill” and redevelopment factors. That is summarized in Figure 40 of the 2013 EOA, which is also attached at the end of this document. It also includes guidelines from DLCD’s Goal 9 Guidebook. The City elected to add additional comparable cities to the analysis as three of the five cities in Figure 40 are metro cities with considerably different economic development opportunities and strategies.

Employment on Other (Non-Vacant) Land

ECONorthwest compiled information from the comparison cities on assumptions used in each city’s EOA for employment that doesn’t require vacant commercial or industrial land. (This corresponds to step 6 in the EOA summary matrix.) The 2013 McMinnville EOA used an overall assumption for employment on non-vacant land of 17%. Exhibit 2 summarizes assumptions used in other Oregon comparison cities.

Exhibit 2. Employment on other land assumptions for comparison cities

City	Emp. on Other Land	Rationale/Approach	Date
Ashland	20%	Empirical analysis of capacity on redevelopable lands.	2007
Newberg	5% (retail only)	Empirical analysis. (See Figure 40 on pg. 85 of 2013 McMinnville EOA)	2006
Redmond	10%	Reasonable judgement. (pg. 5-29).	2005
Grants Pass	10%	Reasonable judgement based on comparison areas. (pg. 8-46)	2007
Albany	0%	Redevelopment was accounted for in the BLI, so they did not account for it again in the forecast. (pg. 11)	2005
Corvallis	Industrial: 11% Retail: 12% Office: 29%	Reasonable judgement based on available buildable land. (pg. 4-56)	2016
Bend		Note: Bend used a site-based approach for estimating land need. We do not recommend this approach.	2016

DLCD's Goal 9 workbook presented guidelines of 85-90% growth on vacant land, based on 10-15% refill and redevelopment cited as a rule of thumb.

The effect of applying refill and redevelopment rates to existing developed land is to implicitly increase the employment density on those lands. Employment density is discussed further in the next section, but must be evaluated together with assumptions about refill and redevelopment. As discussed in the next section, the observed density of employment in commercial and industrial plan designations is currently about 10 employees/net acre in industrial plan designations (down slightly from the 2013 EOA) and 23 employees/net acre in commercial plan designations (up slightly from the 2013 EOA). Exhibits 3A-3C show the effective densities resulting from applying 17%, 10%, and 5% of new employment to developed commercial and industrial sites.

For industrial employment, this ranges from absorbing between 96 to 325 additional employees from present through 2041, and increasing to absorb between 191 to 650 additional employees from present through 2067 on *currently* developed properties. This would increase the employment density for these sites from 10 employees/acre to between 11 to 12 employees/acre.

For commercial development, this ranges from absorbing between 295 to 1,003 additional employees from present through 2041, and increasing to absorb between 619 to 2,103 additional employees from present through 2067 on *currently* developed properties. This would increase the employment density for these sites from 23 employees/acre to between 25 to 29 employees per acre.

Exhibit 3A. Effective Employment Densities with 17% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites						
				Current Calc Emp Density	17% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 17% of emp to 2041	17% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 17% of emp to 2067
Industrial	3,422	4,485	428	10	325	4,810	11	650	5,135	12
Commercial	6,245	8,184	357	23	1,003	9,187	26	2,103	10,287	29

Exhibit 3B. Effective Employment Densities with 10% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites						
				Current Calc Emp Density	10% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 10% of emp to 2041	10% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 10% of emp to 2067
Industrial	3,422	4,485	428	10	191	4,676	11	383	4,868	11
Commercial	6,245	8,184	357	23	590	8,774	25	1,237	9,421	26

Exhibit 3C. Effective Employment Densities with 5% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites						
				Current Calc Emp Density	5% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 5% of emp to 2041	5% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 5% of emp to 2067
Industrial	3,422	4,485	428	10	96	4,581	11	191	4,676	11
Commercial	6,245	8,184	357	23	295	8,479	24	619	8,803	25

Both the industrial and commercial employment densities have remained nearly the same over time: from the 2001/03 EOA, the empirical calculations in the 2013 EOA, and the empirical calculations in the current analysis. Industrial densities have decreased slightly from about 11 employees/acre to about 10 employees/acre. Commercial densities have increased slightly from about 22 employees/acre to about 23 employees/acre.

The 2001/03 EOA used variable assumptions for refill/redevelopment, with 17% for industrial, 15% for commercial, and 13% for institutional, while the 2013 EOA increased these all to 17%.

Average employment densities don't appear to have increased consistent with those rates. Actual changes compared to assumptions about refill/redevelopment of the existing developed sites may be the result of:

- Refill/redevelopment has not occurred, or has occurred at lower rates than assumed in McMinnville's prior EOAs
- Employment densities of existing businesses may have declined, through reduction of employees or through expansion of facilities without commensurate increases in employment densities
- Increases in employment density in some cases may have been offset by reductions in employment density in other cases

Potential reasons may include:

- Increases in automation, where operations occupy the same space, but with fewer employees
- More new businesses/new land use of types with the same or lower employment densities than previous business' employment densities
 - Potential increases in area devoted to storage, cold storage, warehousing, and distribution, some of which may increase together with surrounding agricultural uses.
 - Potential increases in area devoted to indoor grow operations, potentially further increasing from the growth of industrial hemp production.¹¹⁵

The dynamics of new job creation should also be considered in evaluating refill and redevelopment.

- How strongly is job growth correlated with the size or age of a business? How much job growth is created through newer start-ups vs. long-term growth of more established businesses? How many smaller entrepreneurial businesses intend to grow to be larger businesses vs. remain smaller?
- While there may be capacity to add employees within established space for existing businesses, new businesses may need their own facilities that can't be located within the facilities of other businesses. Some existing businesses may retain partially vacant sites in the event they need to expand. Some businesses will require ownership of their land and facilities rather than leasing space on existing developed sites.

An assumption of 5% industrial refill/redevelopment would result in an increase in employment density from about 10 emp/ac to about 11 emp/ac on existing developed sites. This is generally consistent with McMinnville's historic trends.

¹¹⁵ <https://www.forbes.com/sites/andrebourque/2019/01/31/how-hemp-is-moving-oregon-marijuana-to-an-indoor-grow-crop/#10ff80b960ed>

The empirical calculated density for commercial sites in the 2013 EOA was 22 emp/acre, but an aspirational policy of 26 emp/acre was adopted. Any of the three scenarios calculated above (5%, 10%, or 17%) for refill/redevelopment on *currently* developed sites would result in an increase in density on these sites that would exceed currently observed densities, ranging from 24 to 26 emp/acre by 2041. Carrying over the 17% assumption from the 2013 EOA would mean an assumed employment density of 29 emp/acre on these sites by 2067, compared to the current 23 emp/acre, and exceeding even the aspirational overall assumption of 26 emp/acre used in the 2013 EOA. An assumption of 5% commercial refill/redevelopment would result in an increase in employment density from 23 emp/ac to 25 emp/ac on these sites in 2067.

Recommended approach and assumptions

This update could simply carry forward the 17% refill/redevelopment assumption from the 2013 EOA for all categories, but the analysis of empirical data, calculations of effective density, and comparisons with other cities and the DLCDC Goal 9 Guidebook suggest that assumption is high, and that McMinnville hasn't achieved this historically. Further, even if that level of refill/redevelopment had been achieved historically, carrying over an assumption for each planning period would have a compounding effect of assuming unlimited, successively higher capacity of the same existing developed sites to absorb more employment each time. This would push the employment density for those developed lands up each planning cycle, where infill and redevelopment would have already theoretically occurred and increased in each previous planning cycle.

A reasonable assumption would be 5% refill/redevelopment for both commercial and industrial employment, which is what we would recommend. This would result in an increase in employment density on currently developed sites, still exceeding the empirical employment densities from the 2013 EOA.

The assumed 17% refill/redevelopment rate from the 2013 EOA would be an aspirational assumption that exceeds the empirical densities and exceeds the aspirational density from the 2013 EOA. It is an estimate that we don't anticipate will be achieved, and is higher than most comparisons. The 2001/03 EOA refill/redevelopment assumption of 17% for industrial and 15% for commercial is another aspirational assumption that hasn't been observed historically.

The tables below show the result of the 5%, 10%, and 17% refill/redevelopment assumptions for comparison for the 2021-2041 period.

The government land use type is excluded from the remaining employment forecast calculations, as we account for government employment in calculations for other land needs.

Exhibit 4a. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (17% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	283	1,384
Retail Commercial	383	65	318
Office & Commercial Services	3,346	569	2,777
Tourism Services	1,269	216	1,053
Total	6,665	1,133	5,532

Exhibit 4b. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (10% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	167	1,500
Retail Commercial	383	38	345
Office & Commercial Services	3,346	335	3,011
Tourism Services	1,269	127	1,142
Total	6,665	667	5,998

Exhibit 4c. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (5% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	83	1,584
Retail Commercial	383	19	364
Office & Commercial Services	3,346	167	3,179
Tourism Services	1,269	63	1,206
Total	6,665	332	6,333

Employment Density

ECONorthwest completed an empirical analysis of the overall employment density in commercial and industrial areas, as well as in sample areas for the following land use types included in the employment forecast—industrial, office commercial, and retail commercial.¹¹⁶ The 2013 McMinnville EOA used the following assumptions for employment density:

- **Industrial:** 11 employees per acre
- **Commercial:** 26 employees per acre

The 2013 EOA included an empirical analysis of employment density. The 11 employee/acre industrial density was the empirical calculated density. The empirical commercial employment density was 22 employees per acre. The 26 employee/acre density was an aspirational, policy-based assumption.

In the PAC materials provided for the meeting on September 5, 2019, we completed a sensitivity analysis for employment density based on the 2013 EOA assumptions. The analysis shows the effect of a 10% increase and 10% decrease of the 2013 employment density assumptions and the range of resulting needed acreage. The PAC requested further research based on existing employment density in McMinnville. The results of that analysis are provided in this section.

Overall employment density for existing employment in McMinnville

The analysis of overall employment density for commercial and industrial areas included lots identified as “developed” in the buildable lands inventory (BLI) and summarized the employment per acre on these sites by plan designation (commercial or industrial land only). Land in wetlands was removed from the acreage calculation to better account for land used for employment. We calculated employment density, expressed here as total employees per acre, by dividing the number of employees on developed sites in commercial and industrial plan designations by the acreage (less wetlands) of those developed sites. The results of this calculation were:

- **Industrial:** 10 employees per acre
- **Commercial:** 23 employees per acre

Exhibit 5 shows the results of applying these employment density assumptions for the remaining land use types.

¹¹⁶ The other land use types—tourism services and government—were excluded from the sample area analysis. The PAC will be discussing site characteristics. The sites needed for tourism services are typically similar to the needs for retail commercial. Thus, it is reasonable to assume the same employment density for both tourism services and retail commercial. Government employment will not require vacant commercial and industrial land, so we did not analyze employment density for this land use type.

Exhibit 5a. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 17% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,467	10	147	156
Retail Commercial	337	23	15	18
Office & Commercial Services	2,945	23	128	156
Tourism Services	1,117	23	49	59
Total	5,866		338	389

Exhibit 5b. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 10% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,500	10	150	160
Retail Commercial	345	23	15	18
Office & Commercial Services	3,011	23	131	160
Tourism Services	1,142	23	50	61
Total	5,998		346	398

Exhibit 5c. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 5% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	10	158	169
Retail Commercial	364	23	16	19
Office & Commercial Services	3,179	23	138	169
Tourism Services	1,206	23	52	64
Total	6,333		365	420

While this approach provides a reasonable indication of employment densities in McMinnville, the mix of types of employment on sites may affect the overall result (i.e., not all employment in industrial areas is classified as industrial employment). However, these results align with comparable areas and previous guidelines for calculating employment density, and are therefore reasonable assumptions for the purposes of the EOA.

Sample area employment density for existing employment in McMinnville

ECONorthwest also analyzed sample areas representative of employment in McMinnville by land use type. City staff assisted in choosing these areas for further analysis based on local knowledge as well as requirements for data confidentiality. Again, we calculated the employment density by dividing the number of total employees in each sample area by the total acreage of the sample area site. The results by land use type were:

- **Industrial:** 11 employees per acre
- **Office commercial:** 29 employees per acre
- **Retail commercial:** 19 employees per acre

Similar to the first approach to calculate overall employment density, a sample area approach also has limitations. Sample areas, by definition, do not provide information on employment density across McMinnville. However, these areas were chosen based on a representation of typical employment areas in McMinnville. Limitations in data availability, reporting, and confidentiality also present limitations in results.

The results of both approaches align with results from other studies in comparable cities, as well as the guidelines in DLCD's *Industrial and Other Employment Lands Analysis—Basic Guidebook*, which states:

“Typical employment densities per net acre range from 8 - 12 jobs for industrial; 14 - 20 jobs for commercial; and 6 - 10 jobs for institutional/other jobs.”

The next section provides background information on employment density assumptions used in cities that are comparable to McMinnville.

Exhibit 6 shows the results of applying these employment density assumptions for the remaining land use types.

Exhibit 6a. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 17% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,384	11	126	134
Retail Commercial	318	19	17	20
Office & Commercial Services	2,777	29	96	117
Tourism Services	1,053	19	55	68
Total	5,532		294	339

Exhibit 6b. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 10% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,500	11	136	145
Retail Commercial	345	19	18	22
Office & Commercial Services	3,011	29	104	127
Tourism Services	1,142	19	60	73
Total	5,998		319	367

Exhibit 6c. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 5% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	11	144	153
Retail Commercial	364	19	19	23
Office & Commercial Services	3,179	29	110	134
Tourism Services	1,206	19	63	77
Total	6,333		336	388

Employment density comparison

City of McMinnville staff provided ECONorthwest with a list of cities typically used for comparison purposes. The cities and their population are listed in Exhibit 7.

Exhibit 7. Cities used for comparison to the City of McMinnville by population and county

City	Population (2018 PSU Estimate)	County
Ashland	20,815	Jackson
Newberg	23,795	Yamhill
Redmond	29,190	Deschutes
Grants Pass	37,285	Josephine
Albany	53,145	Linn & Benton
Corvallis	59,280	Benton
Bend	89,505	Deschutes

Each city listed above has completed an EOA between 2005 and 2016. Methodologies for each EOA varied, and information related to employment density assumptions was not consistently reported. The assumptions document in each EOA are listed in Exhibit 8, along with a description of the rationale or approach used for arriving at the employment density numbers, if available. These approaches generally fell into two categories, either (1) a reasonable judgement based on comparable cities or (2) an empirical analysis of existing employment density or other metric.

Exhibit 8. Employment densities for comparison cities

City	Employment Density (employees per acre)			Rationale/Approach	Date
	Industrial	Commercial	Retail		
Ashland	12	17	--	Reasonable judgement/comparison (pg. C-6)	2007
Newberg	11	21	21	Empirical analysis (pg. 84 McMinnville 2013 EOA)	2010
Redmond	5 (low) – 12 (high)	12 (low) – 20 (high)	--	Empirical analysis/comparison (pg. 5-29)	2005
Grants Pass	10	17	17	Reasonable judgement/comparison (pg.8-47)	
Albany	12	--	20	Reasonable judgement/comparison (pg 11)	2007
Corvallis	10	35	25	Empirical analysis (pg 4-60)	2016
Bend	--	--	--	<i>Note: Bend did not use an EPA approach for the 2016 EOA.</i>	2016

Recommended assumptions and approach

The results of the empirical analysis are within reasonable ranges for employment densities. Exhibit 9 shows the recommended approach of 11 employees per acre for industrial and 23 employees per acre for all other land use types. It would also be possible to use the commercial density as a total control for the commercial subcategories and allocate a proportion of the total acreage to each subcategory based on the share from the sampled employment densities if preferred, but we believe this method is reasonable.

Exhibit 9. Estimate of future land demand for new employment (recommended approach), McMinnville UGB, 2021 to 2041, after 5% refill/redevelopment deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	11	144	153
Retail Commercial	364	23	16	19
Office & Commercial Services	3,179	23	138	169
Tourism Services	1,206	23	52	64
Total	6,333		351	405

These calculations do not include the government land needs, which are calculated separately.

During discussion of site characteristics, a portion of the commercial uses will be split out and assigned to neighborhood-serving commercial and services to be located in neighborhood areas.

Figure 40. Comparative Employment Density & Redevelopment Factors

Reference	Employment Density (Jobs per Acre)	% of Job Growth on Vacant Employment Land
2001 McMinnville EOA	11 industrial 22 commercial 35 institutional	83% industrial 85% commercial 87% institutional (based on factors including 1-5% requires no non-res built space or land, 5-7% on existing developed land, and 5% vacancy rate)
DLCD Goal 9 Guidebook (2005)	8-12 industrial 14-20 commercial 6-10 institutional & other (demand for net acres; also noted is that each acre can accommodate 10-15 jobs for general commercial and office-park industrial, 20 for offices in non-metro downtowns & suburban settings)	85-90% job growth on vacant land (based on 10-15% use of vacant or redeveloped buildings cited as general rule of thumb)
Salem-Keizer Metro Area Regional EOA 2012-2032 (May 2011)	Forecast densities @: 20 light industrial (above 12-15 current) 36 general office (reflecting current average with range from 27 in retail areas to 73 in Salem central business area) Retail/personal service uses forecast not by jobs per acre (but @ 0.30 FAR)	95% industrial 83% general office (based on assumption that 5% of industrial and 17% of office new employment will locate in existing space or sites not requiring new land; EOA also notes that "there is no study that quantifies how much employment is commonly accommodated in existing built space over a 20-year period in a city.")
Albany EOA Update (2007)	12 industrial 20 commercial retail/services 10 government	100% job growth on vacant land (was at 90% with 2000 EOA @ 10% refill rate but adjusted to 0% rate as the updated 2007 BLI already accounted for infill and redevelopment on supply side of analysis)
Newberg EOA (2010)	11 industrial (including 10% increase in density as efficiency measure) 21 commercial retail & office (overall average with office calculated @ 40% FAR & avg 201 sf/job; retail estimated @ 14.8 net buildable acres per 1,000 new households)	See density for industrial Office appears to assume 100% development on vacant land Retail assumes 95% use of vacant land (with 5% assumed for infill & redevelopment)
City of Beaverton Final Draft EOA (2010)	18 general industrial 10 warehouse 23 flex/business park 58 office 30 retail 38 institutional (@ Metro method of jobs/bldg sf & FAR for densities)	94.2% industrial 92.7% commercial (calculated for excess vacancy above 6% target normalized rate with excess figures at 5.8% industrial, 7.3% commercial)
Metro Urban Growth Report (2009)	6 general industrial & warehouse 23 flex/business park 46 office 27 retail 27 institutional (Calculated using jobs/bldg sf & FAR for densities; @ low end of spectrum for outer ring suburbs)	80-90% general industrial, warehouse & flex/business park (10-20% refill) 70% office (30% refill) 40-70% retail (or 30-60% refill with most (generally @ lower end of refill rates) 60-65% institutional (or 35-40% refill) (Eange for outer ring suburbs, 2015-30 time period)

Sources: From documents prepared by ECONorthwest, Johnson-Gardner and E. D. Hovee & Company, LLC.

McMinnville Three Mile Lane Area Plan: Market Analysis

Date April 16, 2019 | FINAL DRAFT
To McMinnville Three Mile Lane Area Plan
Project Management Team
From Chris Zahas and Sam Brookham,
Leland Consulting Group

Executive Summary

This executive summary provides an overview of the McMinnville Three Mile Lane Market Analysis, which assesses conditions for residential, commercial, office, and industrial development, as well as public recreational facilities. The executive summary includes a description of residential, commercial, office, and industrial forecasts and demand.

Population and Employment Forecasts

The Population Research Center at Portland State University (PSU) produces the annual Population Estimates for Oregon and its counties and cities, as well as the estimates by age and sex for the state and its counties. The population is projected to grow faster from 2020 onwards within the McMinnville UGB than in Yamhill County.

Table ES- 1. Population Forecasts, 2017-2040

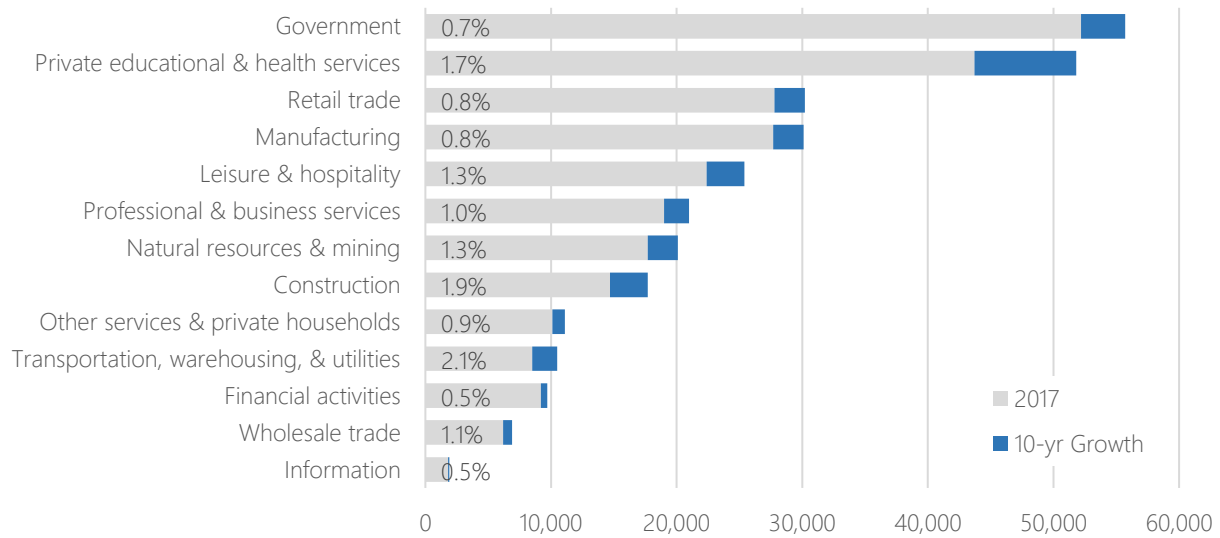
Area / Year	2017	2020	2025	2030	2035	2040
Yamhill County	106,555	111,101	119,339	127,404	135,096	142,311
Annual Growth Rate	N/A	1.40%	1.44%	1.32%	1.18%	1.05%
McMinnville UGB	34,293	35,709	38,437	41,255	44,122	46,956
Annual Growth Rate	N/A	1.36%	1.48%	1.43%	1.35%	1.25%

Source: Portland State University

The study area has a diversified employment base, reflecting the broad range of commercial and industrial businesses in the area. Key takeaways relating to regional employment forecasts include:

- More than one-quarter of all projected employment growth is expected to be in the educational and health services industries, with most in the health care field specifically.
- Industries that typically drive the majority of new office demand—namely Professional and Business Services, Financial Activities, and Information—are among the industries projected to see the slowest employment growth among all industries, and collectively account for eight percent of total projected employment growth.
- Manufacturing employment—the primary driver of industrial development—is projected to be responsible for eight percent of total employment growth.

Figure ES- 2. Projected New Employment Growth, Mid-Valley Region, 2017-2027



Source: Oregon Employment Department (QualityInfo.org).

Real Estate Market

Key takeaways relating to market conditions and real estate trends within the region, City, and Three Mile Lane study area specifically, are as follow.

- Residential prospects** are strong regionally and nationally, but market conditions are weaker in McMinnville. Significant growth in the Mid-Valley region has driven demand for household growth—for both multifamily and single-family. Growth projections for the region suggest demand will remain strong market-wide, although new development in McMinnville has clustered around the western and northern edges of the city. However, existing rents in the region are relatively low and may struggle to attract prominent multifamily developers in the region due to the continuously rising nature of construction costs. The single-family market is very tight, with strong absorption but very little inventory currently listed for sale—particularly in the sub-\$400,000 categories. Single-family homes, multiplexes, townhomes, cottage clusters, and low-rise “garden” apartments are all residential development types that would likely be feasible in the study area in the near-term. Higher-density developments may require additional incentives or other interventions.
- Retail prospects** are relatively strong for certain retail sectors, despite relatively weak market conditions (including rent, vacancy, absorption, etc.). The Three Mile Lane study area likely checks off many site selection criteria and market characteristics typically desired by prospective retailers. While there are few retailers currently in the area, desired physical characteristics, such as visibility, vacant developable land, and ease of access are all present. Further, McMinnville’s central location between the Oregon Coast, the Portland Metro, and Salem provides access to a wide variety of markets. Significant household growth and the burgeoning tourism industry will continue to improve retail prospects.
- Industrial users** are likely to find the Three Mile Lane area an attractive location given its separation from incompatible land users (like residential), ease of access, highway location, level terrain, and

proximity to the airport. While industrial development prospects at the national level are strong, especially warehouse and distribution—largely because of the rise of e-commerce—the Three Mile Lane corridor is not centrally located to large population centers and is therefore unlikely to capture much of this growing market. Instead, industrial growth is likely to be down to the growing agriculture and food and beverage production industry (including the wine industry). These latter users would be consistent with the existing industrial zoning while creating interesting places and improving walkable access to amenities.

- **Office prospects** are potentially strong but limited. Employment data shows few jobs and low historical growth for industry sectors that typically drive demand for new office space. Regionally, however, projections show significant employment growth in education, healthcare, and professional and business services—all of which drive the most demand for new office construction. If McMinnville is able to reposition its office market to capture a greater share of this regional growth, office prospects may expand. Indeed, two businesses recently relocated to the Three Mile Lane Area because of the lack of available office space downtown—reflecting the very low vacancy rate—but wished to remain in McMinnville because of the high quality of life. McMinnville’s quality of life not only has a positive impact on business retention, but there has also recently seen a significant uptick in small high-tech relocations from Silicon Valley that are struggling to find office space. Build-to-suit office opportunities may also arise and help build momentum in the local office market, especially with regard to healthcare and education where there are some existing major tenants and institutions.
- **Lodging** is likely to be a significant development type over the long-term, but the area may struggle to attract hotel developers due to its existing industrial character, lack of walkable amenities, and isolation from downtown. An assessment of the opportunities to capture demand associated with the burgeoning \$7 billion wine industry in the Willamette Valley and related tourism development requires further, more nuanced analysis.
- **Tourism** is a booming industry, particularly with regard to the wine industry, increasing market pressure for the new construction of compatible uses, such as experiential retail and restaurants, lodging, and craft industrial, as well as recreational amenities, such as trails and parks, that combined help to create an authentic, vibrant place.

Three Mile Lane in its entirety is located within an Opportunity Zone, a new tax program created by the 2017 Tax Cuts and Jobs Act designed to spur investment in distressed communities. Investors may defer tax on capital gains up to December 31, 2026, by making an appropriate investment through a qualified opportunity fund (QOF) in accordance with certain requirements. This will increase returns and should make investing in opportunity zones more appealing.

Demand and Forecasted Absorption

The following table provides a summary of market area demand for all applicable land uses. The table also includes an estimated development program for the Three Mile Lane study area, which is LCG’s projected “capture” of regional growth—based on historical trends, land supply, and anecdotal evidence based on the

two focus group discussion conducted to date.¹ The justification for both these numbers is included in the “Notes” column.

It is important to note that these numbers are not specific recommendations; rather, they simply provide an indication of the potential program mix based on market strength. Changes to the mix and specific numbers are anticipated with changes to the zoning, land supply, and public interventions, among other market disrupters.

Table ES- 3. Summary of Market Area Demand and Three Mile Lane Capture

Land Use	Market Area Demand	3ML Est. Program	Notes
Ownership Residential	2,555 units	NA	The market is strong for single-family, with high home values, household incomes, sales volumes, absorption, and construction activity. The quantity depends largely on the City’s vision for the area, applicable zoning, and buildable land.
Rental Residential	1,224 units	240 units	Despite solid national development prospects and strong market area demand due to high growth, low-rise rental apartments and multiplexes are likely the primary building types feasible in the study area because of relatively weak market characteristics.
Retail	539,200 sf	150,000 sf	The study area is well-positioned for new retail development, particularly large-format retail. Neighborhood-serving retail may be a mid- to long-term aspiration when additional residential construction occurs.
Office	144,500 sf	30,000 sf	The office market is relatively weak, and the absorption of significant speculative new development should not be expected. However, opportunities may arise because of McMinnville’s high quality of life, and the Three Mile Lane corridor’s proximity to the airport and institutional users, such as healthcare and education.
Industrial	793,000 sf	80,000 sf	The industrial market remains strong due to the growth of agriculture, food and beverage production, and manufacturing. Continued growth may generate demand in the study area, but development may negatively impact prospects for other land uses, such as lodging and multifamily.
Lodging	NA	NA	Lodging is a specialized development type, which may be feasible given McMinnville’s strong tourism industry. However, a weak office market may limit feasibility in the short-term.

Source: Leland Consulting Group

¹ Where applicable, LCG increased the projected growth rate to reflect higher spending due to tourism from the burgeoning wine industry. Spending generated from tourism would not otherwise get captured within LCG’s demand models as the majority of demand is typically generated by those that live and work within the primary market area.

Introduction

The Three Mile Lane Area Plan (3MLAP) project will develop an area plan for the Three Mile Lane corridor in McMinnville, updating the 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The 3MLAP will integrate a wide range of land uses and a multi-modal transportation system that serves both local and state transportation needs and provides active connectivity within the plan area as well as to the City's downtown core. The project will consider how to maximize the opportunities for job creation, housing, and resiliency planning in the corridor by leveraging the land assets to their highest and best use for affordable housing, industrial development, tourism development, hospital expansion, airport expansion, and gateway improvements.

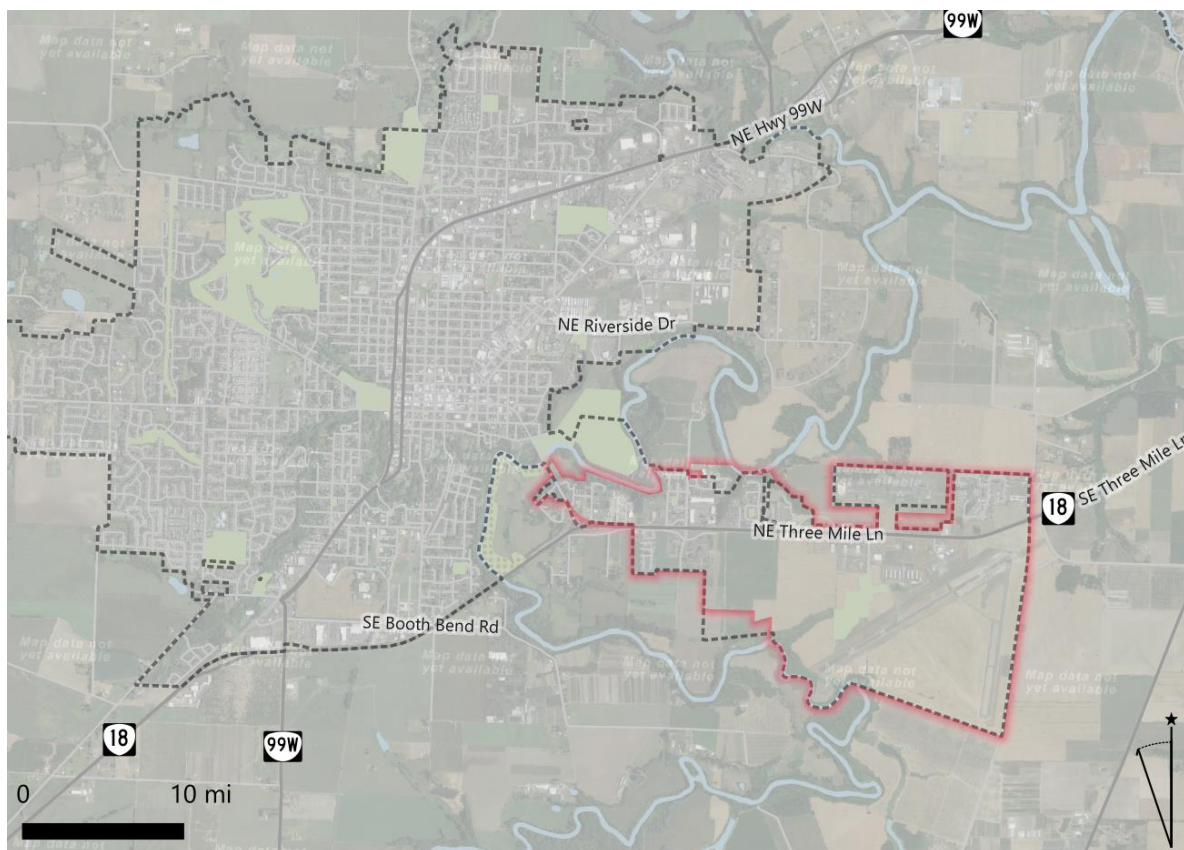
Task Overview

This Market Analysis includes existing and future market conditions for development in the Project Study Area based on current forecasts for population and employment growth; published forecasts for expected growth and development trends; contact with industry professionals; and information provided by participants project meetings and other public input.

Project Study Area

The project study area is located in the southeast arm of McMinnville, centered around State Highway 18/Three Mile Lane, as indicated below in Figure 1.

Figure 1. Three Mile Lane Study Area



Source: Google, TIGER, Leland Consulting Group

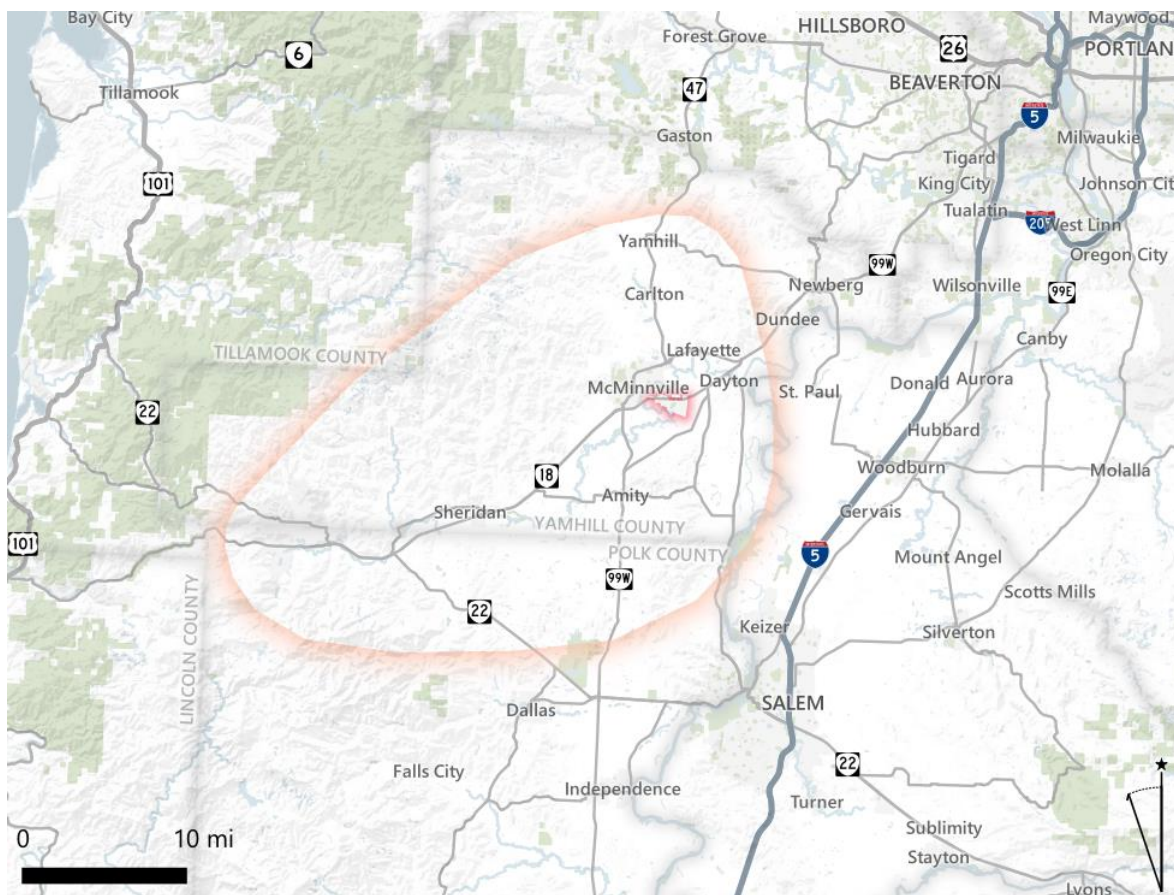
The Market Area

The market area, as defined in Figure 2, represents the area from which the most demand for residential, commercial, and industrial uses will originate, and where most of the competitive development is located. Residents and businesses located in this area are the primary groups to support retail on site, lease/utilize office space, and live in the study area. The market area is roughly bounded by the Willamette River to the east, Tillamook State Forest to the west, and Polk County to the south—although the market does extend into Polk County, there are few residents or jobs located in this area—and the City of Yamhill to the north.

The market area is defined based on several variables, including drive time, destinations, and commute patterns and other relationships to the City of McMinnville. As the most southwestern city of significance on the way to the coast, the market area extends further southwest than it does to the north and south, where McMinnville is unlikely to out-compete with Oregon’s major metropolitan regions—namely Portland and Salem. The pass-through traffic on Highway 18 from Portland to the coast is another market of importance to retailers and tourism-related developers, but not necessarily captured within this report. The retail leakage analysis, discussed in depth later in this report, would capture some of the retail spending, but impacts to hotels, wineries, and other important tourism-related organizations and development would not be cataloged.

McMinnville and other cities located on the western periphery are likely to capture the majority of demand in the Western Willamette Valley, while Newberg is closer to the Portland Metropolitan Area and more likely to capture demand for residents and businesses whose lives and livelihoods are oriented towards Portland.

Figure 2. Regional Overview and Market Area



Source: TIGER, Leland Consulting Group

National and Regional Context

Development Context and Market Trends

Development and Land Use Types

This section includes excerpts from the Urban Land Institute’s (ULI) Emerging Trends in Real Estate report for 2019, an annual publication that assesses the state of real estate markets both nationally and locally based on interviews and surveys with experts in development and finance. Both national and regional trends have an impact on future land uses in the study area: they set the stage for the types of investments that are desirable for real estate developers and investors.

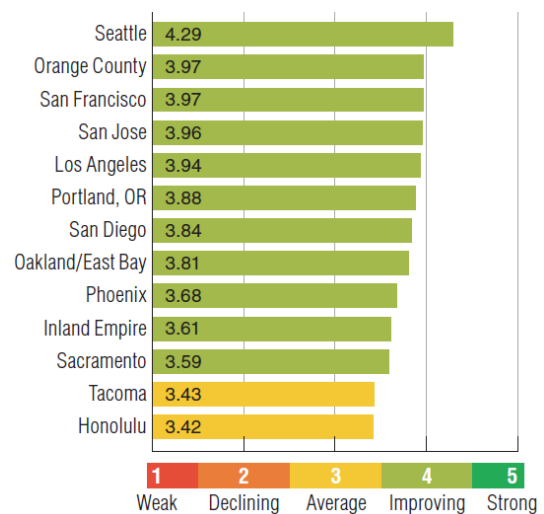
*Emerging Trends*² suggests that access to talent (i.e., well-educated workers) is what drives the economies of many of the Pacific Northwest markets.

The Portland metropolitan region³ is described by ULI as a "solid 18-hour city" whose strengths include strong economic growth due to increased wealth in the market, a high quality of life and attractive outdoor activities, and a diverse workforce that helps to supply trained labor to industries.

While the regional economy is not considered as strong as other Pacific Coast major metropolitan regions, it has experienced the benefit of being able to offer a more competitive cost structure to its more expensive neighbors along with a high quality of life for residents. This is a prime example of how quality of life can drive an economy and one that McMinnville can continue to leverage, especially given the affordability challenges facing the Portland metro.

Indeed, the main challenges in the Portland metropolitan area are housing affordability and critical infrastructure enhancements, where the median home value is \$338,000 and the median household income is \$68,100. McMinnville’s relationship to the Portland metropolitan region may be nuanced, but affordability appears to be a factor. According to 2015-2016 migration data from the IRS (which is based on the address on annual tax returns), Yamhill County attracted approximately 230 households from Multnomah County, with only 173 households migrating *from* Yamhill to Multnomah during this same period. In general, Yamhill’s migratory relationship with other Oregon counties is more prevalent than Multnomah: approximately 65 percent of incoming households to Yamhill County in 2015 to 2016 were from Oregon, compared to only 37 percent for Multnomah. Further, 69 percent of households *leaving* Yamhill migrated to other Oregon counties, compared to only 51 percent of Multnomah households.

Figure 3. Local Outlook: Pacific Northwest



Source: ULI

² [URL](#)

³ Since McMinnville is on the periphery of the Portland metropolitan area, Portland directly impacts McMinnville’s economy.

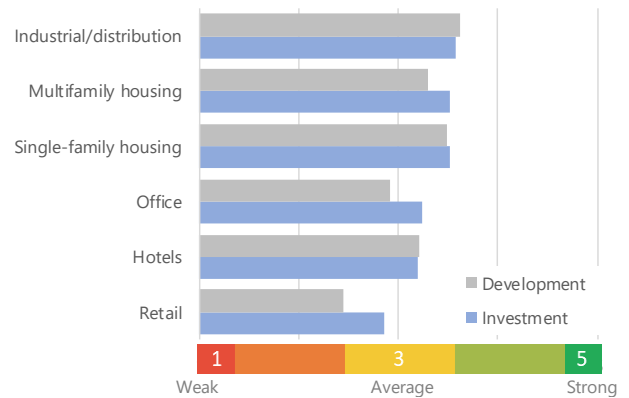
National Real Estate Development Prospects

Emerging Trends also provides guidance about the types of development that are likely to be most desirable in the coming years from a developer and investor perspective. While this is a national outlook, the guidance is relevant for most local markets, including McMinnville.

The following figure shows ULI’s high-level summary of national investment and development prospects for 2019. Several notable features are described below.

Industrial and distribution are favored development types, largely because of the acceleration of online retailing, and the need for distribution points for these goods. However, developers will seek to locate online distribution centers near the center of metropolitan areas where the density of residents and businesses is greatest, therefore the impact of this trend in McMinnville is likely to be modest. Single-family housing has picked back up significantly; for many years following the great recession the development of single-family housing was much slower. Multifamily housing is also seen as having fair to good development prospects. Hotel development is judged to be just above fair.

Figure 4. National Development Prospects, 2019



Source: ULI

LCG’s experience is that hotel development is a specialized form of development, which will continue to work in specific locations, often with an established base of major employers or a major tourism draw, as McMinnville has. Office development is less desirable,⁴ in part because the new generation of white-collar employees requires less space: many hard-wall offices have been eliminated in favor of open floor plans, more employees are working remotely, and paper filing and other “analog” space requirements have become digitized. A majority of new office development has also taken place in close proximity to central business subareas (e.g., downtown Portland), where many young professionals locate and where job growth has been fastest.

New retail development is seen by investors as the riskiest and least desirable type of development, primarily due to the rapid expansion of online retailers who are capturing market share from mall anchors and commodity retailers. Sears, Macy’s, Toys R Us, Sam’s Club, J.C. Penny, and Payless Shoes are among the chains that have completed major store closures. The retrenchment of these traditional retailers and years of high vacancies have made retail developers cautious. Nevertheless, there may be opportunities for retail growth in under-served markets or areas with significant population growth.

The Impact of Tourism on Development

There are several emerging trends in traveler behavior and consumer preferences that have a significant impact on tourism, and therefore should be considered in terms of potential investment decisions. While investments

⁴ However, two office-related businesses have recently moved to Three Mile Lane because they outgrew downtown locations. Office market characteristics provided later in this report shows a low vacancy rate in the office market of 1.4 percent, suggesting a significant lack of available office space.

are typically related to commercial estate, tourism can often also result in residential demand as visitors are drawn to a particular quality of life (for example, young, emerging professional looking to relocate or retirees looking for a place to retire). Some of these trends are described below.

- **Authenticity** – Travelers are increasingly seeking authenticity in the places they visit, where they can experience deeper and more personal connections. According to a travel trend poll of travel agents by American Express in 2014, more than one-third (34 percent) of respondents said customers are seeking to immerse themselves in unique and authentic aspects of their travel destinations.
- **Interactive/Experiential Tourism** – It is more likely that a visitor will be motivated to travel to a destination, extend their stay or return for a future visit if the attractions and assets allow for direct interaction. This has significant implications for the art/culture, entertainment/festival, culinary and other sectors of the McMinnville visitor offering.
- **Culinary/Food Tourism** – Authentic food experiences have become a popular motivator for travel, according to research conducted by TrekkSoft, an international tour operator software company. In a worldwide survey of nearly 150 tour operators, respondents described food markets, tasting sessions, cooking lessons and vineyard/farm visits as growing in popularity.
- **Health and Wellness** – Health-conscious consumers are now seeking to enhance their well-being through travel experiences. In 2017, Booking.com found that 40 percent of travelers are interested in a health and well-being travel experience, such as locally sourced menus, improved access to recreational activities such as yoga, and wellness- or fitness-oriented events.
- **Leveraging Waterfronts** – Both large- and mid-sized communities throughout the country have invested in their scenic waterfronts by planning and supporting the development of shopping districts, outdoor restaurants and river walks. Cities such as Grand Rapids (MI), Bend (OR), Pueblo (CO), Reno (NV) and many others have developed extensive plans and zoning adjustments to add riverside cafes, unique retail, gondolas, craft breweries and other assets that build on these invaluable natural assets.

The Impact of Airports on Development

The 650-acre McMinnville Municipal Airport is located within the Three Mile Lane Study Area on the south side of Highway 18. The facility can accommodate private jet aircraft, but there is no commercial airline that services McMinnville. Most of the aircraft housed at the airport are small planes owned by private individuals. There are also a few jets and a significant helicopter presence due to the helicopter flight school.

While there is not currently commercial air service operating out of the airport, it is important to acknowledge any impact it has on the area's prospects, including any related development opportunities. An assessment of national trends in general aviation and related development helps provide context for possible opportunities.

Nationally, many modern airports now generate most of their revenues from sources other than aviation. Airport authorities are no longer stale bureaucracies. They have quietly been morphing into what can best be called entrepreneurial landlords.

Depending on local circumstances, airports have seen the following types of development (in addition to the usual airport facilities like parking, etc.), either on their lands or directly adjacent to their lands (many of these are in high demand and, therefore, currently at a premium):

- Hotel developments
- Conference/convention centers
- High-end outlet malls
- Destination shopping centers
- Corporate head offices
- Mixed-use developments (shop, work, play, stay)
- Office buildings
- Post-secondary education facilities, specifically aerospace-related
- High-tech business parks
- Industrial developments (manufacturing, warehousing)
- Cargo facilities
- Casinos
- Entertainment destinations
- Recreational facilities
- Botanical gardens
- Butterfly gardens
- Residential developments
- Libraries
- International sports facilities
- Local amenities

Demographics

This section provides an overview of past, existing, and projected demographic conditions.

Household and Population Characteristics

In 2018, the project study area was home to just over 2,000 residents—approximately six percent of McMinnville’s total population and three percent of the market area. The market area—which is mostly located in Yamhill County—contains about three-quarters of the County’s population.

The study area’s population has grown at the fastest rate versus the city, county, and state, although total numerical growth has been relatively little. McMinnville, in general, has generally experienced significant population growth—particularly from 2000 to 2010.

Table 1. Population Counts

	Study Area	McMinnville	Market Area	Yamhill Co.	Oregon
2000 Total Population	1,536	27,198	59,834	84,992	3,421,399
2010 Total Population	1,856	32,187	69,597	99,193	3,831,074
2018 Total Population	2,086	34,366	75,125	104,675	4,185,014
00-10 Annual Growth Rate	1.9%	1.7%	1.5%	1.6%	1.14%
10-18 Annual Growth Rate	1.5%	0.8%	1.0%	0.8%	1.11%
00-18 Annual Growth Rate	1.7%	1.3%	1.3%	1.2%	1.13%

Source: ESRI and Leland Consulting Group

Selected household characteristics are provided in the following table. Generally, existing households in the Three Mile Lane study area are slightly smaller, have higher incomes, and are significantly older, more diverse, and less educated than McMinnville and the wider region. Further, home values are higher than the City and market area average, yet lower than the county and state, likely because despite there being relatively few homes in the study area, most were built post-2000.

Table 2. Select Demographic and Housing Characteristics, 2018

	Study Area	McMinnville	Market Area	Yamhill Co.	Oregon
Avg. Household Size	2.58	2.65	2.74	2.73	2.50
Median Home Value*	\$291,043	\$277,574	\$292,514	\$307,273	\$301,025
Median HH Income	\$55,460	\$53,456	\$57,553	\$61,863	\$57,902
Per Capita Income	\$27,729	\$26,783	\$27,420	\$28,571	\$31,775
Median Age	40.9	35.7	38.1	38.0	39.7
Non-white Pop	20.6%	17.8%	16.5%	14.6%	16.4%
Bachelor's +	19.0%	24.4%	22.2%	26.3%	33.4%

Source: ESRI and Leland Consulting Group

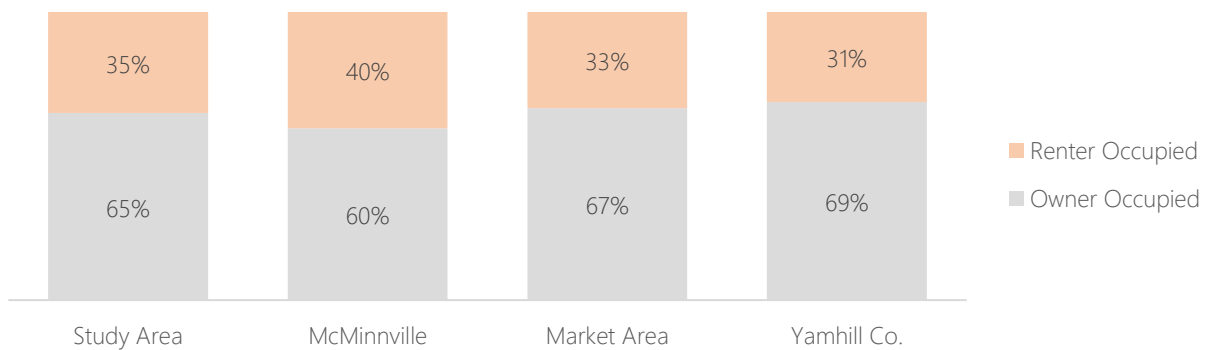
*Owner-occupied housing only

As shown in Figure 5, the study area has a greater proportion of renters compared to market area and county (where owner-occupied households are the norm), but less than the City of McMinnville. This is likely reflective of the higher proportion of older and higher-income households in the study area versus McMinnville.

The Pew Research Center indicates that certain demographic groups—such as young adults, nonwhites, and those with less educational attainment—have historically been more likely to rent than other groups, and rental rates have increased among these groups over the past decade. However, rental rates have also increased among some groups that have traditionally been less likely to rent, including whites and middle-aged adults.⁵

In fact, although renting is most common among young adults, nearly everyone rents at some point in their lives—whether by choice or by necessity. However, rental housing is particularly important for low-income and minority households, about half of whom are renters. As a result, supplying affordable units in a variety of structure types and neighborhoods is a critical national housing policy priority.^{6,7}

Figure 5. Tenure, 2018



Source: ESRI and Leland Consulting Group

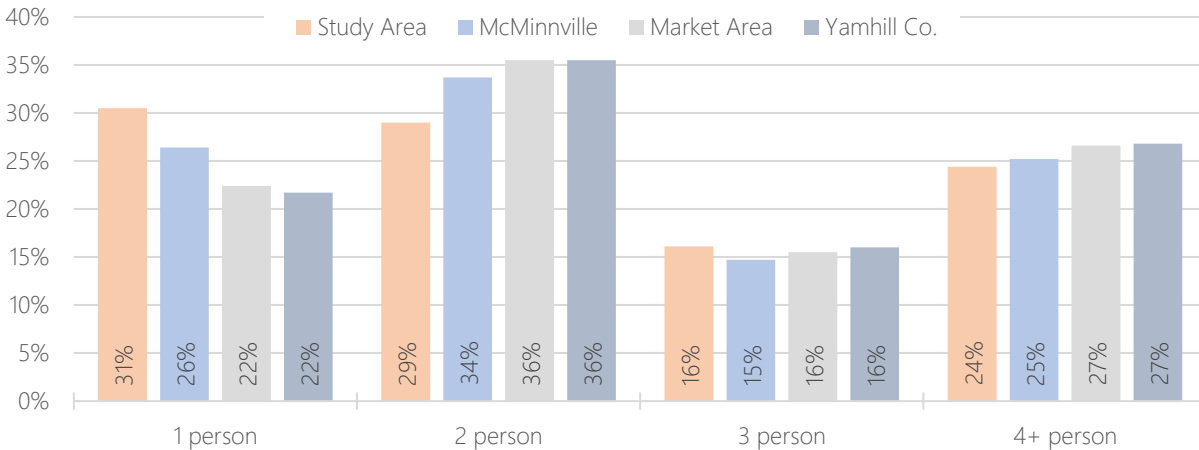
⁵ Pew Research Center, "More U.S. households are renting than at any point in 50 years," 2018, [URL](#)

⁶ From "Renter Demographics" by the Joint Center for Housing Studies of Harvard University, [URL](#)

⁷ At the time of writing, McMinnville was undertaking a Housing Needs Analysis (HNA), the preliminary results of which show housing affordability as a growing challenge in McMinnville.

Figure 6 shows the proportion of households by size for each comparison area. The study area currently has the greatest proportion of one-person households but is consistent with all comparison areas for households with three or more people. Generally, one- and two-person households are the most common household size.

Figure 6. Households by Size, 2010



Source: ESRI and Leland Consulting Group

Residential Forecasts

Population growth is a key indicator and driver of demand for both residential and commercial development, and therefore, population forecasts are critical in estimating future demand. The projected growth—or lack thereof—of the population, households, and employment help to inform future growth rates which are used in the demand analyses presented in this report.

The Population Research Center at Portland State University (PSU) produces annual population estimates for Oregon and its counties and cities, as well as estimates by age and sex for the state and its counties.

The population is projected to grow faster within the limits of the McMinnville UGB than in Yamhill County as a whole. As such, an increasing share of the county’s population is expected to reside in McMinnville over the next 40 years (32 percent in 2018 and 35 percent by 2067).

While McMinnville will have high actual population growth, other cities in Yamhill County have higher projected growth rates over the next two decades. These cities include Dundee (1.84 percent), Newberg (1.81 percent), Lafayette (1.7 percent), Carlton (1.6 percent), and Yamhill (1.2 percent).

Table 3. Population Forecasts, 2017-2040

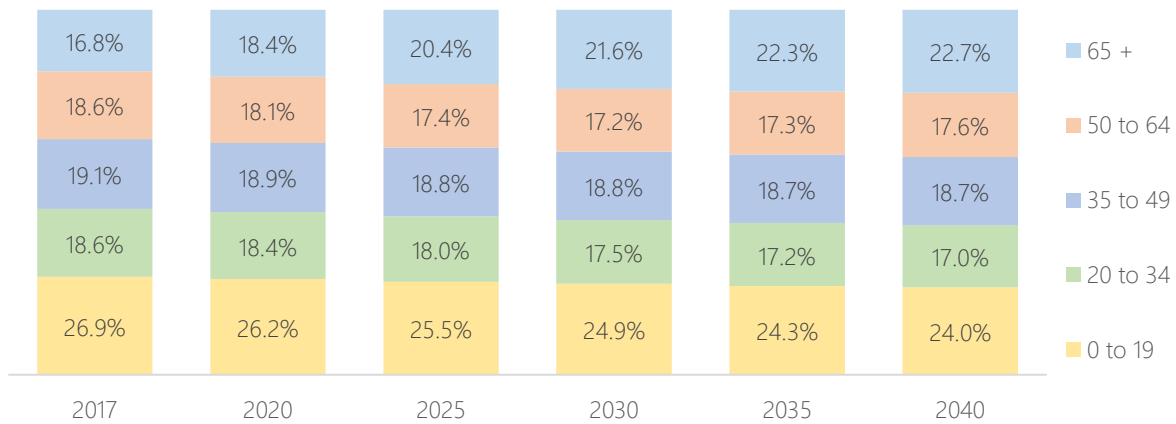
Area / Year	2017	2020	2025	2030	2035	2040
Yamhill County	106,555	111,101	119,339	127,404	135,096	142,311
Annual Growth Rate	N/A	1.40%	1.44%	1.32%	1.18%	1.05%
McMinnville UGB	34,293	35,709	38,437	41,255	44,122	46,956
Annual Growth Rate	N/A	1.36%	1.48%	1.43%	1.35%	1.25%

Source: Portland State University

The 65-and-over age group is projected to experience the most growth in the next two decades as the entire baby boomer generation enters retirement age. After 2030, the millennial presence is projected to significantly

increase the proportion of the population aged between 50 and 64. Access to essential services and a sufficient range of appropriate housing options will be critical in accommodating these aging demographics. These shifting demographics are likely to have a significant impact on residential development. For example, growth in the number of seniors will result in demand for senior housing (age-restricted apartments or assisted living facilities) and small and maintenance-free dwelling units. Growth in the Millennial generation will result in demand for affordable single-family, townhomes, and multifamily housing.

Figure 7. Population by Age, Yamhill County, 2018-2040



Source: Portland State University

Employment

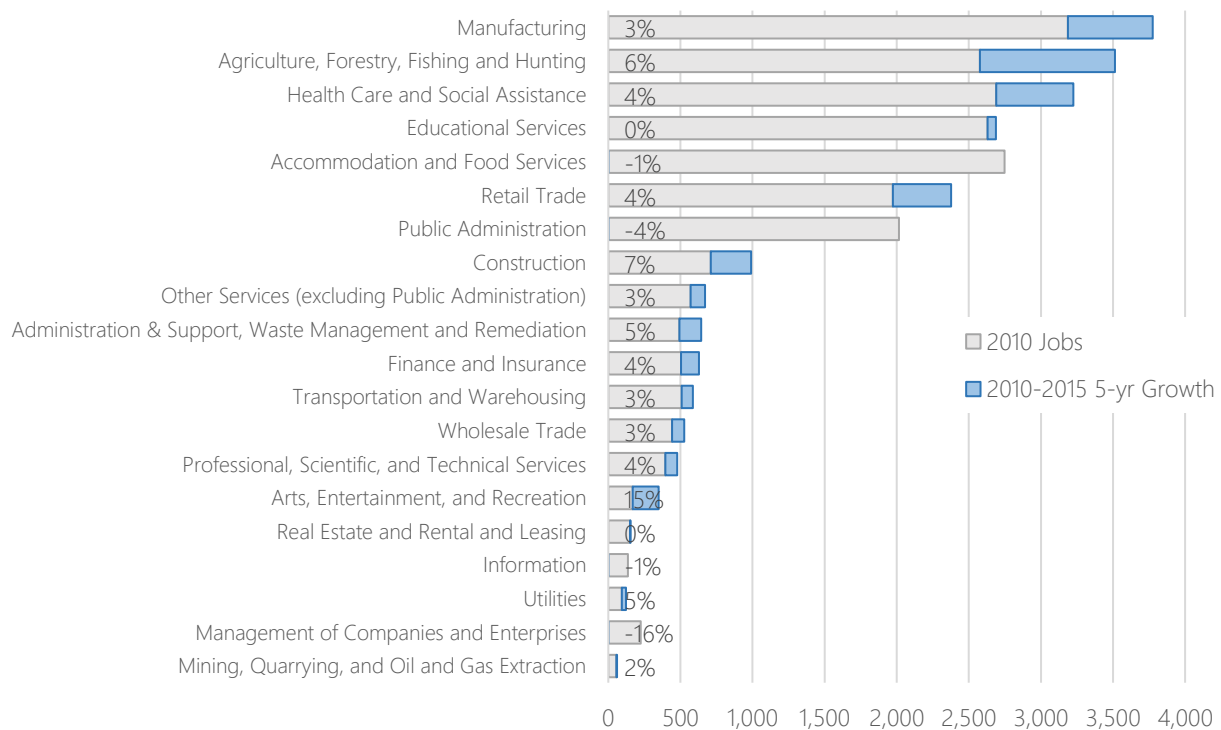
This section provides an overview of past, existing, and projected employment conditions.

Total job counts for 2010 and 2015 and annual employment growth are shown in Figure 8. Employment in the McMinnville market area predominantly consists of jobs in manufacturing, education, healthcare, accommodation and food services, and retail. These five industries were responsible for over 71 percent of all jobs in 2015. Approximately one-quarter of all jobs in 2015 were in the manufacturing industry. Of these top five industries, all but Educational Services experienced high annual growth of over two percent.

- The fastest growing industries between 2010 and 2015 were:
 - Arts and entertainment (15.5% annually). While this sector is relatively modest in size, its growth has been the highest among all other sectors, likely due to the increase in tourism in the area.
 - Construction (6.9% annually).
 - Agriculture, forestry, fishing, and hunting (6.4% annually). Not only in this the third-fastest growing sector in the market area, but it is also the second-largest in terms of total jobs. One of the inputs into this sector is the wine industry, in which McMinnville has continued to experience growth.
 - Administrative & support, waste management & remediation services (5.5% annually)
 - Utilities (5.4% annually)

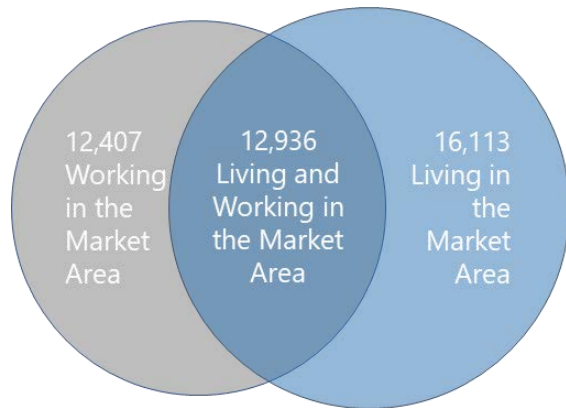
- Finance and insurance (4.5% annually). The majority of speculative office demand is typically generated by this sector and the following sector. This growth improves development prospects for new office development, but in terms of total jobs, these sectors remain relatively minor in the region.
- Professional, scientific and technical services (3.9% annually).
- The only industries to lose jobs in the five-year period between 2010 and 2015 were:
 - Management of companies and enterprises (-15.6% annually)
 - Public administration (-3.7% annually)
 - Information (-1.3% annually)
 - Accommodation and food services (-0.7% annually).

Figure 8. Employment Profile, McMinnville Market Area



Source: LEHD. Percentages shown above are compound annual growth rates for the past five years.

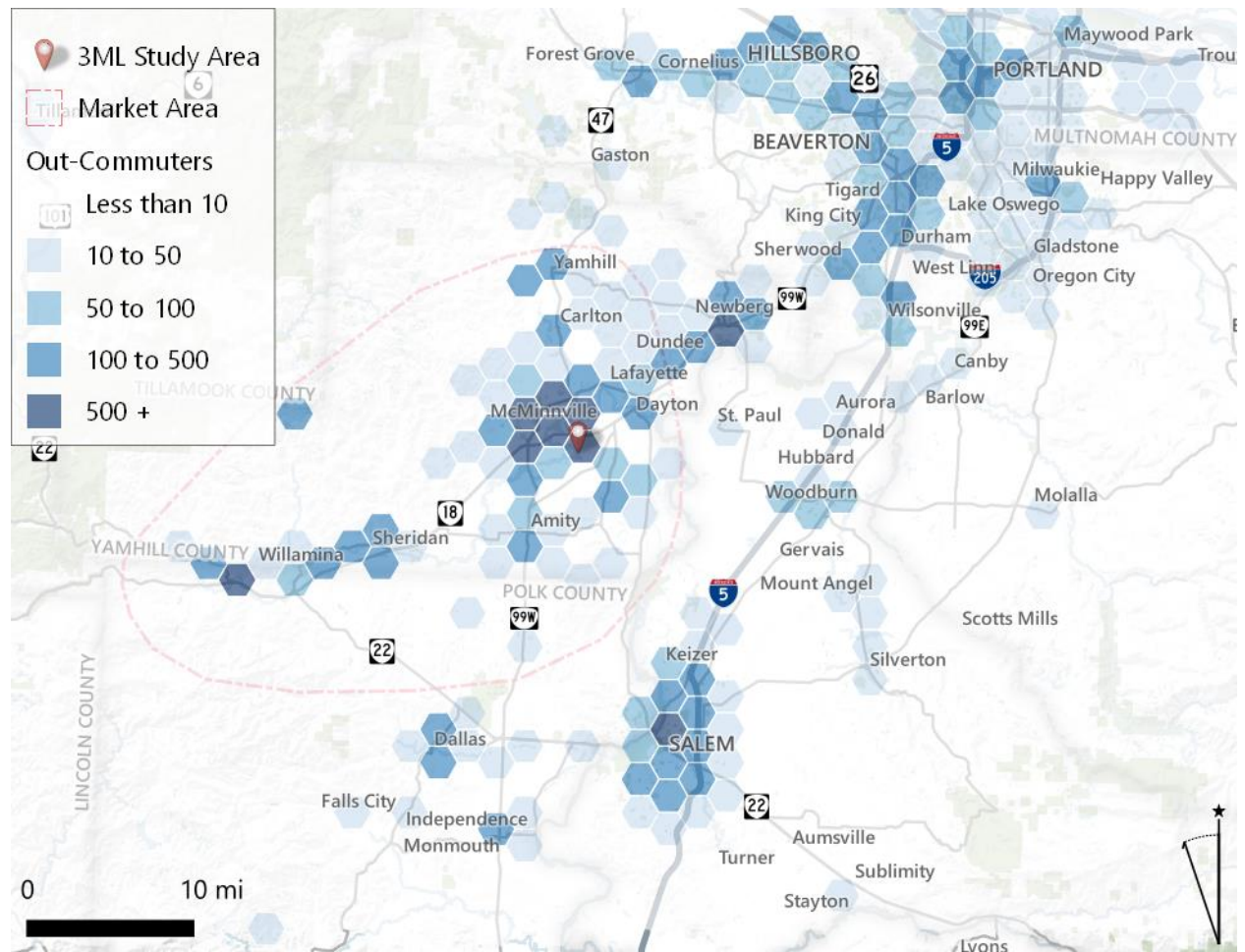
Figure 9. Commute Patterns, Inflow-Outflow, McMinnville Market Area, 2015



The number of people that both live and work in the McMinnville market area generally increased from 2005 to 2015, suggesting that McMinnville’s employment market has strengthened over the past decade. Approximately half of the people working in the market area as of 2015 also live there, up from 41 percent in 2005.

Figure 10 below shows where residents of the market area commuted to work in 2015. The highest concentration of employees living in the market area is within McMinnville. However, a significant number of market area residents commute to Newberg and Salem, as well as further afield to various cities in the Portland metropolitan area. Few residents commute to the coast, although there are small concentrations of employment in cities and towns to the southwest of McMinnville—namely Sheridan and Grand Ronde.

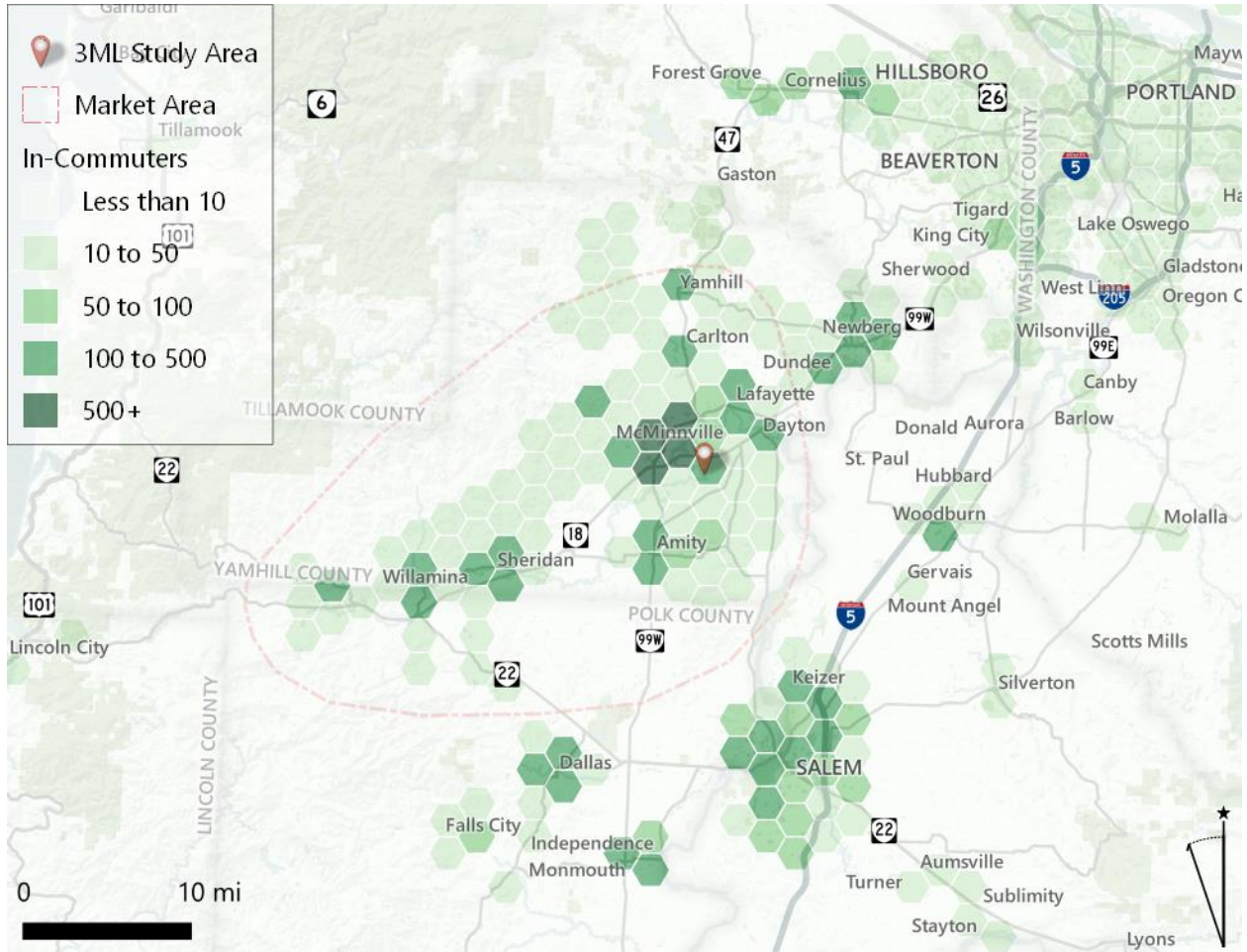
Figure 10. Where Market Area Residents Commute To, 2015



Source: LEHD OnTheMap and Leland Consulting

As the following map shows, there is a significantly greater concentration of employees that also live in the McMinnville area. Few employees working in McMinnville and the surrounding market area live in Salem and even fewer in areas of the Portland Metro.

Figure 11. Where Market Area Employees Commute From, 2015



Source: LEHD OnTheMap and Leland Consulting

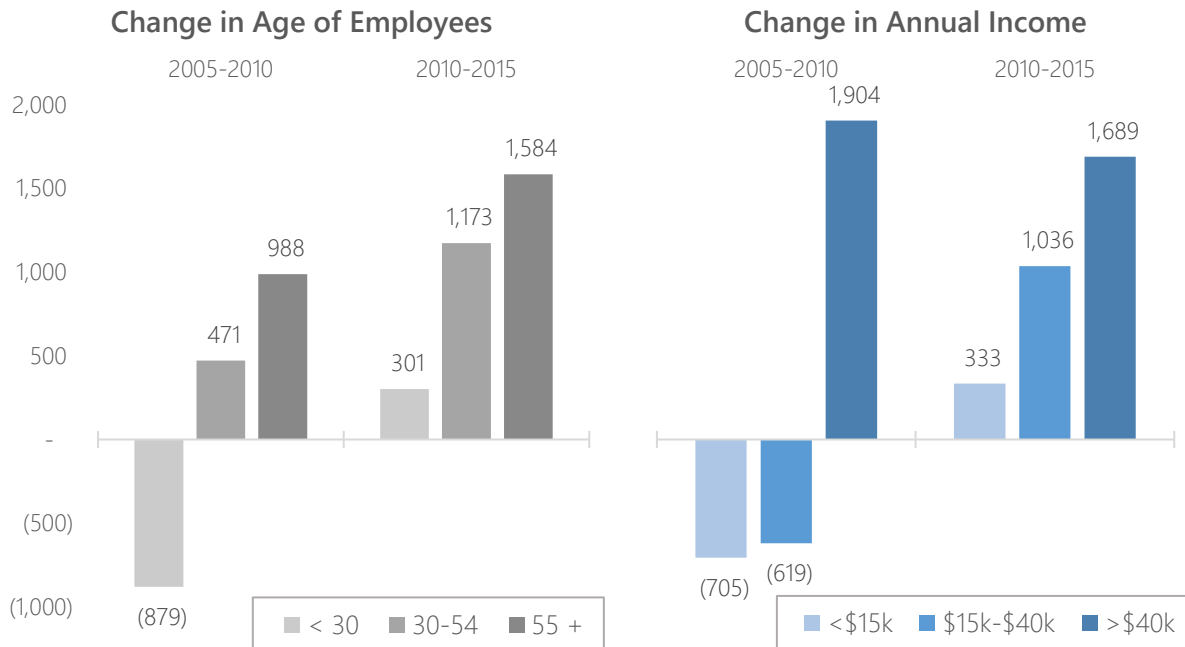
Figure 12 below shows the proportion of market area employees by both age and annual income in 2005, 2010, and 2015. Generally, employees in the market area were significantly older in 2015 than in 2005 but earned significantly more on an annual basis. In fact, employment grew by almost 2,600 jobs in the 55-and-over age category. During this same period, workers in the under-30 age category declined by almost 600.

Some of the key takeaways about McMinnville’s employment associated with both the aforementioned commute data and this trend data is summarized as follows.

- McMinnville as an aging community that is failing to attract or retain its younger workforce. Comparatively, the same data source shows a similar yet less significant trends for the City of Portland.
- People over the age of 55 are moving to McMinnville as they near retirement age, skewing the average employee age upwards. In contrast, almost half of all new employment growth in Portland between 2010 and 2015 was for employees aged between 30 and 54. Similarly, however, the metro

also showed a decline in workers younger than 30 between 2005 and 2010, and only modest growth between 2010 and 2015. Ultimately, this shows Oregon to be an attractive place for workers well into their career already rather than younger, entry-level workers.

Figure 12. Change in Number of Employees by Age and Annual Income, McMinnville, 2005-2015

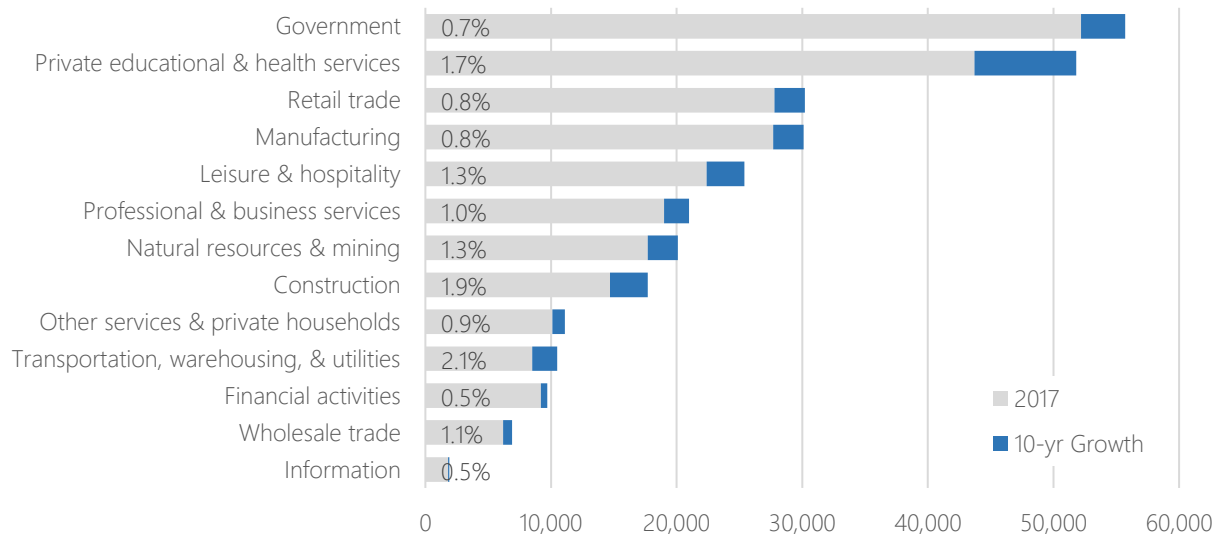


Source: LEHD

Employment Projections

For employment forecasts, we use the State Employment Department’s 10-year projections for each industry. Over half of all projected employment growth is expected to occur in the industries of Educational and Health Services, Government, Construction, and Leisure and Hospitality. The fastest growing industry is Transportation, Warehousing, and Utilities. New, specialized office demand may arise from significant growth in education and healthcare, while employment growth in leisure and hospitality is indicative of the region’s burgeoning tourism presence, particularly with regard to the wine industry.

Figure 13. Projected New Employment Growth, Mid-Valley Region*, 2017-2027



Source: Oregon Employment Department (QualityInfo.org)

*Includes the four-county region of Marion, Polk, Washington, and Yamhill

However, caution is required with these projections. Not only do they apply to a larger geographic area than the residential projections (a four-county region versus the McMinnville UGB), but the employment projections are given by industry, likely resulting in a significant margin of error. As such, it is likely to be just as instructive to consider historical trends (e.g. from the last five to 10 years) in projecting future employment in the market area. The demand estimates for new office and industrial development that are presented later in this report are based on an average of historical and future growth rates.

Real Estate Market

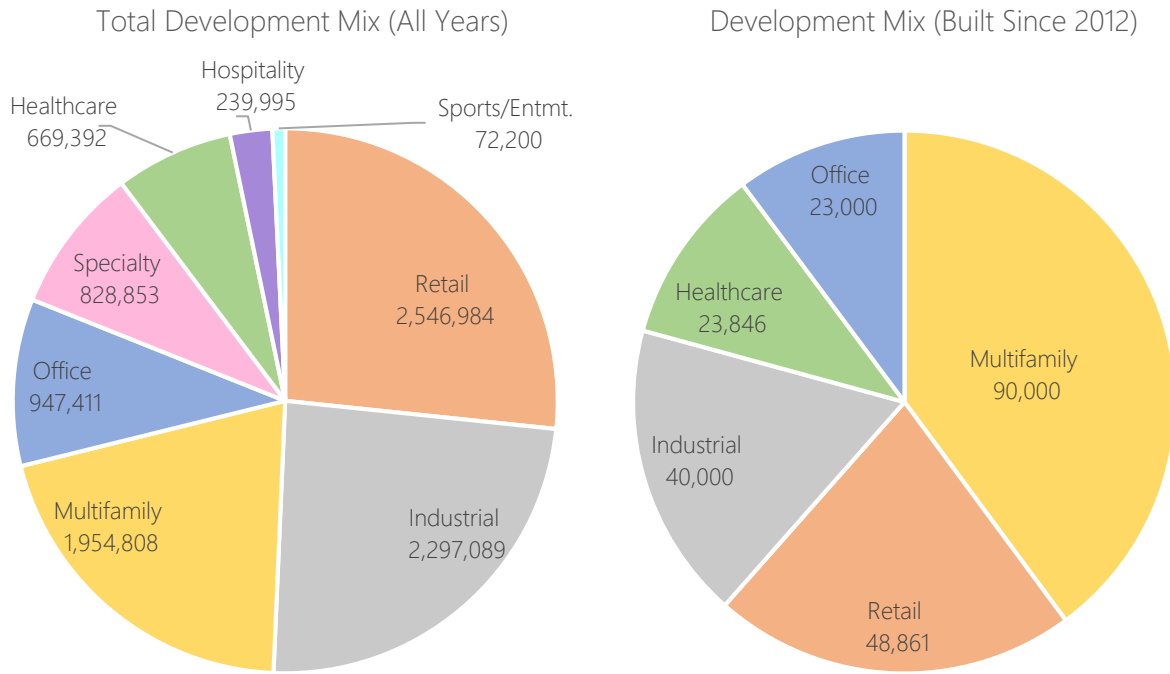
This section covers the residential market, which includes both single-family and multifamily housing; the retail market; and the market for “employment” space, which includes both industrial and office land uses. Market conditions—such as the development pipeline, building vacancies, rents, and other market trends—are critical to establishing the market’s strength and subsequent level of financial feasibility for new development.

However, more recent development in McMinnville has been mostly multifamily residential (predominately apartments), which is consistent with national trends and consumer preferences, despite weaker market conditions. With the growing demand among younger and older generations for apartments, tighter mortgage lending requirements, and many years of limited apartment production, there remains pent-up demand for apartments in most markets. Coupled with a changing commercial market in which office space use is declining every year and retailers are closing at an unprecedented rate in face of e-commerce, multifamily has generally become the dominant type of new development. This trend appears to be applicable to the McMinnville market area as well. With that said, construction costs and increasing land prices continue to increase feasibility barriers. If rents are not high enough to justify new construction to mitigate these barriers, then additional funding will be necessary to bridge the feasibility gap.

Figure 14 shows commercial and multifamily real estate development (excluding institutional and single-family residential) by total square footage within the market area. The chart on the left shows all development built

across all years. The land use mix is relatively evenly spread across many development types, with retail and industrial comprising over half of all development.

Figure 14. McMinnville Market Area Land Use Mix, Commercial and Multifamily Development (Square Feet)

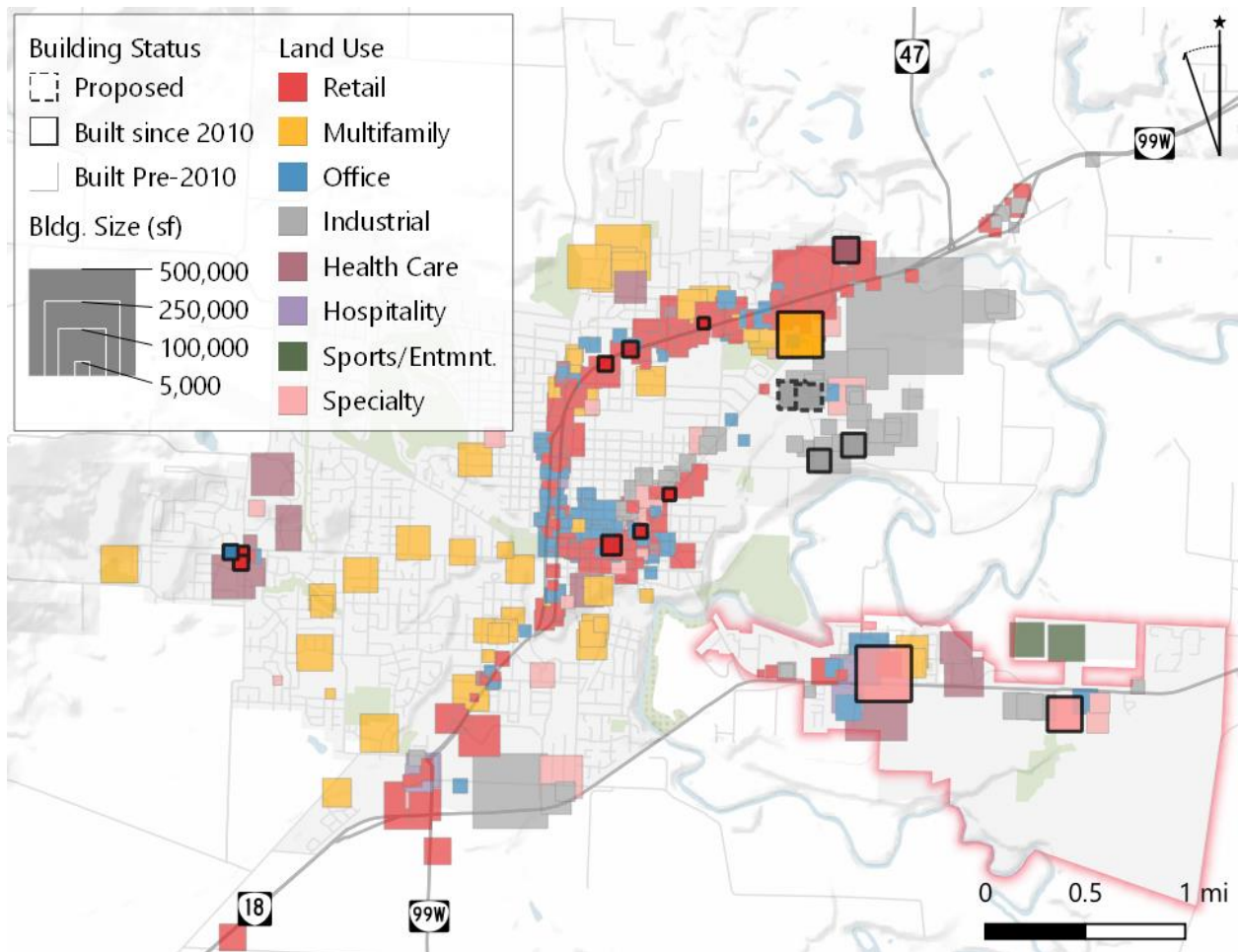


Source: Costar

Figure 15 shows the location and size (by total building square footage) for each land use. Squares with bold outlines indicate recent construction and buildings under construction, while squares with dashed or no outlines indicate proposed projects planned for 2019 or beyond. It is worth noting that some of these proposed projects have been in the pipeline for a long time, such as the proposed retail projects in the Three Mile Lane study area. This analysis—to a certain extent—will identify whether some of these projects are indeed feasible.

There has been relatively little new development in McMinnville, and most recent construction has occurred in the northern sections of the city, with some smaller retail projects along the Highway 99W corridor.

Figure 15. Development by Land Use* and Year Built, City of McMinnville



Source: Costar and Leland Consulting Group
 *Excludes institutional and single-family residential land uses

Residential Market

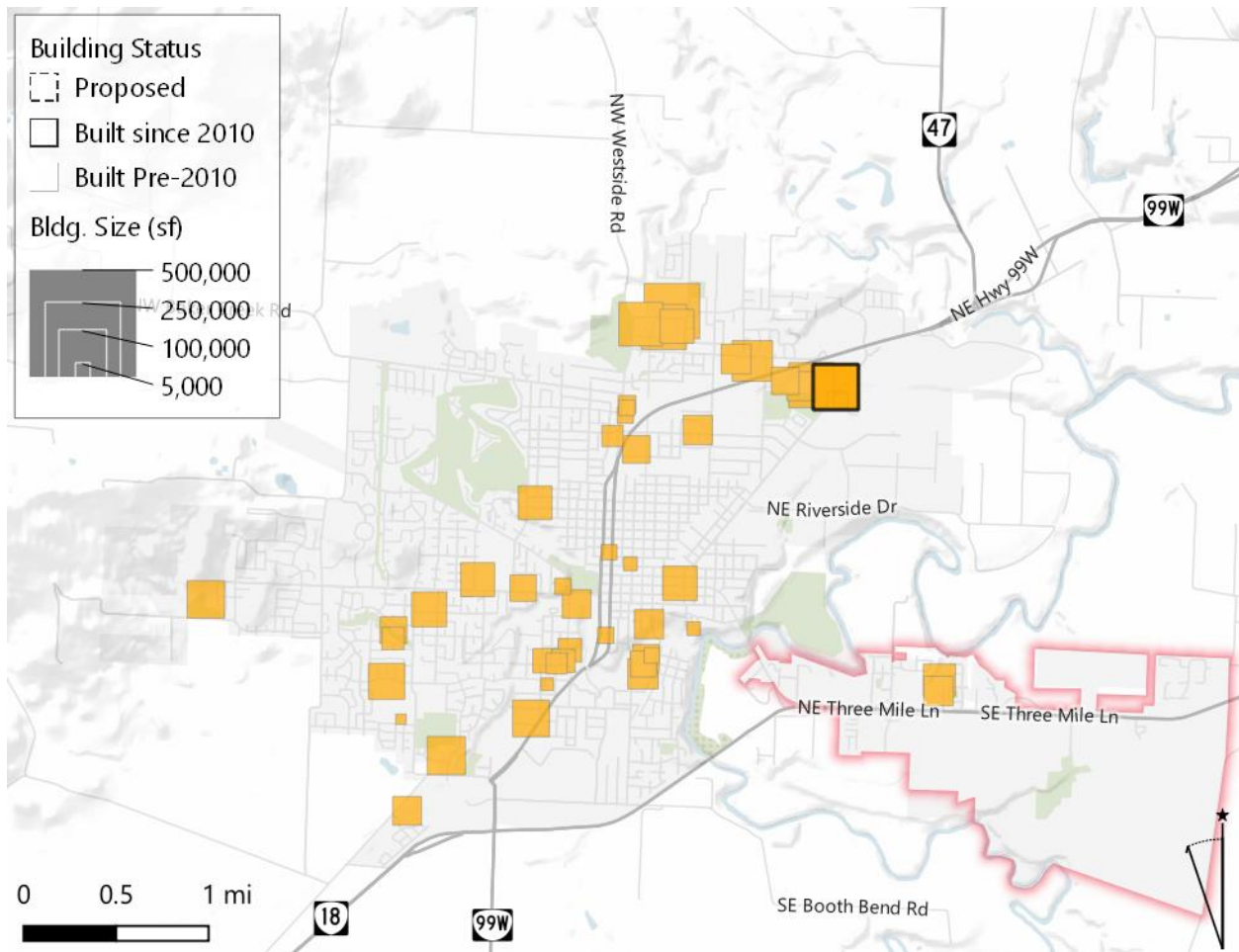
The residential market includes both single-family and multifamily development—both renter-occupied and owner-occupied.

Multifamily Rental Market Summary

Nationally, apartment demand and occupancy remain strong and demographics are favorable to the apartment sector. However, apartment growth tends to be most apparent closer to the center of large metropolitan areas.

The regional market is largely rural and features a sizable proportion of renters, underpinned by demand from students at several local colleges and universities. Deliveries have been limited in this cycle, though lease-up has been rapid in new projects. Generally, there have been tighter vacancies and higher rent growth than in the wider Portland metro region. The primary inventory is for “workforce housing,” and there are no high-end communities (designated by CoStar as 4 or 5 stars) in the submarket. Investment in Yamhill County is limited, with fewer than 10 properties typically trading each year between primarily local firms and investors.

Figure 16. Multifamily Residential Development



Source: Costar, Leland Consulting Group

Within McMinnville, 13 of the 37 apartment buildings with 20 or more units are non-market-rate⁸ (senior or affordable). Market-rate apartments rent—on average—from about \$1.00 to \$1.20 per square foot. The vacancy rate is very low, with the only vacancies near or above five percent in buildings older than 1980. Units in newer buildings typically achieve higher rents.

Only one apartment project has been completed within the market area since 2012—Lafayette Place Apartments. This project is pictured below along with a summary of its key attributes.

Lafayette Place Apartments. A 132-unit market-rate apartment project, completed in 2017, located in north McMinnville. The buildings are wood-frame, three-story “garden walk-ups”. At \$955 for a 1-bedroom apartment (\$1.32 per square foot) and \$1,196 for a 2-bedroom apartment (\$1.26 per square foot), the Lafayette Place Apartments are the highest renting multifamily



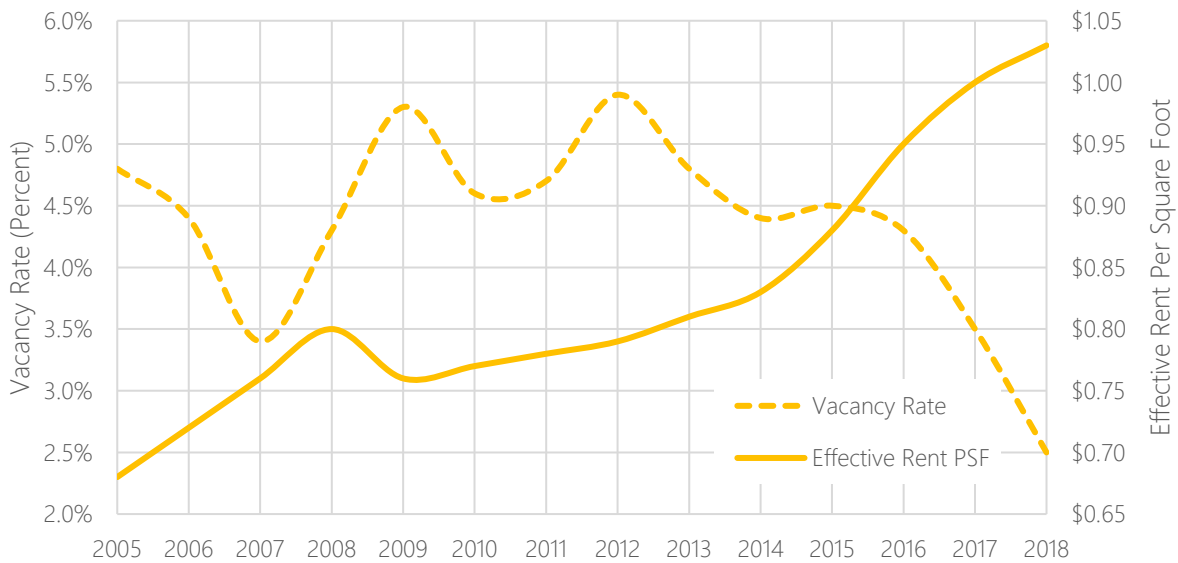
⁸ Market rate housing is an apartment that has no rent restrictions

property in the market area. Parking is 100 percent onsite surface lots.

Figure 17 below confirms that the multifamily market in the McMinnville market area is tight. Average rents have been climbing over the last decade, while vacancies have been very low and have rapidly declined since 2012, indicating demand for new multifamily construction.

In fact, this market strength and potential demand is underlined by the fact that vacancy rates in McMinnville’s multifamily housing market remained low and rent growth was largely positive during the recession—a period of time where most apartments in similar markets saw the exact opposite trends occurring.

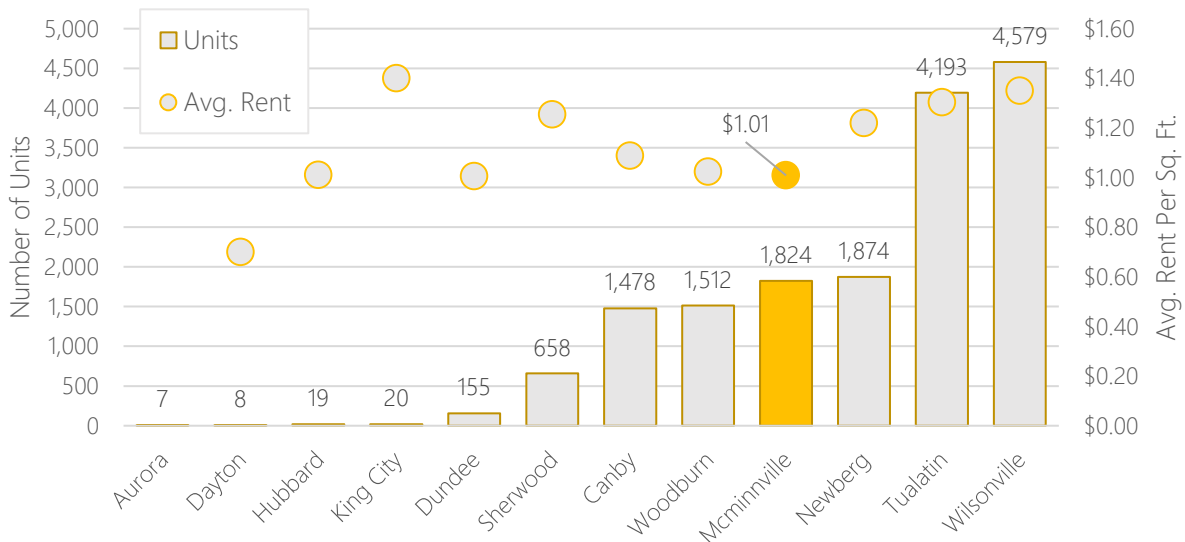
Figure 17. Market Area Multifamily Rent and Vacancy Trends, 2005-2018



Source: Costar, Leland Consulting Group

However, the average rent per square foot for multifamily apartments in McMinnville is lower than those in Newberg, Tualatin, and Wilsonville, which benefit from their proximity to the larger job centers in Portland and Washington County. Some of McMinnville’s newer or higher quality multifamily properties, however, have seen rents higher than the historical average. For market-rate properties only, the average rent increases to about \$1.11 per square foot.

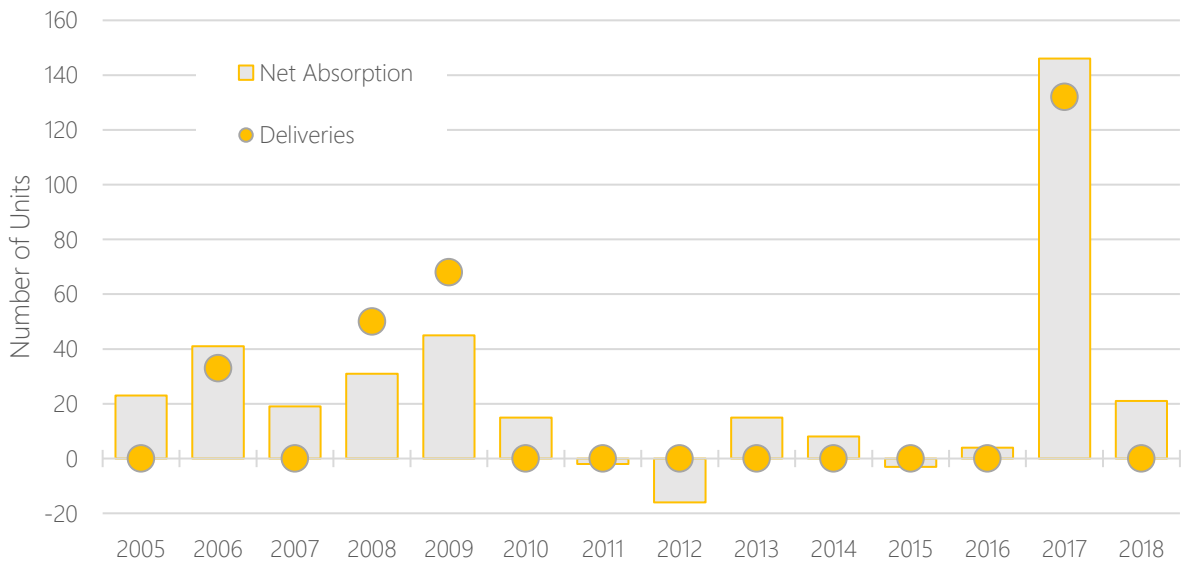
Figure 18. Regional Multifamily Residential Summary



Source: Costar, Leland Consulting Group

Vacancies decreased gradually and then significantly from 2012 through 2018, despite the completion of the 132-unit Lafayette Place Apartments in 2017, largely due to continued positive absorption. The instant absorption of the first new apartment project in a decade indicates strong demand for new rental housing.

Figure 19. Market Area Multifamily Net Absorption and Deliveries (units), 2005-2018

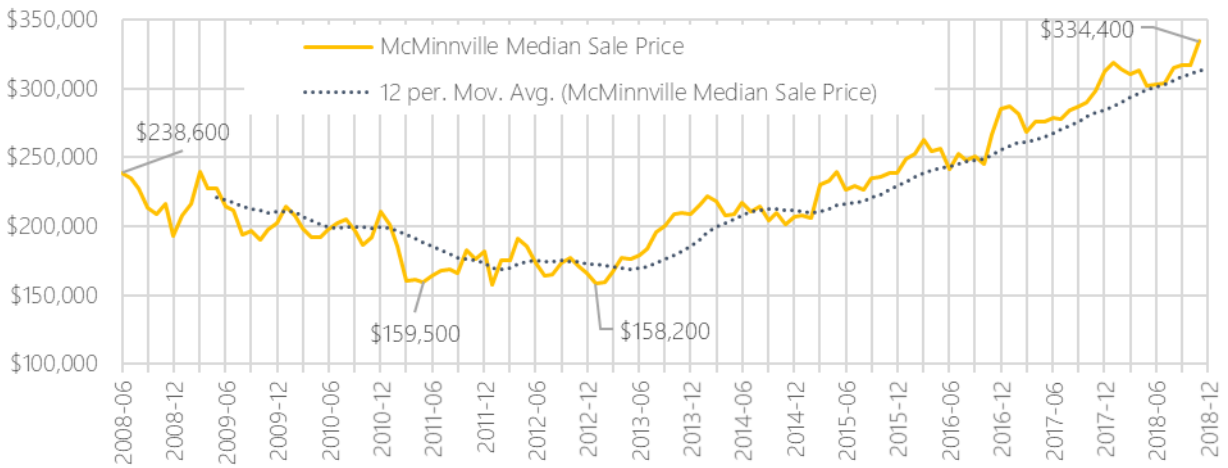


Source: Costar, Leland Consulting Group

Single Family Market Summary

Single-family home prices have been increasing rapidly since the 10-year low of \$158,000 in 2013 Q2. The pre-recession median price of \$239,000 was surpassed going into 2016. Per Figure 20, McMinnville’s single-family market appears strong and hasn’t experienced the same volatility in the market over the past 10 years as many other municipalities.

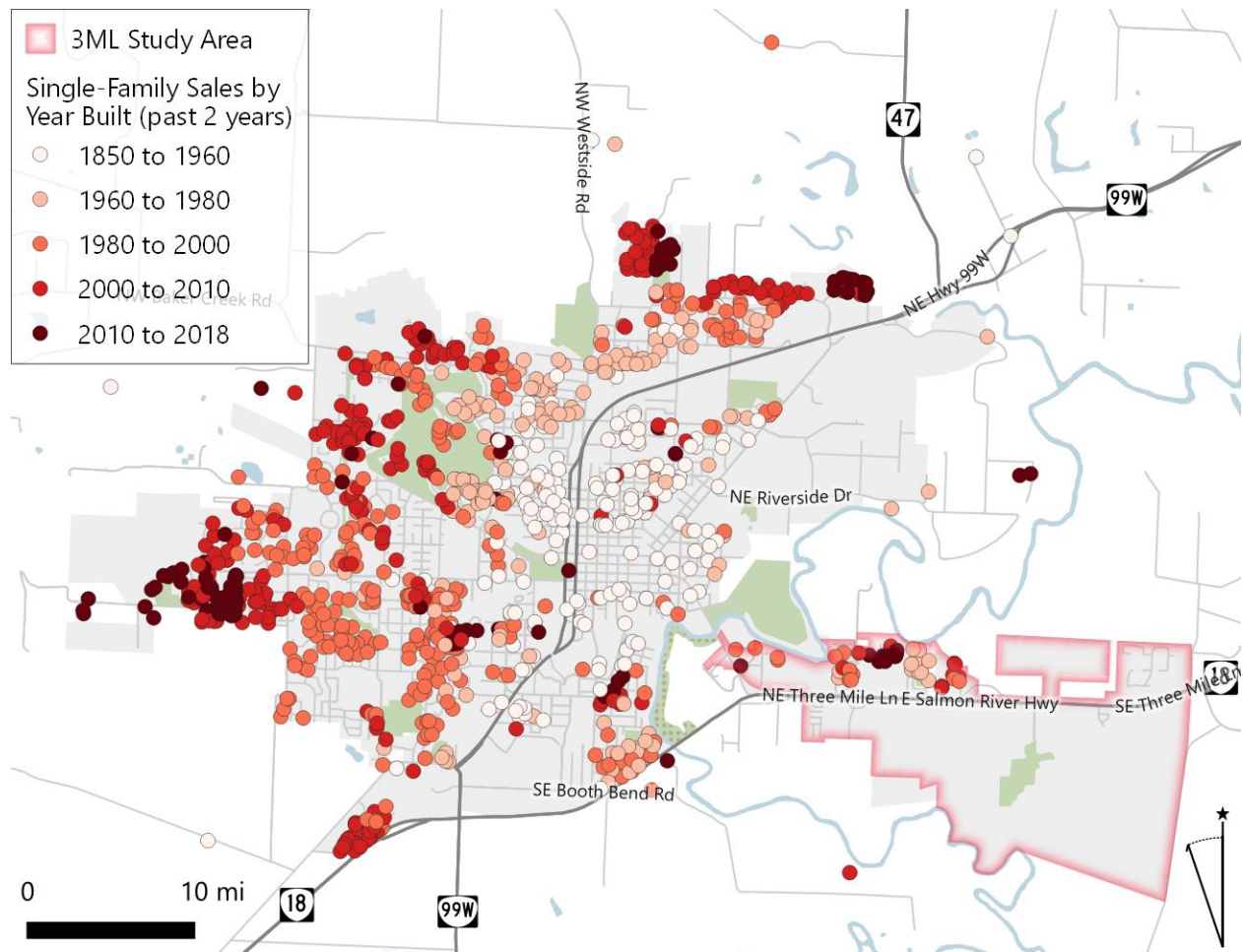
Figure 20. McMinnville Single-Family Median Home Sold Price (2008 to 2018)



Source: Zillow Real Estate Research

Figure 21 shows the location density of residential sales for the past two years. Sales have been driven by new single-family construction in subdivisions, mostly in the western and northern edges of the city. However, some new development has occurred in the Three Mile Lane project area.

Figure 21. Single-family Residential Sales, Past Two Years



Source: Redfin, Leland Consulting Group

Table 4 below shows data relating to single-family sales and absorption for the past 24 months, as well as current for-sale listings, and estimated months of inventory. Months of inventory are often referenced when determining whether it's a seller's market or a buyer's market: If there are zero to four months of inventory, meaning that all current listings can expect to be sold within 4 months, it is considered a seller's market because houses are selling very quickly.

Key findings and general takeaways include:

- Over the last 24 months, approximately 1,127 homes were sold (all new homes and resales), over 92 percent of which were single-family detached homes.
- There are no existing townhomes listed for sale.
- The single-family market is considered tight, with only three months of inventory currently listed for sale. The market for housing under \$400,000 is particularly tight, with very little inventory listed for sale and the highest rate of absorption across all home types and price ranges.

Table 4. Owner-occupied Housing Market Summary, McMinnville, 2018

	Sales in Last Two Years	Percent of Total	Absorption (Units Sold per Month)	Listings	Months of Inventory
Single-Family Homes					
Under \$200k	68	7%	3	0	0
\$200k to \$300k	373	36%	16	9	1
\$300k to \$400k	365	35%	15	31	2
\$400k to \$500k	141	14%	6	43	7
\$500k to \$600k	59	6%	2	12	5
\$600k +	38	4%	2	23	15
Subtotal	1,044		44	118	3
Attached Homes*					
Under \$200k	12	14%	1	0	0
\$200k to \$300k	58	70%	2	0	0
\$300k to \$400k	13	16%	1	0	0
\$400k +	0	0%	0	0	0
Subtotal	83		3	0	0
All Housing					
Under \$300,000	511	45%	21	9	0
Over \$300,000	616	55%	26	109	4
Total	1,127		47	118	3

Source: Redfin and Leland Consulting Group

*Attached includes condominiums and townhomes

The following table—which shows various data for sales over the past 24 months for all housing (all construction years) and new housing (built since 2010) by the number of bedrooms—provides further confirmation of the tight single-family market and relatively strong demand for middle-income, mid-sized, high-quality housing. Housing built since 2010 tends to cost about 22 percent more on average than the local single-family market. New housing—and homes with two and three bedrooms—spend the least time on the market (not including one-bedroom housing, which comprises only one percent of the market).

Table 5. Single-Family Sales Within the Last Two Years by Number of Bedrooms

Number of Bedrooms	Percent of Sales	Avg. Price	Avg. Price per Sq. Ft.	Avg. Size (sq. ft.)	Avg. DOM	Avg. Year Built
All Construction	100%	\$333,904	\$185	1,865	370	1985
1	1%	\$263,451	\$255	1061	188	1971
2	9%	\$254,814	\$205	1,276	374	1962
3	62%	\$315,474	\$188	1,710	368	1985
4	23%	\$393,456	\$173	2,303	375	1992
5	5%	\$424,828	\$156	2,772	382	1997
6	1%	\$498,520	\$151	3,344	351	1984
Built Since 2010	14%	\$408,298	\$203	2,029	313	2016
1	1%	\$275,000	\$393	700	133	2017
2	2%	\$328,000	\$201	1,648	288	2012
3	33%	\$379,286	\$199	1,902	283	2015
4	49%	\$408,915	\$186	2,202	375	2016
5	16%	\$442,392	\$171	2,590	366	2016

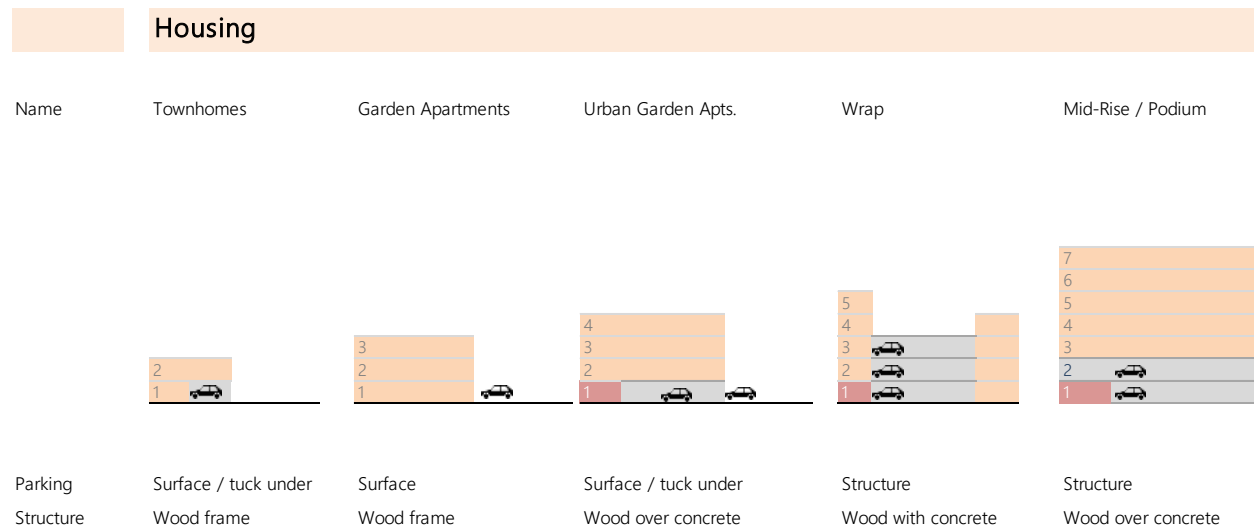
Source: Redfin, as of July 2018

Housing Development Prototypes

Most housing can be categorized within a set of “prototypes,” which are shown below (single-family residential is not included). The prototypes increase in scale and density moving from left to right. Parking is a key factor that affects housing density and financial feasibility. Typical types of parking are surface, tuck under, structured, and below-grade structured. Surface parking is the least expensive and below-grade structured parking is the most expensive. Structured parking can add tens of thousands of dollars of construction cost per housing unit, which often means that only hot housing markets with high rents can accommodate higher-density housing types with structured parking. Construction materials also change as housing density increases. Townhomes, low-rise (garden) apartments, and low-rise apartments with tuck-under parking (urban garden apartments) are typically entirely wood-frame buildings; while wrap and mid-rise/podium structures require concrete construction for parking areas; in addition, steel is sometimes used instead of wood for the apartment areas. The construction complexity and specialization required for these building types also increases costs.

Single-family, townhomes and low-rise apartments appear to be the most financially feasible housing development types in the near- and mid-term. Single-family homes will also be feasible. Urban garden apartments (which include tuck-under parking and sometimes ground-floor retail) may be feasible in the mid- and long-terms. Wrap and mid-rise projects are only likely to be feasible after significant “place-making” improvements have been made, and/or if the market changes. Affordable and/or mixed-income projects can sometimes achieve higher densities than market-rate projects since they have access to additional public funding sources. While the vacancy rate across multifamily apartments is practically zero and net absorption continues to increase, rents remain too low for market-driven high-density developments. However, the tight market may generate significant rent growth, subsequently improving the feasibility of higher density developments.

Figure 22. Housing Development Prototypes



Market Trends

The recession had a profound and lasting effect on the housing market, and while the recovery is now almost over, more people are renting than ever before. For many people, financial barriers such as rising student debts, access to credit, and large down payments have forced them to rent. For many others, the choice to rent is simply a choice. Indeed, it is well established that the two most populous generations—the Baby Boomers (ages 54 to 72) and the Millennials (ages 22 to 37)—are currently the primary drivers of demand for residential units in walkable, urban locations that offer flexibility and a range of amenities.

As Baby Boomers reach retirement age and see the last of their children leave home, they are increasingly attracted to smaller move-down or “lock-and-leave” housing which requires less maintenance and affords more flexibility. As such, age-restricted and senior multifamily housing has risen near the top of the list for best investment choices (per ULI’s “Emerging Trends in Real Estate 2018”).

For Millennials, the situation is more nuanced and difficult to forecast. The common rhetoric for many years was that Millennials desire urban living and will continue to reside in urban cities because of financial conditions and choice. However, while demand for urban rental apartments has remained high among Millennials, they are increasingly forming households and having children, looking at select suburbs and secondary markets because of the quality of life, lower cost, and space and yard availability. Indeed, 70 percent of Millennials expect to be homeowners by 2020, even though only 26 percent own today (per ULI’s “Gen Y and Housing”). With that said, generational trends associated with the next emerging generation—Gen Z (ages 21 and below)—are relatively unknown.

Other reports have recently documented important trends in housing. Findings include:

- Cost of housing, neighborhood safety; proximity to work; K-12 school quality; and community character, ambiance, and visual appeal were the top five critical community features for survey respondents.⁹

⁹ Urban Land Institute (ULI), Gen Y and Housing: What They Want and Where They Want it, 2015

- Urban setting; proximity to shopping, dining, and entertainment; walkability; and availability of mass transit are all also important—but not critical—features in a community.¹⁰
- The more walkable the community, the more satisfied residents are with their quality of life.¹¹
- Access to public transportation is much more important to those earning under \$50,000 per year, while walkability is also more important to those with lower incomes.¹²
- Sixty percent of residents would spend at least a little more for a house in a walkable community.¹³
- Four-in-ten people prefer a walkable community and a short commute. Millennials, in particular, are swayed by a shorter commute.¹⁴

Talk of generational shifts, however, sometimes misses the point. Ultimately, people are waiting longer to make significant life choices, such as buying a home or having children, and quality of place has emerged as a primary desire for almost all prospective residents across all demographic groups. Quality of place is simply the components that make any given place enjoyable to live, such as availability of and access to good schools, parks, quality healthcare, transit, shops, entertainment, and cultural amenities.

Residential Demand

As noted earlier, projected growth rates tend to vary significantly depending on the source and the geography in question. Therefore, it is important to carefully consider the “middle-of-the-road” option and note that actual demand is likely to change. With that said, PSU’s projections for the McMinnville Urban Growth Boundary align with projections for Yamhill County as well as the “baseline” growth rate, which applies the historical household growth rate from 2010 to 2018 in the market area to current households.

For the residential and retail demand forecasts, we assume that actual household growth will be approximately 1.3 percent. Based on this household growth rate, we project market area demand for an additional 3,800 units over the next 10 years within the market area, or about 380 units per year. We anticipate that the most demand for new *rental* units will be from households with incomes less than \$75,000, and the most demand for new owner-occupied housing to be from households earning between \$50,000 and \$150,000. We expect about 32 percent of future housing demand to be for renter-occupied units, resulting in about 1,200 rental units and 2,500 owned units.

¹⁰ Ibid.

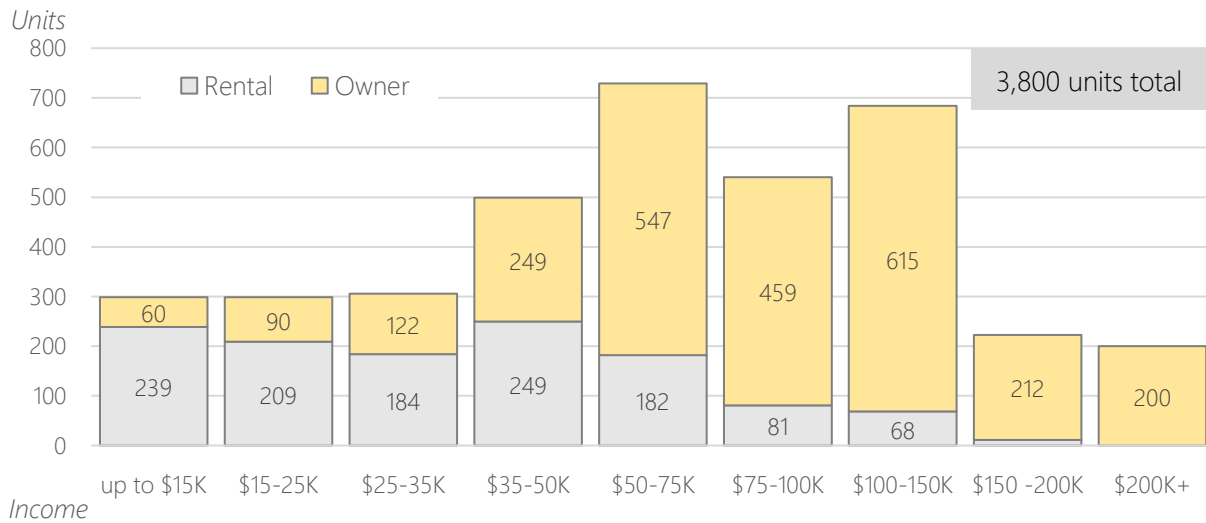
¹¹ National Association of Realtors (NAR), National Community and Transportation Preference Survey, 2018

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

Figure 23. 10-year Market Area Unit Demand



Source: Leland Consulting Group

Table 6. Annual Income Range and Attainable/Affordable Monthly Rent and Housing Price

HH Income	\$15k	\$25k	\$35k	\$50k	\$75k	\$100k	\$150k	\$200k	\$200k+
Attainable Monthly Rent	\$375	\$625	\$875	\$1,250	\$1,875	\$2,500	\$2,500+	\$2,500+	\$2,500+
Attainable Home Price	\$45k	\$75k	\$105k	\$150k	\$225k	\$300k	\$450k	\$600k	\$600k+

Source: ESRI, Leland Consulting

While projected residential growth suggests demand for a total of 1,200 multifamily rental apartments, the past five years has only delivered a total of 132 multifamily apartment units, significantly lower than the necessary rate of development required to get to 1,200 within the next decade. Of course, townhomes and—to a lesser extent—single-family homes may also be renter-occupied, but multifamily apartments will be responsible for the majority of new renter-occupied units. With the trajectory of the past five years, the multifamily market will continue to be constrained, potentially increasing rents and attracting developers to the region. However, the City should explore ways in which to incentivize new housing development and bridge any potential feasibility gaps preventing new construction.

Table 7. Historical and Forecasted Multifamily Residential Trends, Market Area

	Past 5 Yrs.	Next 10 Years
Net MFR Absorption	175 units	275 units
MFR Deliveries	132 units	350 units

Source: Costar and Leland Consulting Group

Three Mile Lane Study Area Absorption

With such a tight single-family and multifamily market, as well as few major tracts of vacant tracts for greenfield development inside urban areas, we expect the project study area to capture a significant amount of new residential demand over the next 10 years.

While the vacancy rate is currently almost zero, development activity should theoretically increase, and we anticipate the multifamily market to subsequently stabilize near five percent vacancy (typically considered the point of market equilibrium for multifamily). For this reason, we anticipate deliveries to be higher in the Three Mile Lane project area than net absorption. This assumes that land supply and zoning is able to accommodate new multifamily development.

For single-family, we anticipate single-family development to build out to the extent allowed. Given the existing industrial zoning, there are few places which could accommodate such residential development. Much fewer single-family units could be accommodated simply due to the density of single-family development and land required relative to multifamily residential.

Retail Market

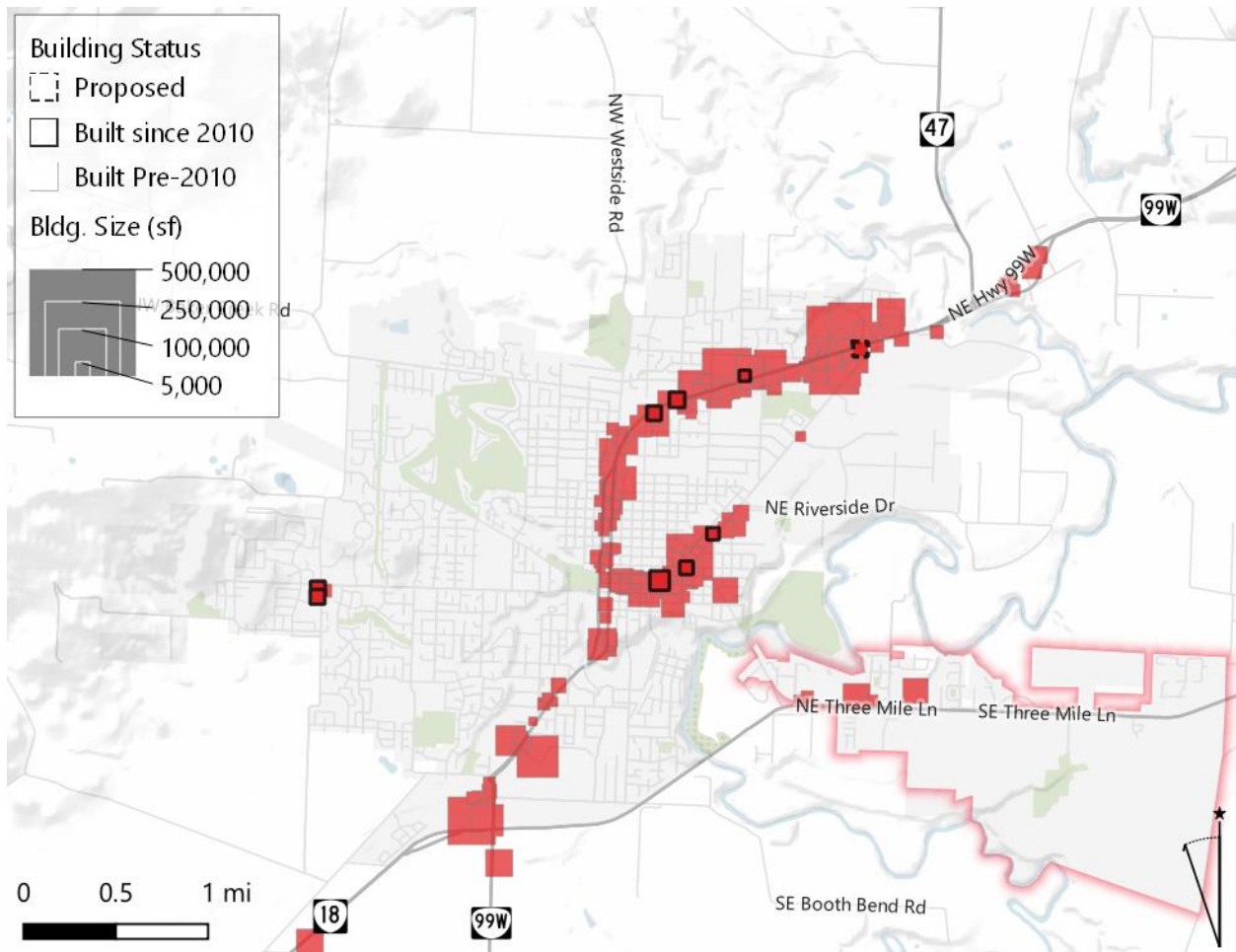
Market Summary

For retail, the analytic goal of defining a “market area” is generally to encompass likely customers whose spending power will fuel a significant majority of sales in future shops and eateries in the study area. Competitive supply (both existing and potential) will also, logically, tend to fall within that same market area. Neighborhood stores such as supermarkets tend to have much smaller market areas than big box stores, which in turn have smaller catchment areas than regional malls or other larger-scale projects.

CoStar reports that the McMinnville market area has 268 buildings totaling 2.5 million square feet of retail space. The market has a low vacancy rate of 1.4 percent. Rents vary widely by retail property type, condition, and configuration. Generally, asking rents for quality retail space range from around \$14 to \$18 per square foot, but a few quality, well-positioned retail spaces are achieving upwards of \$24 to \$30 per square foot triple-net, such as some pad sites along Highway 99W. No comps currently exist for brand new, first-generation retail space.

Figure 24 illustrates the relative size of retail development by total square footage. Retail development is largely concentrated along State Highway 99W. Generally, retail is small-scale—especially along Baker Street and near downtown—while larger neighborhood-serving retail—such as McMinnville Town Center, Lowe’s, Wal-Mart, WinCo Foods, and Bi-mart—is located in the northern and southern areas of the city.

Figure 24. Regional Retail Development



Source: Costar, Leland Consulting Group

Understanding the pattern of retail spending within a community is critical. By looking at estimated demand from existing households and current estimated sales, we can identify the relative strength or weakness of each retail category. Retail sectors in which household spending is not fully captured are called “leakage” categories, while retail categories in which sales are higher than estimated household demand generated by existing residents are called “surplus” categories.

A retail sales surplus indicates that a community pulls consumers and retail dollars in from outside the trade area, thereby serving as a regional market. Conversely, when local demand for a specific product is not being met within a trade area, consumers are going elsewhere to shop, creating retail leakage.

Table 8 shows the current annual retail leakage for various retail categories. Most retail categories show a sales leakage occurring, with Food and Beverage (grocery), Building Materials and Garden Equipment, Health and Personal Care, and Miscellaneous Retailers showing a surplus. This indicates that the McMinnville area is a weak retail market with a lot of spending potential leaving the area. General Merchandise shows the highest leakage, but these retailers—such as Walmart and Target—have large catchment areas and it’s very possible that McMinnville residents travel to larger metros, such as Salem and Portland to shop at these stores.

While leakage usually presents an immediate opportunity to increase new retail development activity and capture some of the demand leaving the area, this may be unlikely for many of the retail categories in the table and following chart below given McMinnville’s proximity to several regionally-significant retail centers. For example, both Bridgeport Village and the Woodburn Outlets—which provide an extensive range of low-cost, high-quality products—are about a 45-minute drive of McMinnville.

Table 8. Retail Leakage Analysis, McMinnville Market Area

	Est. HH Demand	Current Est. Sales	Current Leakage (\$)
Furniture and Home Furnishings	\$25,459,215	\$9,815,869	15,643,346
Electronics and Appliance	\$25,779,334	\$10,205,468	15,573,866
Building Material, Garden Equip	\$56,286,379	\$89,349,237	-33,062,858
Food and Beverage (grocery)	\$132,402,012	\$244,668,336	-112,266,324
Health and Personal Care	\$49,511,435	\$59,825,939	-10,314,504
Clothing and Accessories	\$39,384,538	\$5,785,467	33,599,071
Sporting Gds, Hobby, Book, Music	\$27,981,058	\$12,792,050	15,189,008
General Merchandise	\$138,540,476	\$41,383,114	97,157,362
Misc. Store Retailers	\$38,326,257	\$81,493,693	-43,167,436
Foodservice and Drinking Places	\$83,233,240	\$53,518,658	29,714,582
Other (including cinema, prof./med. office, consumer banks, etc.)	\$92,535,592	\$91,325,675	1,209,917

Source: ESRI

Figure 25. Market Area Retail Demand: Surplus/Leakage

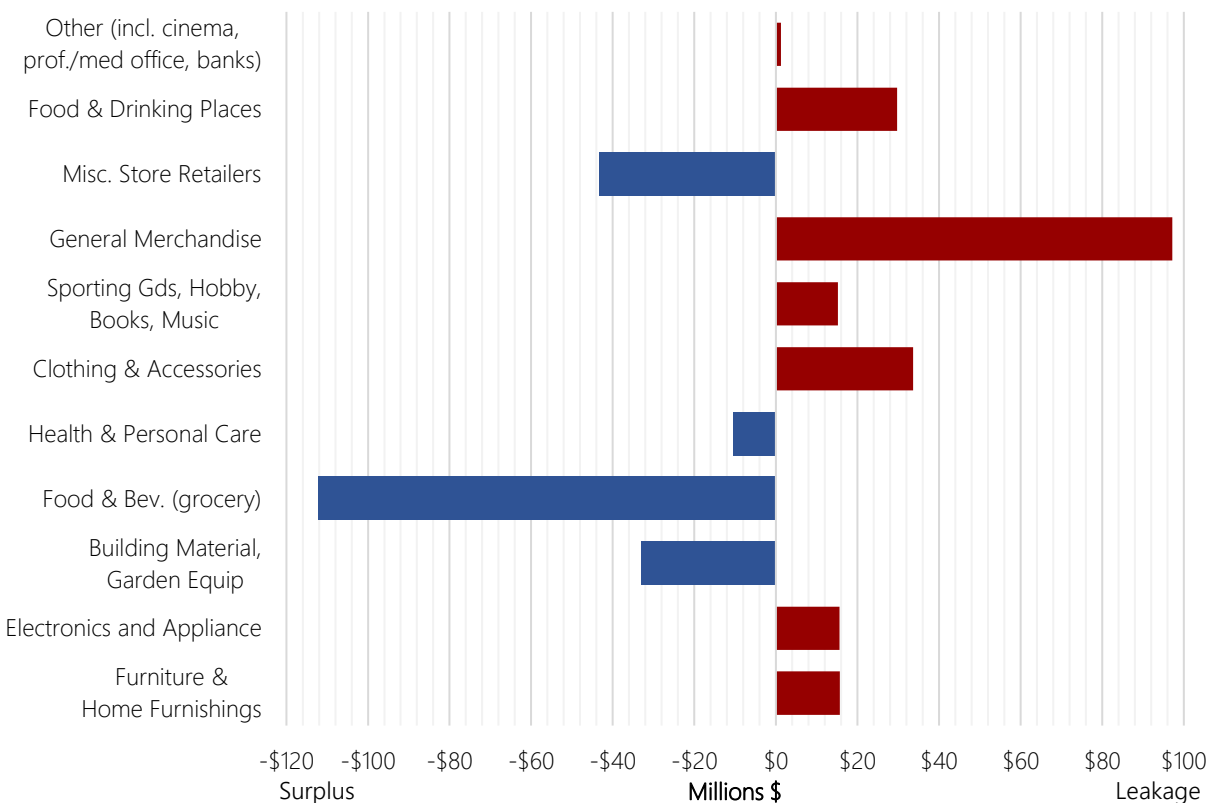
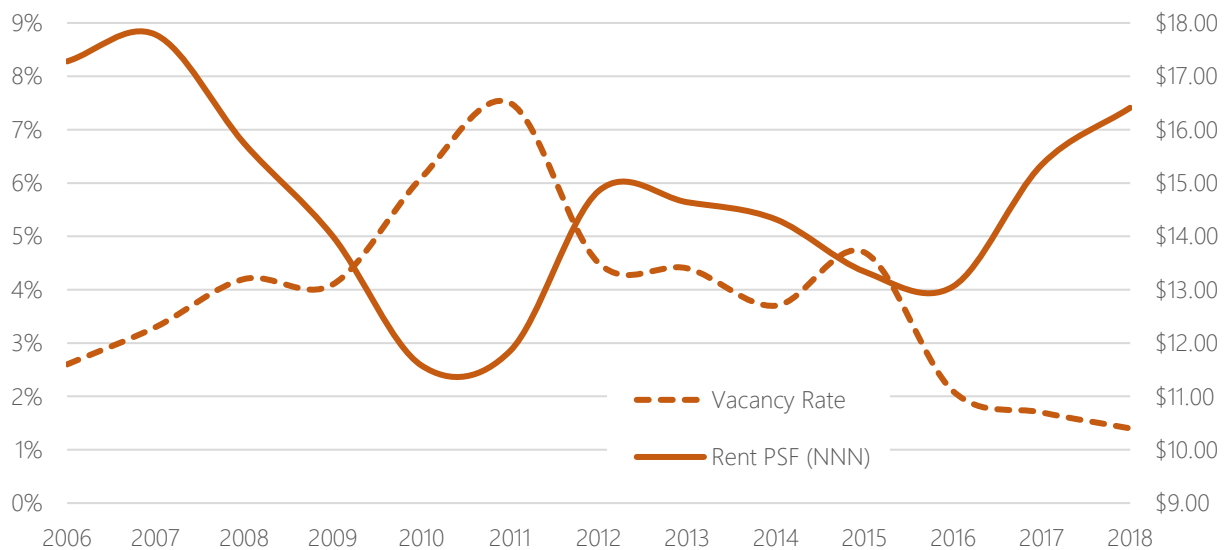


Figure 26 provides rent and vacancy trends for retail development in the McMinnville market area. Rents and vacancies tend to have an inverse relationship, and this has been the case with local retail. Rents were at their lowest rates and vacancy at its highest during the recession, and rents have yet to recover to the 12-year high of almost \$18 per square foot triple-net (NNN) in 2007, despite Costar data showing the vacancy rate at record lows.

While such low vacancies typically suggest demand for new retail development, this may be small-scale. The changing face of the retail sector is resulting in record closures of national retailers, and other large regional retail centers—such as the Woodburn outlet mall and Bridgeport Village—are far more competitive and already established.

Figure 26. Market Area Retail Rent and Vacancy Trends, 2006-2018



Source: Costar

Figure 27, which shows the net absorption and total retail deliveries by year for the past 12 years, demonstrates why the spike in the vacancy rate occurred in 2010 and 2011. Clearly, some major retail space was vacated during and immediately following the recession, but the market appeared to have bounced back in 2012 with a relatively strong year of positive absorption. In terms of deliveries, there have been few significant developments over the past decade.

Figure 27. Market Area Retail Net Absorption and Deliveries (sq. ft.), 2006-2018



Source: CoStar

Market Trends

The goods-based consumer retail industry is undergoing a seismic shift and transformation. Big name retailers are declaring bankruptcy and closing hundreds of stores as online purchases grow and American buying habits change. Last year saw a record number of store closings. This is having a trickle-down effect on communities, as some see their brick-and-mortar retail bases slowly eroding, with impacts felt in shopping centers and along traditional Main Streets.

Planners in some cities and counties are taking proactive approaches to the shifting retail landscape. They're commissioning studies of the marketplace and developing new strategies to maintain and foster better retail environments. Also, many retail-only zoning classifications are being modified to allow a variety of new uses in ground-floor, street-fronting spaces. The idea is to liven up the street with pedestrian activity without relying on retail, with new uses ranging from offices to fitness facilities.¹⁵



Table 9 summarizes the anticipated growth and decline of primary retail types. This information is based on research conducted by commercial real estate company Cushman & Wakefield and reflects changing preferences. Online shopping is having a significant impact on “commodity retail.” Retailers selling products that can easily be ordered and shipped from Amazon or others face a challenging environment and must have a competitive advantage against online competition—whether that is the convenience, experience, customer service, or something else. Commodity retailer categories include electronics, office supplies, and video stores.

By contrast, experiential consumerism is an emerging trend in which retailers offering a special experience, or offering services that cannot be procured online, have the potential to thrive. A prime example is dining—as one retail guru has said, “you can’t eat the internet;” and you certainly cannot dine with family and friends on the internet. Therefore, food and beverage establishments have become a larger and larger part of the retail

¹⁵ [URL](#)

experience, on both main streets and larger shopping centers. Another growing “retail” sector is healthcare. Small, neighborhood-scale providers are moving into both main street and retail center locations.

Table 9. Retail Trends: Growing and Declining Retail

Growing	Declining
	
<ul style="list-style-type: none"> • Retail that offers a special experience • Food! • “Fast Casual,” i.e. Little Big Burger • Food Halls, artisanal markets • Trucks to Bricks • Grocery: Ranging from discount, to organic, to small format, and ethnic • Medical users, incl. ZoomCare • Apparel: Fast fashion, off-price, active sportswear • Sporting clubs • Fitness/Health Clubs • Marijuana dispensaries • Auto repair • Convenience stores • Car dealerships • Home improvement and home furnishings 	<ul style="list-style-type: none"> • Commodity retail • Food: Casual dining, weaker fast food chains • Mid-priced apparel and shoes; children’s • Dollar Stores • Pet supplies • Electronics • Office Supplies • Bookstores • Toy Stores • Video stores • Bank Branches

Source: Cushman & Wakefield, Leland Consulting Group.

The Rise of E-commerce

Between 2001 and 2015, total online retail sales grew at a 21.8 percent annual growth rate and accounted for 22 percent of total retail sales growth. During the same period, brick-and-mortar stores grew at a rate of only 3.7 percent annually, decreasing their share of the total retail market from 98 percent to 89 percent. While still only

a small total market share, estimates indicate that up to 20 percent of total US sales will be attributed to e-commerce by 2019.

The rise of online retail has also had a major impact on the way retailers are doing business. As more people turn to the internet to do their shopping, traditional brick-and-mortar stores are altering their store formats and incorporating an online platform into their business concepts. Omnichannel retail strategies, where a retailer operates through both physical locations and online sales, have proven to be a necessity in today's market.

The list of top online retailers reinforces this point, as many also have a significant brick-and-mortar presence. Of the top 25 companies with the highest online retail sales in 2016, 18 were more traditional brick-and-mortar retailers. These include companies such as Walmart, Best Buy, Macy's Inc., Nordstrom Inc., Target Corp., Gap Inc., and Neiman Marcus.¹⁶ That said, Amazon remains king among online retailers, with almost six times the sales volume of the second-ranked retailer, Walmart.

Employment Market

The McMinnville market area has 97 office buildings with a total of 785,000 square feet of rentable space, comprising entirely of Class B and C buildings. Most are wood-framed buildings built between 1970 and 2000. Office vacancy stands at 3.2 percent according to CoStar; this is down from a 10-year high of 10.5 percent in 2011, indicating demand for new space.¹⁷ Gross office rents currently average around \$18.20 per square foot per year.

There are 85 industrial buildings with a total of 2.4 million square feet of rentable space, although almost one-quarter of this total is from the steel mill in the north of the city. Industrial vacancy stands at 0.4 percent according to Costar, down from a 10-year high of 15.8 percent in 2014. Industrial rents average around \$8.40 per square foot.

Market Summary

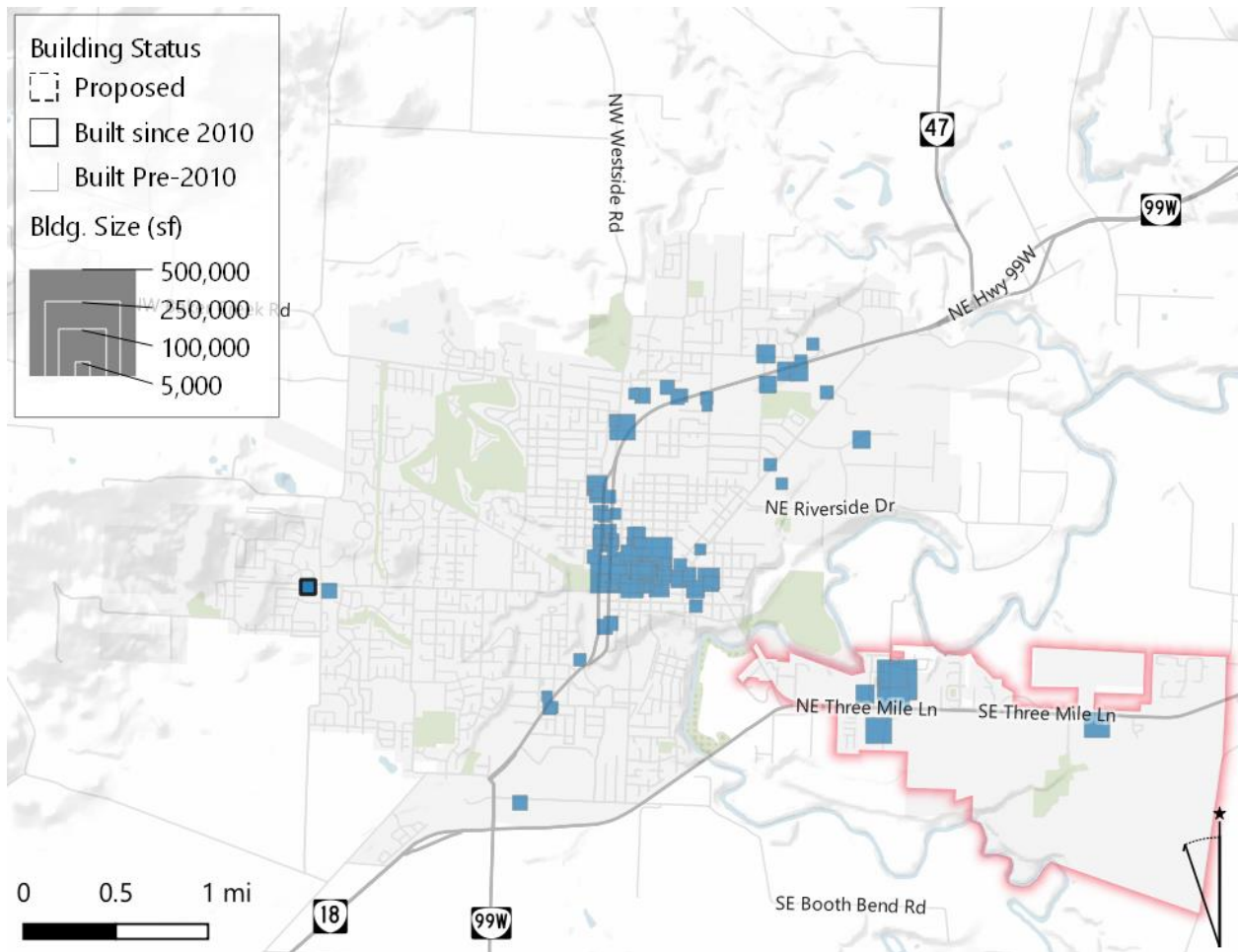
With an economy centered on agriculture, the Yamhill County office market is relatively quiet, and its tenants and investors are predominantly local. The vacancy rate is tight, due in part to moderate absorption but largely because of limited inventory and the lack of new construction. Rents experienced back-to-back years of growth in 2015 and 2016 but contracted in the past year. Over the cycle, the submarket has consistently posted minimal investment activity and nearly no new supply.

As shown in Figure 28, new office construction in the region has been limited to the Portland Metropolitan Area and other close-in cities.

¹⁶ www.wwd.com/business-news/financial/amazon-walmart-top-ecommerce-retailers-10383750/

¹⁷ Anecdotal evidence suggests an immediate need/demand for mid- and large-scale Class A office space, although the extent of which is likely limited, based on projected regional employment growth rates.

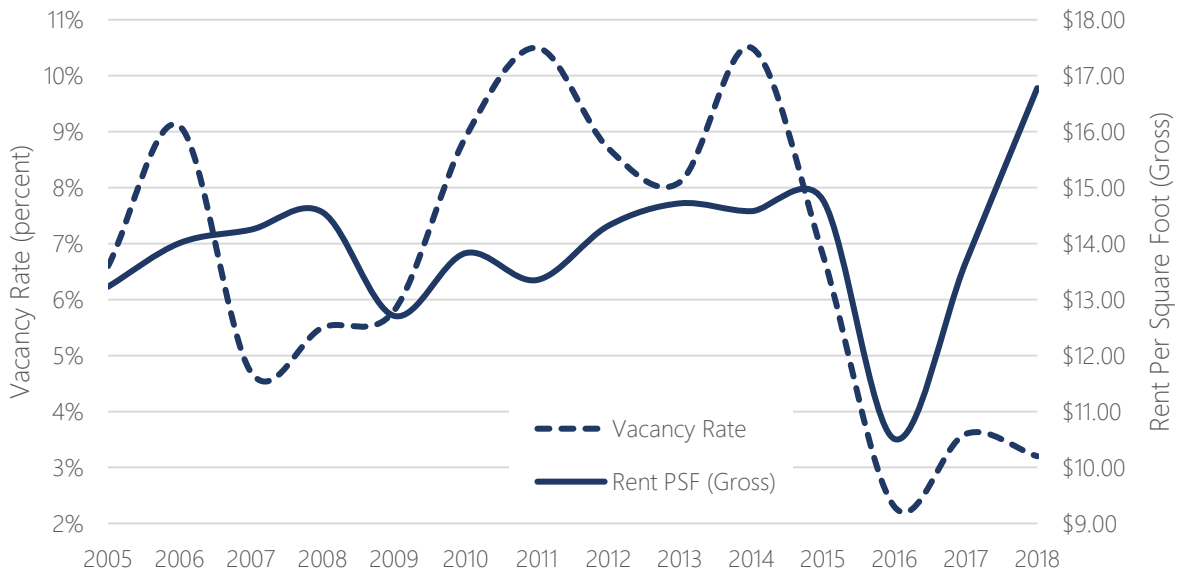
Figure 28. Regional Office Development



Source: Costar, Leland Consulting Group.

There has been little to no rent growth in the market area over the past decade, and vacancy rates have been erratic, declining significantly from 2014 and settling near three percent in 2018. However, the following chart shows the volatility of the office market.

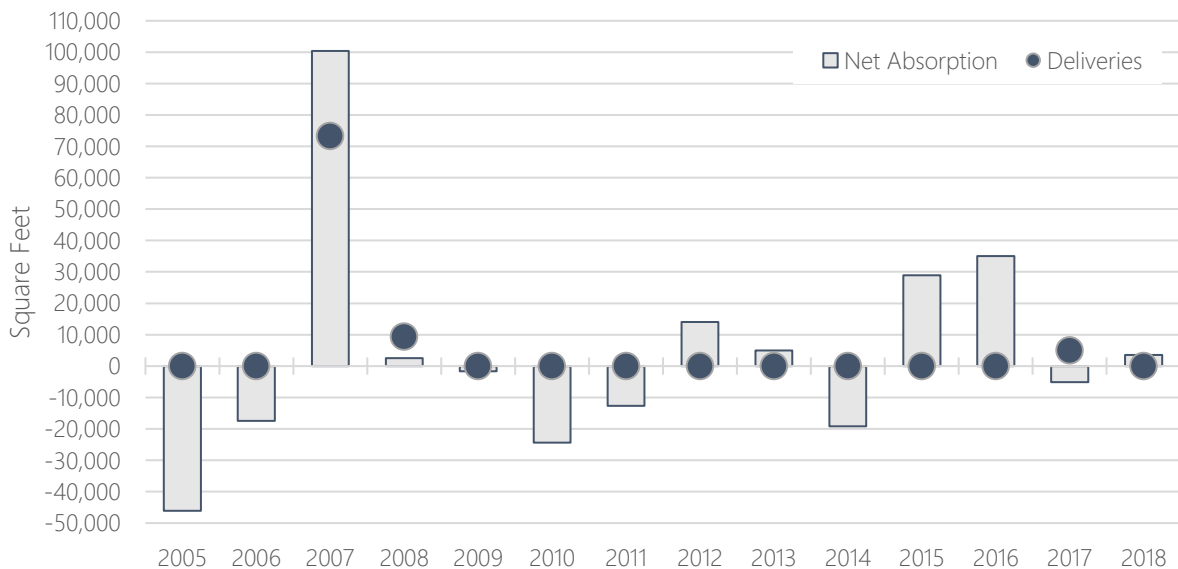
Figure 29. Market Area Office Rent and Vacancy Trends, 2005-2018



Source: Costar

Net absorption of office space has been largely positive, albeit minimal, and essentially no new office space has been constructed in the past decade. This is reflective of the fact that more competitive and significant employment clusters are located elsewhere in the region, largely throughout the Portland Metropolitan Area, such as Wilsonville. However, this may also partially due to the lack of appropriately zoned land for office.

Figure 30. Market Area Office Net Absorption and Deliveries (sq. ft.), 2005-2018



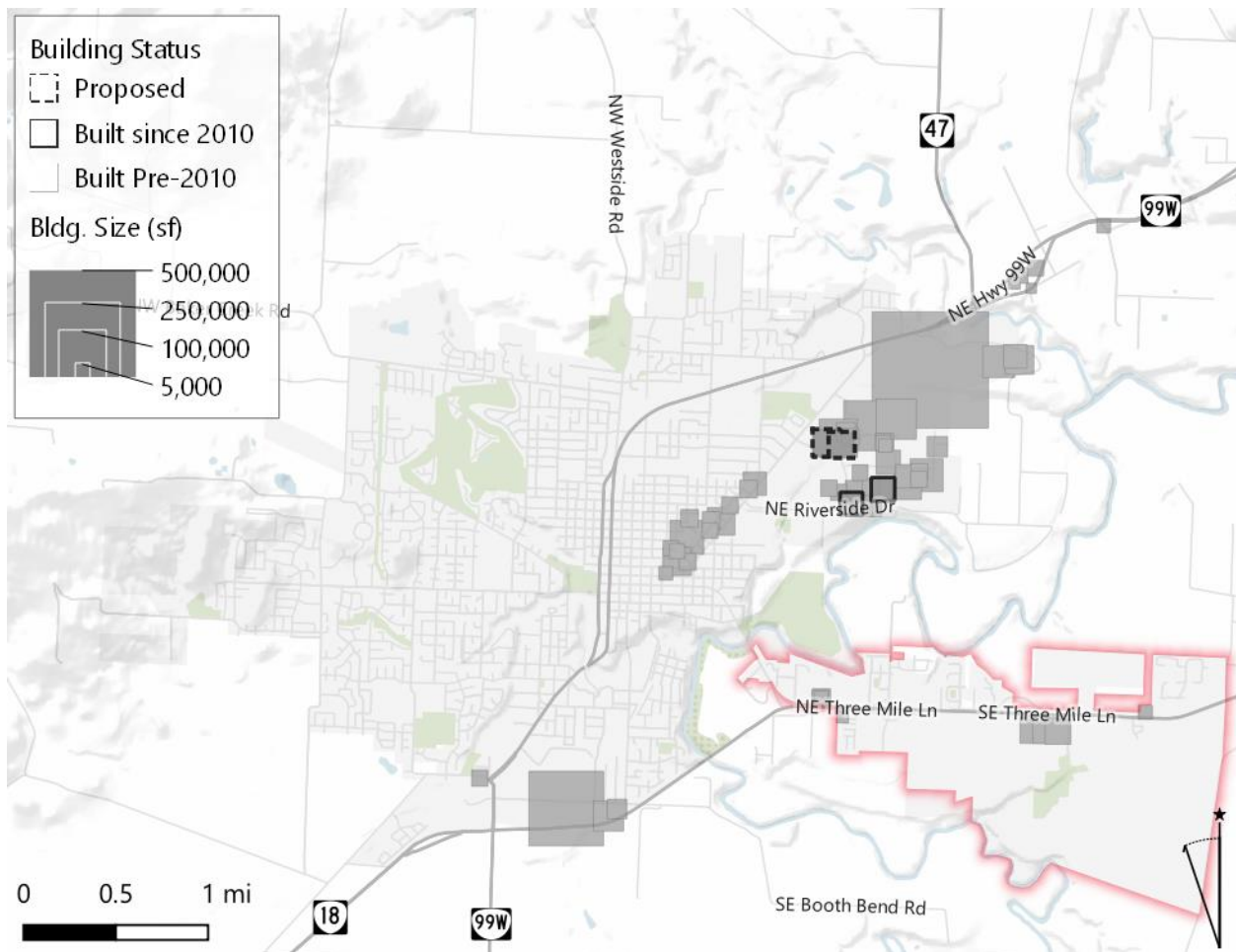
Source: Costar

For industrial, the market is marginally stronger than for office. However, like office, industrial development has also clustered elsewhere in the region in locations that are arguably better suited for continued expansion.¹⁸ Locations such as the Tualatin, Tigard, and Wilsonville benefit from close proximity to Interstate-5 and access to talent in Portland. These locations have rapidly built up their manufacturing industries, among others. While McMinnville has seen recent development, it is unlikely to compete with these other centers.

With that said, Three Mile Lane may have a locational advantage for industrial development due to its proximity and access to the airport. Nationally, many modern airports now generate most of their revenues from sources other than aviation. While small and lacking commercial service, the McMinnville airport may have positive impacts for a hotel (including conference spaces), office space, business parks, industrial development (particularly manufacturing and warehousing), cargo facilities, sports facilities, among others.

Extending the airport runway to accommodate larger aircraft may further improve development prospects and accelerate the rate of development. However, doing so is understood to be challenging as the only place to extend is to the northeast, which would require moving Highway 18.

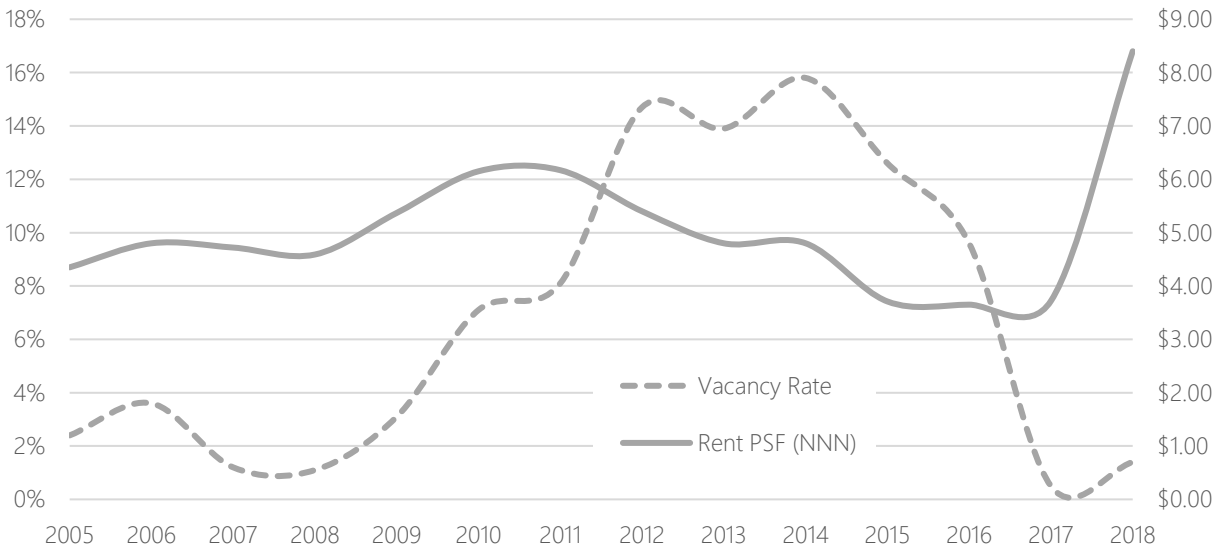
Figure 31. Regional Industrial/Flex Development



¹⁸ The data that populates the corresponding map often neglects to show owner-occupied buildings, such as the Jackson Family Wines building, built in 2017 in the Three Mile Lane corridor.

While the industrial vacancy rate is virtually zero, rents have only just climbed to pre-recession levels. A hike in vacancy rates between 2009 and 2014 resulted in negative rent growth. However, with the wine industry such a significant component of the Mid-Valley industrial market, there is a reason to believe that typical rent and vacancy characteristics may not truly represent the McMinnville market area’s industrial market.

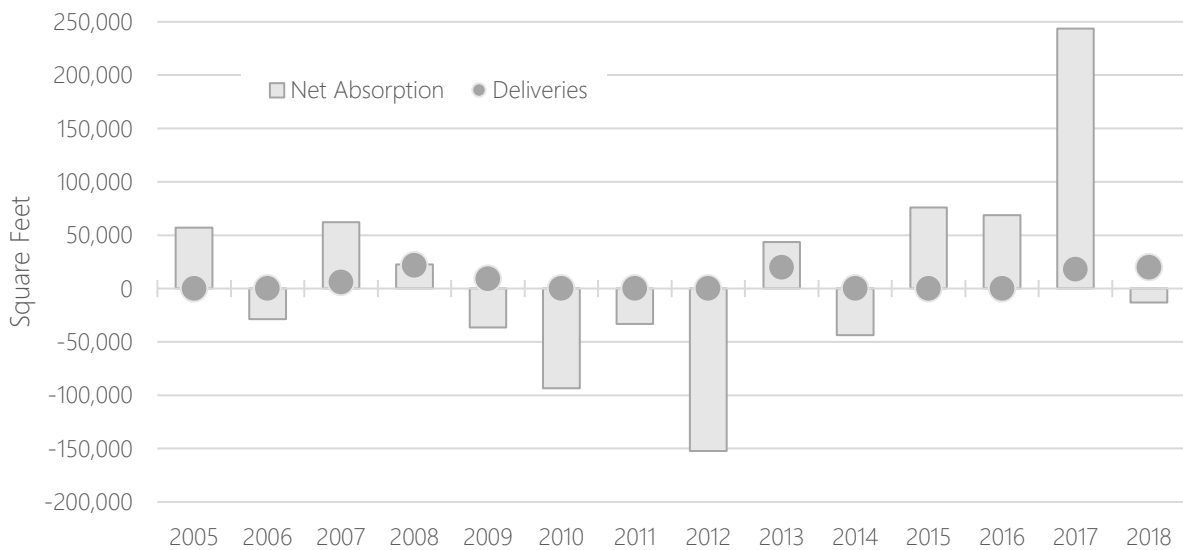
Figure 32. Market Area Industrial Rent and Vacancy Trends, 2009-2018



Source: Costar, Leland Consulting Group

Net absorption has been largely positive since several years of negative absorption between 2009 and 2012—likely as a result of the recession, with a huge surge in absorption in 2017 which has resulted in almost zero vacancies in the market area. There have been few industrial deliveries over the past decade.

Figure 33. Market Area Industrial Net Absorption and Deliveries (sq. ft.), 2005-2018



Source: Costar, Leland Consulting Group

Planned and Proposed Projects

Per Costar, there are only two proposed industrial buildings in the McMinnville area, both of which are planned for either office or industrial. Both buildings are located in McMinnville's industrial district (zoned General Industrial M-2) along a Portland Western Railroad rail spur.

Figure 34. Proposed Industrial Development, McMinnville



Source: Kidder Matthews

Market Trends

While people once followed the jobs, corporations and professional firms are now following people back to the city. These companies have increasingly seen prospective employees choosing to live, work, and play in more interesting—often urban—locations, and now they have realized that attracting these employees requires them to be in these places too. As such, the authenticity of a place has become a sought-after commodity. This is likely one of McMinnville's strongest assets. Companies and workers now look for the genuine, the idiosyncratic, the unique and, most importantly, the personality of a place that matches their own. In fact, a recent Newmark study identified a significant rent premium for office properties with transit access, dining operations, and open floor plans of around 50 percent higher than those with obsolescent characteristics.

For cities, this means that opportunity lies in attracting more investment and focusing on placemaking to make themselves the place where the best and brightest live, work, and shop. This might require updating office and industrial areas to reflect the way we now do business and work day-to-day. And, as the finance, utility, and even government sectors continue to consolidate, cities will need to backfill their buildings with new tenants to keep downtown an interesting and lively place.

Location Preferences

Across the United States, traditional office development is increasingly considered obsolete in today's shifting market. Since the Great Recession tenant preferences have shifted to central, walkable, amenity-rich locations as companies find it tougher to recruit the Millennial and emerging Gen Z workforce to sterile, single-use buildings and in auto-dependent neighborhoods. These locations have typically been in inner-city areas, but more recently office investors have been refocusing their attention to suburban communities that increasingly offer a better value for investors than urban products, mainly in areas where developers are creating live-work-play environments. The migration of millennials to the suburbs should ease investor concerns about demand for suburban office space.

Workplace Trends

General trends impacting the office workspace include a steady decline in the number of square feet per employee, the increase in standardized workspaces and non-dedicated (shared) office space with more

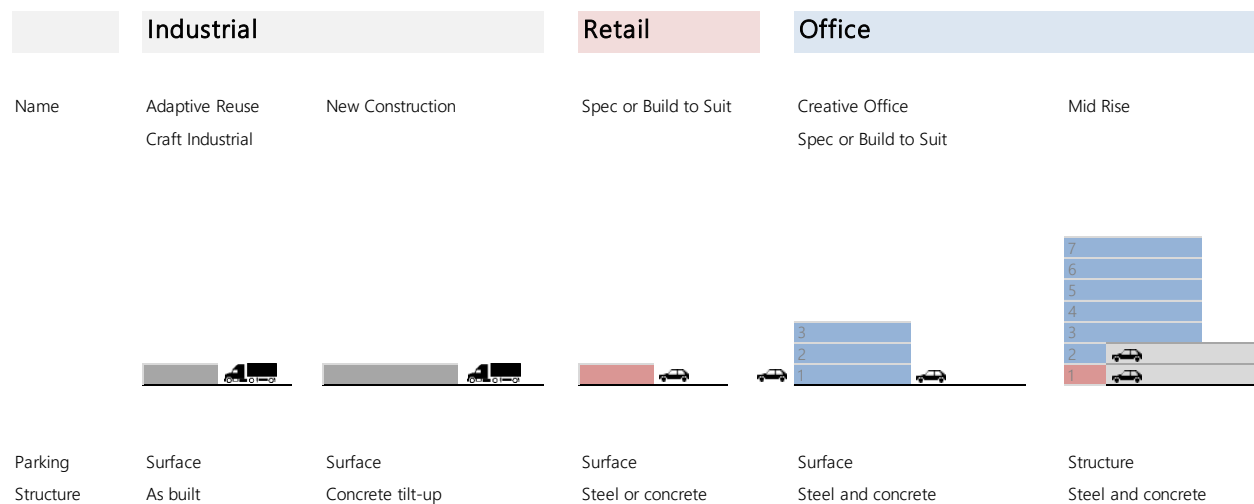
amenities, more tolerance for telecommuting and collaborative workspaces, and a greater emphasis on higher space utilization, innovation, and productivity. Within the private sector, Class A office space continues to be the primary driver of new office demand, yet “creative” office environments—the repositioning of established office space (typically Class B) to open, modern workspaces—are becoming ever more popular. Real estate investors are wondering whether the office sector is next in line for a painful shakeup, as tenants continue to use office space more efficiently.

The impact of tenants’ push for greater space efficiency has created winners and losers within the office market. Fitting more employees into less space has enabled office tenants to sign smaller leases or afford higher-end space. This is a particularly compelling tradeoff in the current market, as tenants are increasingly relying on amenity-rich office environments to help recruit the highly skilled workers who are now in short supply.

Commercial Development Prototypes

Commercial development prototypes are shown below. Once again, parking is a major driver of building form. Only one commercial development prototype—mid-rise office—includes structured parking; this building type is unlikely to be feasible due to the high cost of structured parking.

Figure 35. Commercial Development Prototypes

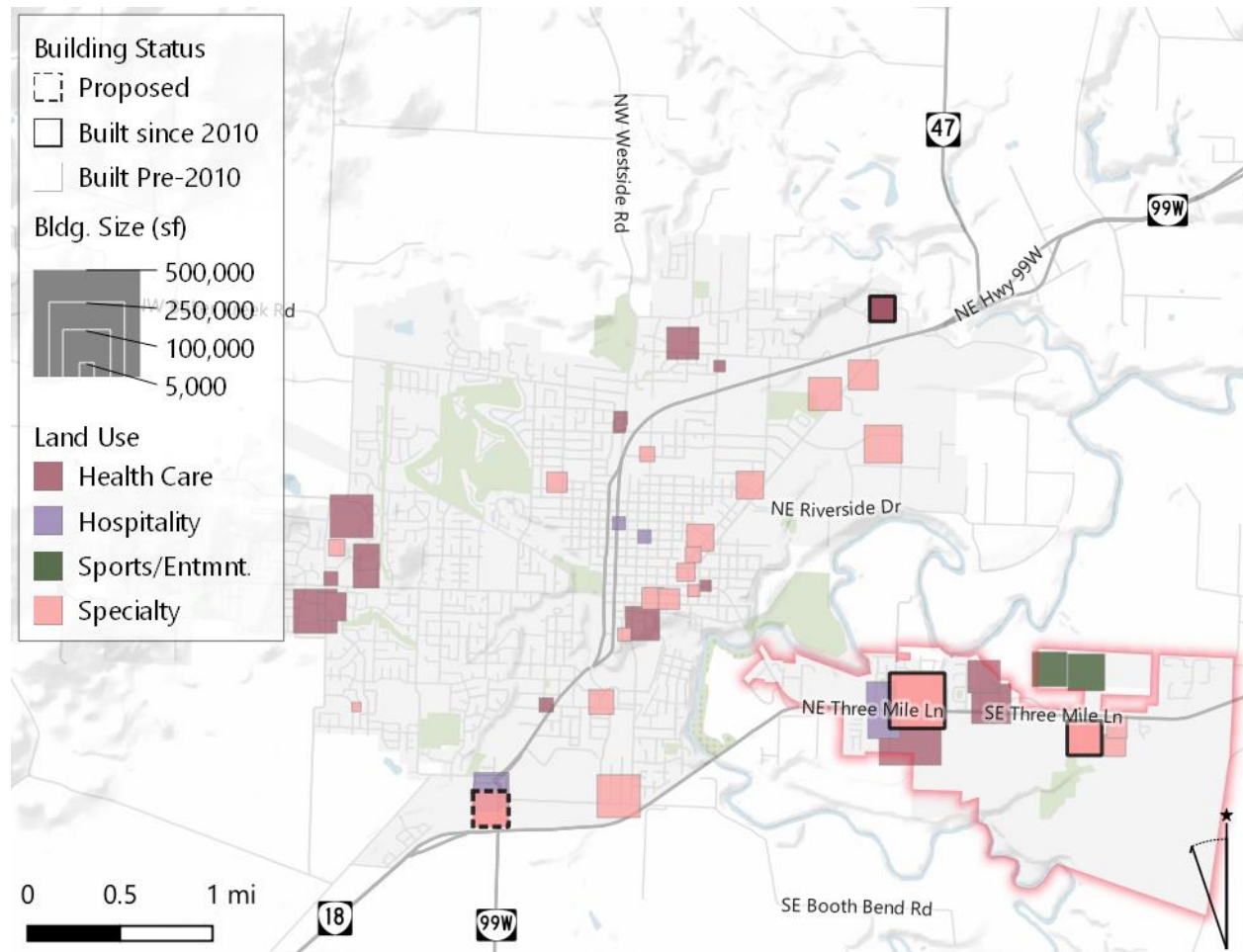


Lodging, Hospitality, Specialty, and Recreation

Development Summary

Since 2010, there have been only a handful of new properties built in these categories, including one health care facility (skilled nursing facility/assisted living), and two specialty properties (Chemeketa Community College and an airplane hangar).

Figure 36. Regional “Other” Development



Source: Costar, Leland Consulting Group

Tourism

The tourism region of the Willamette Valley includes Benton, Linn, Marion, Polk, Yamhill and portions of Clackamas and Lane counties. The region stretches from the crest of the coast range to the crest of the Cascade Range. The Willamette Valley offers more than 500 wineries in 150 miles, historic towns and cities, craft breweries, farm stands, and hiking, paddling, and cycling.

The region continues to be a big draw for locals and tourists alike, with tourism rates in Oregon rising 54 percent in the last three years¹⁹ (as of December 2018). In 2018, the Willamette Valley was the second-most visited destination in Oregon for overnight tourists, attracting almost 20 million visitors (Portland was first with 26.4 million, and the Oregon Coast was third with 18 million)²⁰. New wine country restaurants and boutiques have made the area even more appealing.

¹⁹ <http://www.wweek.com/culture/2018/10/09/two-oregon-natives-are-opening-a-bougie-new-hotel-in-downtown-mcminnville/>

²⁰ <http://industry.traveloregon.com/content/uploads/2018/05/Dean-Runyan-FINAL-2018.pdf>

The wine industry has brought new economic activity and tourism, and industry growth, bringing more jobs, increased tourism, and international recognition, and growing support of arts and culture opportunities.

The arts and culture environment in Yamhill County is a growing field of increasing vitality. Artist studios and monthly wine walks increasingly attract visitors from outside the region. Events such as the two annual international wine conferences at Linfield College and monthly art and wine walks provide critical exposure both for area artists and for local vineyards. Key institutions – such as Chehalem Cultural Center, George Fox University and Linfield College – play significant roles in providing robust art and cultural offerings to their communities. The vibrancy of the environment varies across the county, and the accessibility of arts and cultural opportunities may not be equitable across different populations.

High quality of life and robust arts and culture offerings are often considered the most attractive aspects of Yamhill County for residents or businesses considering the location. They are also tourism draws. Other attractors include the region’s natural beauty, small-town feel, good schools, and quality higher education institutions. The area’s proximity to Portland while remaining rural and independent is also a positive attribute.

The following table provides high-level tourism data for the Willamette Valley.

Table 10. Willamette Valley, Direct Travel Impacts, 2012-2018

	2012	2018	Change
Direct Employment	18,830	21,890	16%
Employee Earnings (\$M)	\$385	\$522	36%
Visitor Spending (\$M)	\$1,423	\$1,629	14%
Taxes (State/Local) (\$M)	\$59	\$79	34%

Source: Dean Runyan, *Oregon Travel Impacts, May 2018*

Per the Oregon 2015 Regional Visitor Report for the Willamette Valley Region,²¹ approximately seven percent of all overnight trips in 2015 were for business, 53 percent were to visit friends or relatives, and 40 percent were considered “marketable” (i.e. leisure). Of these marketable trips, most people were visiting for the outdoors, a special event, or touring—and mostly during the spring and summer months. In terms of spending, 30 percent of the \$706 million spent in the region was on lodging, and 27% was on restaurant food and beverage.

The Willamette Valley attracts visitors that are typically older, higher-income, and often childless or retired individuals and couples. The average age of overnight visitors to the Willamette Valley was 49 in 2015, older than the state average of 46. A significantly greater proportion of visitors aged 45 and over visit the Willamette Valley (61 percent of all visitors versus 49 percent).

Lodging & Hospitality

Near Term Hotel Development Prospects.

The primary demand driver for hotel development include:

- Tourism and tourist destinations,

²¹ <http://industry.traveloregon.com/content/uploads/2016/11/Oregon-Willamette-Valley-Region-2015-Visitor-Final-Report.pdf>

- Entertainment activities,
- Business activity (number of jobs and businesses),
- Business conferences and conventions, and
- Travel patterns (visibility).

McMinnville's Three Mile Lane arguably possesses three of the five drivers listed above, which is a positive sign for future lodging and hospitality development. Despite this, in the near term (zero to five years), hotel development in Three Mile Lane will be difficult for the following reasons:

- **Distance from downtown amenities.** Visitors to the hotel would probably drive, not walk, to the restaurants, wine-tasting, boutiques, retail, and other amenities in downtown. There are no commercial amenities at the Three Mile Lane today and therefore a hotel at the Three Mile Lane would need to create its own sense of place and stand on its own. This would require a significantly higher level of investment, potentially in place making amenities, restaurants, meeting facilities, etc.
- **The current setting is somewhat industrial.** This is not a highly desirable hotel setting. Uncertainty about what will happen to the Evergreen properties and the surrounding area will also make hotel developers more reluctant to invest.
- **Land constraints** impact the ability of the market to support the development of moderate-cost hotels, which are needed to support the burgeoning tourism industry.

Long Term Hotel Development Prospects.

In the long term, this could be an excellent site for a hotel. Numerous amenities would improve prospects for hotel development, including:

- Additional parks, open spaces, and festival venues.
- Restaurants and retail.
- Wine tasting and wine-related uses.
- Other residential and commercial development.

The more that a hotel developer needs to create these amenities "from scratch," the more difficult the economics will be.

Many of the new hotels recently built in the region are unique and interesting, with amenities oriented to local tourism draws—such as the wine industry. Some of these new hotels are profiled below.



The Allison, Newberg, Oregon. The Allison is an 85-room, 5-star resort hotel in Newberg, Oregon which opened in 2010. Room rates average between \$435 and \$475 per night.

Located in the Willamette Valley in 35 acres of grounds, this luxury spa resort is within 10 miles of dozens of wineries and 2 miles from Chehalem Glenn Golf Course. Amenities include an upscale restaurant and wine cellar, a spa offering wellness treatments, an indoor pool and hot tub, and yoga classes.



Atticus Hotel, McMinnville, Oregon. Atticus is a new 36-room luxury boutique hotel in downtown McMinnville, at the corner of N.E. 4th St. and N.E. Ford St. The property—which takes the place of a vacant parking lot—is a 22,640 square-foot, four-story building, and was developed by the Odd Fellows Building (OFB) LLC. It is leased in its entirety by Live McMinnville LLC., which will operate the Atticus Hotel.

Eighteen wineries and tasting rooms are located within walking distance along the town’s quaint and historic downtown stretch. The Atticus offers a variety of studio and one-bedroom suites from \$300 per night, as well as a 2-bedroom 2.5-bath penthouse. The hotel features amenities including a conference room, exercise facility, business center, private dining space, and a restaurant and bar. Guests can expect a full accoutrement of services, including valet parking, in-room dining, 24-hour concierge, and group sales coordination.



The Hotel at Independence Landing, Independence, Oregon. A boutique hotel is expected to open in Independence, Oregon in May 2019. The developer, Tokola Properties, was selected by the City of Independence after they bought the waterfront property in 2015 and sent out a request for qualifications for developers to outline their vision for the site.

The Independence hotel, featuring "warm and contemporary" architecture that compliments the historic downtown area, will have 75 rooms.

Embarcadero Hospitality Group will manage the hotel. Seasonal rates for rooms will range from around \$125 on winter weekdays up to \$300 or more for certain suites during summer weekends, developers said.

Recreation & Open Space

Infrastructure—the physical facilities and systems that support economic activity—is a key driver of real estate investment and development. Historically, real estate was influenced by the quality and location of roads, bridges, and other forms of auto-oriented infrastructure. The Interstate Highway System, for example, was a critical factor in the growth of suburban America.

More recently, transit-oriented development has become a common term in the lexicon of real estate and transportation officials. Transit-oriented development is characterized by compact, mixed-use, residential, and commercial development that is clustered around a transit stop or a rail station. Today, bike trails, bike lanes, bike-share systems, and other forms of active transportation infrastructure are helping spur a new generation of "trail-oriented development." This trend reflects the desire of people around the world to live in places where driving an automobile is just one of a number of safe, convenient, and affordable transportation options. The Urban Land Institute’s America in 2015 report found that, in the United States, over half of all people (52 percent) and 63 percent of millennials would like to live in a place where they do not need to use a car very often; half of U.S. residents believe their communities need more bike lanes.

Active transportation was, until recently, an overlooked mode of travel. However, in recent years, investments in infrastructure that accommodates those who walk and ride bicycles have begun to reshape communities.

Shared themes among active transportation projects include the following:

Active transportation infrastructure can catalyze real estate development. Trails, bike lanes, and bicycle-sharing systems can improve pedestrian and bicyclist access to employment centers, recreational destinations, and public transit facilities, thereby enhancing the attractiveness of developments along active transportation corridors. In some cases, former industrial districts and towns outside urban cores have benefited from active transportation infrastructure due to improved walking and cycling connectivity.

Investments in trails, bike lanes, and bicycle-sharing systems have high levels of return on investment. Regions and cities have found that relatively small investments in active transportation can have outsized economic returns due to improved health and environmental outcomes and reduced negative externalities, such as automobile traffic congestion and poor air quality.

Bike-friendly cities and towns are also finding that bicycle facilities boost the tourism economy and encourage extended stays and return visits. Tourism is one of the world's largest industries. The U.S. Travel Association explains that U.S. residents spend over \$800 billion a year on travel and recreation away from home.

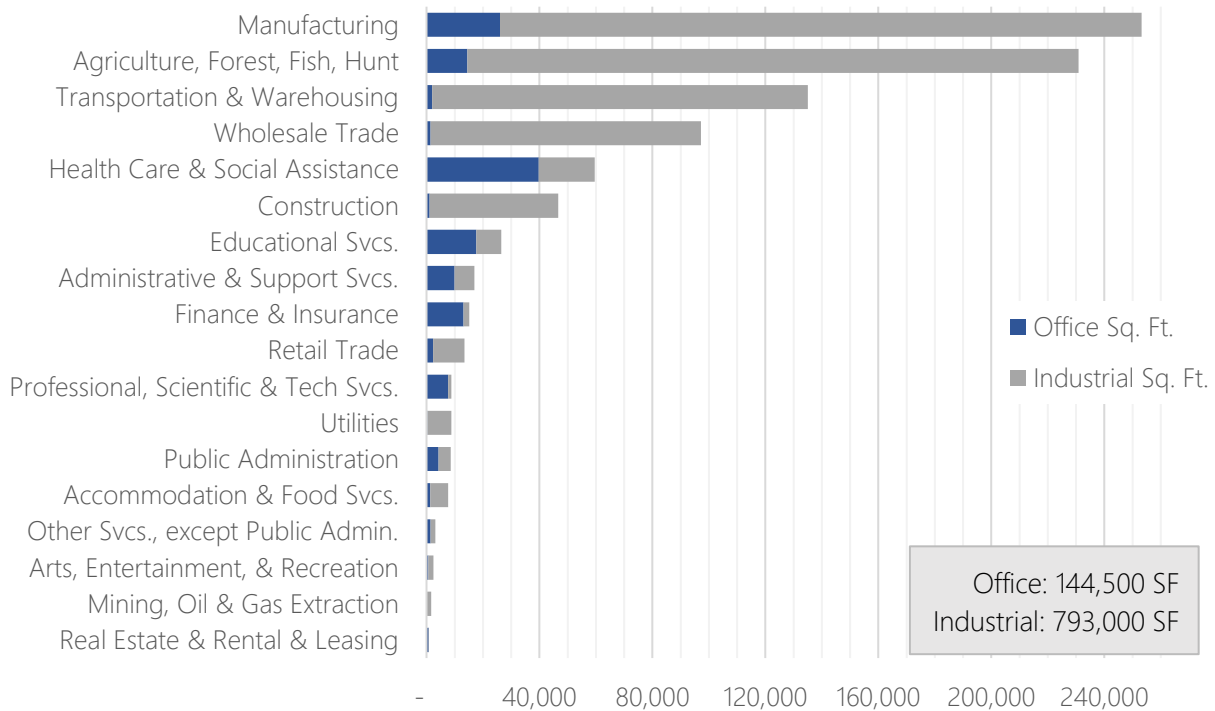
Demand for Commercial/Employment Development

This section provides an estimate of future 10-year market demand for residential development, office and industrial development, and retail development.

Office and Industrial Demand

Based on the respective strength of the office and industrial markets, most employment-based demand for new development is likely to be in the industrial sector, specifically manufacturing and agriculture (tied to the wine industry). With that said, this is largely dependent on McMinnville's ability to compete with other cities in the region where industrial development has been more prevalent. Figure 37 shows LCG's office and industrial development forecast for the market area, based on job growth forecasts made by the U.S. Census.

Figure 37. 10-Year Office and Industrial Demand



Source: Leland Consulting Group

For office, employment growth in the industries of healthcare and social assistance and educational services can be expected to drive most of the demand for new office development.

However, the Census’ employment forecast likely overstates demand for industrial and office space. The following table shows historical employment growth rates along with historical office and industrial deliveries documented over the past decade. These historical trends are useful in suggesting office and industrial construction for the next decade in the market area.

Because little new office space has been built (despite the addition of several thousand new employees), it is possible that there will be little to no demand for office space in the next decade; however, the limited development may be due to a limited supply of appropriately zoned land. Likewise, the total demand for new industrial space may be lower than would be projected using employment forecasts.

Three Mile Lane may be a prime location for **light or craft industrial** which could align with the City’s vision for the area and provide secondary tourism benefits if new development includes experiential or retail components. This is discussed further in the following “Retail Absorption” section. Larger or heavy industrial users are likely to be attracted to existing business and industrial parks, such as that in the north of the City.

Table 11. Historical and Forecasted Office and Industrial Trends, Market Area

	Past 5 Years	Next 10 Years
Net Office Absorption	48,102	70,000
Office Deliveries	5,000	75,000
Net Industrial Absorption	82,500	175,000
Industrial Deliveries	58,000	200,000

Source: Leland Consulting Group

Three Mile Lane Office Absorption

While employment is projected to continue to grow in the market area, the industries projected to experience the most growth and dominate future employment are not traditionally significant office users. This is also true of the past five years, during which time very little new office space was built, suggesting a limited office market outside of healthcare.

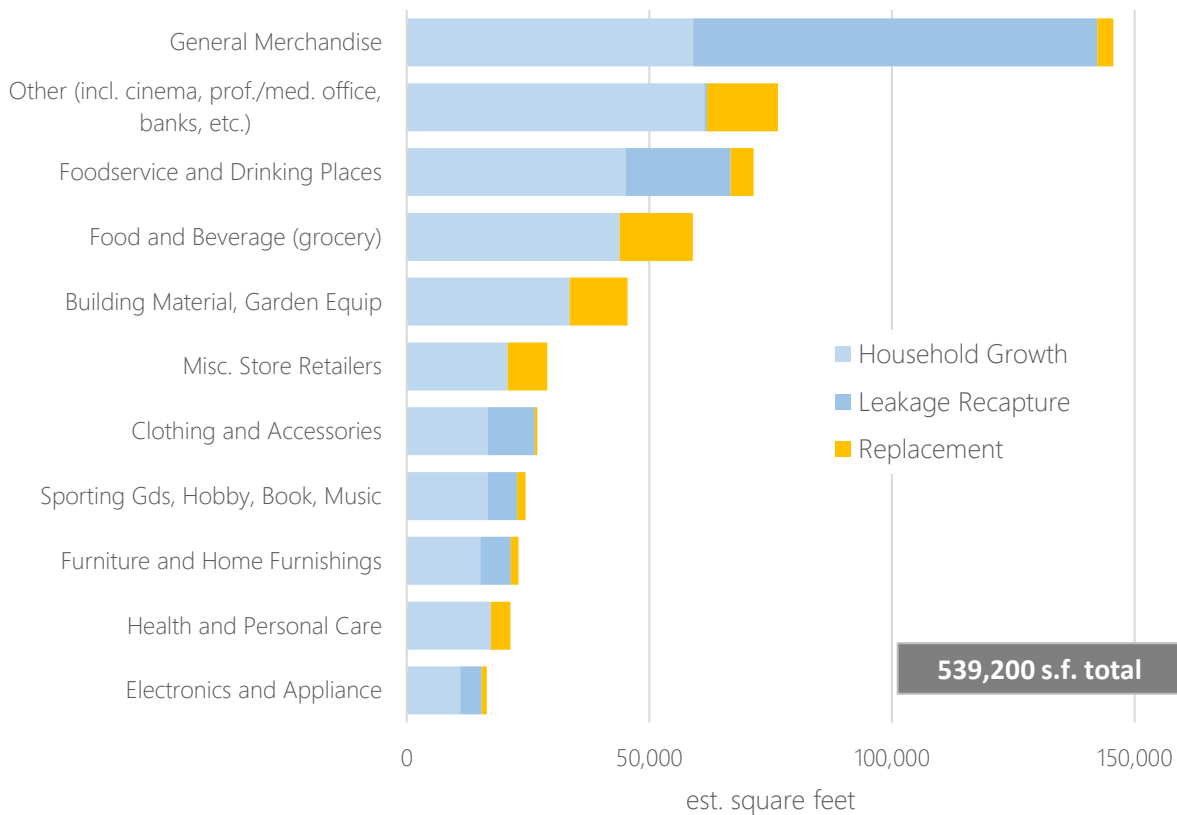
As office rents are too low to justify the high costs of new, high-quality speculative office development, new construction is only likely if large office users can be attracted to the area, or if one or more tenants are looking for a special site and campus environment, particularly near existing health care facilities. McMinnville’s high quality of life, business incentives, and proximity to the Portland metro region may indeed be sufficient in attracting these larger companies, but this is almost impossible to forecast. Additionally, target users could include existing companies looking to expand.

Speculative office development is therefore likely to be minimal or nonexistent in the Three Mile Lane area in the near- and mid-term. On the other hand, recent trends for owner-occupied (often called build-to-suit) buildings in the Three Mile Lane corridor are positive indicators for both the office and industrial markets. The recent presence of two large companies—Jackson Family Wines (industrial/flex) and The Springs Living (office/flex)—in the corridor prove that a market exists for new space, reinforced by the very low vacancy rate in both markets. However, as build-to-suit opportunities are typically less driven by traditional market forces—because they are often to fill specific niches in the market and rent growth is less important—new build-to-suit opportunities are more challenging to forecast than speculative office.

Retail Demand

Using the household growth projections and leakage analysis described earlier, we forecast demand for approximately 529,000 square feet of additional retail development within the market area over the next decade. The general merchandise, “other” (cinema, medical and professional office, etc.), and foodservice and drinking places (restaurants and bars) retail categories are responsible for about half of total demand. Grocery demand would likely support one or two additional stores.

Figure 38. 10-year Market Area Retail Demand by Source



Source: Leland Consulting Group

The following table shows total retail absorption and development for the past five years, and forecasted development based on the same historical trends. Note that these forecasted numbers are significantly lower than those presented above. This is merely to highlight that there may be pent-up demand well into the future if the development trends of the past continue. Increasing the rate of development may, therefore, require significant public interventions.

Table 12. Historical and Forecasted Retail Trends, Market Area

	Past 5 Yrs.	Next 10 Years
Net Retail Absorption	117,900	200,000
Retail Deliveries	40,300	150,000

Source: Costar, Leland Consulting Group

Three Mile Lane Retail Absorption

The Three Mile Lane project area is relatively well-positioned for retail development due to high visibility, ease of access, high traffic counts along Highway 18, and there are few alternative urban areas between McMinnville and the coast, providing opportunities to capture spending from those visiting the Oregon coast.

Additionally, as one of the few locations in the market area with large, contiguous, vacant tracts of land within city limits, Three Mile Lane should be able to capture a significant portion of market area demand over the next 10 years.

However, significant challenges remain, including:

- Existing retail in the project area is virtually non-existent;
- Many retailers—particularly bars, restaurants, and other small-format stores—are likely to prefer a downtown location, where there is existing activity, authentic and interesting buildings, and less risk; and
- There are many other large, successful retail centers within a reasonable drive-time with which any major retail development would compete.

As such, retailers in Three Mile Lane are likely to be auto-oriented, with convenience and general merchandise retail potentially feasible in the short-term. Significant household growth in the area—as projected—is likely to generate demand for further dining and grocery options over the longer term, but not in the near-term as current retail spending data indicates a major surplus of grocery stores in the region.

The tourism and wine industry, especially, is burgeoning, increasing opportunities for development that would leverage the wave of visitors to the area during the warmer months. Specifically, this may take the form of experiential or “destination” retail and commercial uses. Commercial tenants in this category include restaurants, wine-tasting and wine sales, unique Willamette Valley food growers and vendors, other food and beverage vendors (coffee, ice cream, bakeries), and outdoor recreation suppliers. Secondary commercial tenants can fill space alongside these “anchor” tenants. Indeed, a larger building with production, warehousing or light manufacturing in the back and a front-facing retailer—such as a tasting room or craft store—would fit the existing industrial, auto-oriented character of the Three Mile Lane study area while increasing activity in the corridor.

Conclusion

This market analysis assessed the market conditions for residential, commercial, office, and industrial development, and subsequently identified opportunities for the Three Mile Lane corridor based on existing land assets.

Projected residential and employment growth over the next 20 years will drive demand for new residential, commercial, and industrial development. Potential development in the Three Mile Lane corridor is likely to be driven by these market forces, as well as more nuanced needs for housing and retail in particular. Existing market conditions indicate that development will likely remain low-density and surface parked, at least until rents increase and development feasibility of higher-density building types improves. For residential uses this may translate in the near-term to townhomes and apartments up to four stories, as well as single-family and multiplexes. Based on projected demand, retail development is likely to be surface parked, low-rise, and community-serving (potential grocery store, restaurants, etc.), and as part of mixed-use residential and/or office developments over a longer time period.

The growing tourism industry, airport activity, and existing needs for meeting space should drive demand for hotel. However, with speculative office demand relatively low in comparison to housing and retail, hotel prospects are reliant on existing employment and tourism.

With few large flat land tracts left in the area and moderate to high employment growth projected in the industries of manufacturing, agriculture, transportation and warehousing, and wholesale trade, there is strong industrial demand. However, a housing-focused vision for the area is likely to be incompatible with significant

industrial development. Less impactful industrial—light or “craft,” particularly if retail or experiential components are included—would be compatible with adjacent land uses and help generate a live-work-play environment.

In short, opportunities for new development are prevalent given the prevalence of large, greenfield sites in the study area. As such, it is positioned to capture a significant share of regional demand for retail and commercial development, as well as housing, industrial, and other mixed uses.



Land Use and Transportation Facility Options and Evaluation McMinnville Three Mile Lane Area Plan

DATE August 5, 2019

TO Heather Richards and Jamie Fleckenstein, City of McMinnville

FROM Darci Rudzinski and Andrew Parish, Angelo Planning Group
Ken Pirie, Walker Macy
Chris Zahas and Sam Brookham, LCG
Andy Mortensen, DEA

CC Michael Duncan, ODOT

INTRODUCTION

Purpose

The goal of the McMinnville Three Mile Lane Area Plan planning project is to create a long-range, 20-year+ plan guiding future growth in the eastern-most area of the City. This memorandum introduces and evaluates three land use concepts for the McMinnville Three Mile Lane area. These land use concepts are the result of several rounds of public outreach, meetings of the project's advisory committees, and discussions between City staff and the consultant team. They are informed by a series of technical memoranda that are available on the project website, www.threemilelane.com. The concepts provide three distinct approaches for the buildout of new land uses, local street networks, and amenities.

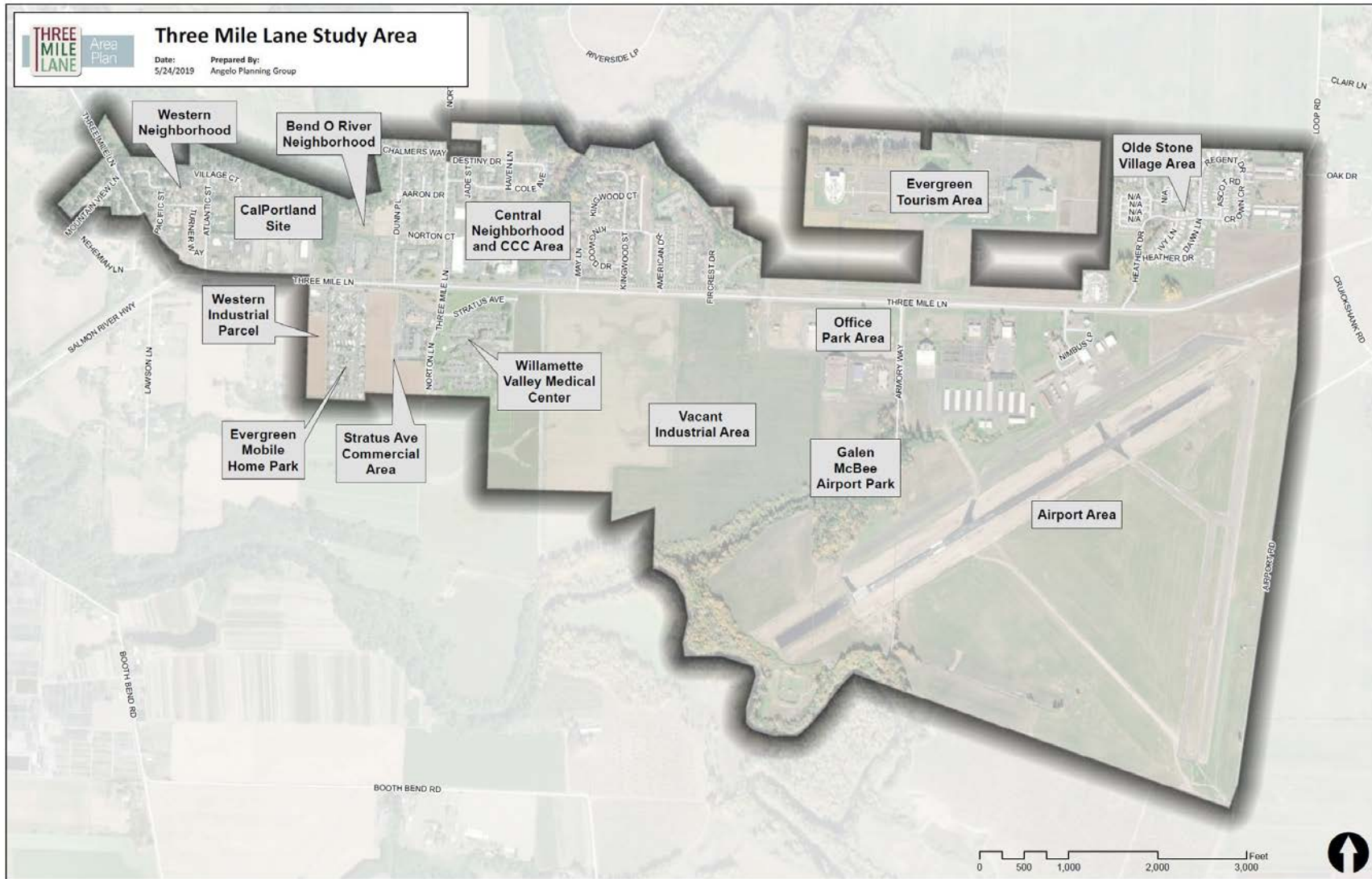
The purpose of this evaluation is to identify benefits and drawbacks of these alternatives, rather than to simply pick the highest-scoring concept. After review from the project advisory committees and broader public, it is likely that the best-performing attributes from all three concepts will make their way into a hybrid, preferred land use option.

Exploring alternatives for the future design of Three Mile Lane (OR 18) is also part of this evaluation effort. The Facility Design Options section of this report describes two design options for OR 18. Both facility design options are expected to service and support any of the three land use concepts, including connectivity with the local street networks contained within each concept.

Project Area and Existing Conditions

The Three Mile Lane area is shown in Figure 1. The study area includes a wide range of land uses. South of Three Mile Lane, the study area is dominated by the McMinnville Municipal Airport, the Willamette Valley Medical Center, and vacant industrially-zoned land. A few commercial and manufactured home uses are also identified to the west. North of Three Mile Lane, the uses are more mixed, with fewer large parcels except for the Evergreen Aviation & Space Museum complex. The north side includes single-family and multi-family uses, mobile homes, and commercial, industrial, and vacant uses.

Figure 1. Three Mile Lane Study Area



The City of McMinnville owns a significant portion of the study area—mostly around the airport, but also the two vacant properties at the east end of Three Mile Lane, as well as the public parks. The two large vacant sites to the west of the airport are privately owned. Chemeketa Community College owns the commercial center in which its campus sits. The Falls at McMinnville LLC owns the Wings & Waves Waterpark and The Falls Event Center sites, but the Evergreen Aviation & Space Museum site is owned by Affordable Mid Coast Housing LLC. The museum itself is a nonprofit, and leases out the buildings. Other major landowners include Olde Stone Village, Baker Rock Resources West LLC (CalPortland site), and Habitat for Humanity, which owns the Aspire Subdivision in the Western Neighborhood Subarea.

Existing conditions are discussed in greater detail in the Existing Conditions Booklet and Technical Memorandum #1.

Project Goals and Evaluation Criteria

An aspirational vision statement, community goals and objectives, and potential criteria to evaluate land use and transportation options for the Three Mile Lane area were developed early in the project.¹ They were created in order to articulate the Three Mile Lane Area Plan’s desired outcomes and help in the evaluation of options for the area. These materials were discussed in project advisory committee meetings and the subject of an online survey and a public open house.²

A revised set of evaluation criteria tied to the goals and objectives was used to evaluate the options in this report, as detailed in Appendix A. The evaluation criteria used to test the three land use concepts are derived from the project’s goals and objectives; the project goals are described below.

GOAL 1: Support and enhance the district's economic vitality and marketability

This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism. Alternatives will be evaluated qualitatively for how well they address the area's development/redevelopment potential.

¹ See Memorandum #4 Evaluation Criteria.

² See Memorandum #5 for an overview of project public involvement to date and feedback received on content in Memorandum #4.

GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.

The study area contains several existing residential neighborhoods, including assisted-living and manufactured home residences, as well as major employers and tourism destinations. This plan aims to provide a mix of land uses that support one another to create a unique part of the city. McMinnville has recently adopted a set of “Great Neighborhood Principles” that have been used to evaluate land use concepts for the Three Mile Lane area.

GOAL 3: Enhance multi-modal connections throughout the district

This plan aims to create a complete, multimodal transportation network that serves the north and south sides of Three Mile Lane within the district, and that connects the business community, the hospital, residential neighborhoods and tourism amenities to each other and to the city center. Alternatives will be evaluated through criteria measuring transportation safety and performance for all modes of travel: pedestrian, bicycle, transit, freight, and personal vehicles.

McMinnville’s Great Neighborhood Principles

- 1. Natural Feature Preservation.** Great neighborhoods are sensitive to the natural conditions and features of the land.
- 2. Scenic Views.** Great neighborhoods preserve scenic views in areas that everyone can access.
- 3. Parks and Open Spaces.** Great Neighborhoods have open and recreational spaces to walk, play, gather, and commune as a neighborhood.
- 4. Pedestrian Friendly.** Great Neighborhoods are pedestrian people for people of all ages and abilities.
- 5. Bike Friendly.** Great Neighborhoods are bike friendly for people of all ages and abilities.
- 6. Connected Streets.** Great Neighborhoods have interconnected streets that provide safe travel route options, increased connectivity between places and destinations, and easy pedestrian and bike use.
- 7. Accessibility.** Great Neighborhoods are designed to be accessible and allow for ease of use for people of all ages and abilities.
- 8. Human Scale Design.** Great neighborhoods have buildings and spaces that are designed to be comfortable at a human scale and that foster human interaction with the built environment.
- 9. Mix of Activities.** Great Neighborhoods provide easy and convenient access to many of the destinations, activities, and local services that residents use on a daily basis.
- 10. Urban-Rural Interface.** Great Neighborhoods complement adjacent rural areas and transition between urban and rural uses.
- 11. Housing for Diverse Incomes and Generations.** Great Neighborhoods provide housing opportunities for people and families with a wide range of incomes, and for people and families in all stages of life.
- 12. Housing Variety.** Great Neighborhoods have a variety of building forms and architectural variety to avoid monoculture design.
- 13. Unique and Integrated Design Elements.** Great Neighborhoods have unique features, designs, and focal points to create a neighborhood character and identity.

GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville

The study area is a primary gateway to the City of McMinnville. Alternatives will be evaluated qualitatively for how well they provide an identity for the district, reflect McMinnville’s intrinsic character, and highlight the landscape features of the district. Because the land use concepts are fairly high-level, urban design considerations explore aesthetic elements that could be applied in the area. Later stages of this project will also present options for an actual gateway feature or monument to further highlight the entry to the City.

Alternatives Creation and Evaluation Process

The creation of the land use concepts and the criteria by which they are evaluated are the result of a public process that has included:

- Participation of the Three Mile Lane Area Plan’s Advisory Committees, which consist of technical and agency members as well as landowners, members of the public, and others.
- A series of stakeholder interviews and hands-on workshops with property owners to discuss options for large vacant parcels within the study area.
- Creation of project goals and objectives, and an online survey to evaluate them.
- Market analysis and case studies prepared by the project’s consultant team, focusing on large vacant parcels in the study area.
- An open house held on April 10, 2019 at Chemeketa Community College to provide information to the public on existing conditions and gather feedback regarding the project’s goals and objectives.

Additional detail about this process is provided below.

Market Analysis

Early in the project, a market analysis was conducted to assess regional conditions for residential, commercial, office, and industrial development and to identify specific development opportunities within the Three Mile Lane corridor by leveraging the land assets to their highest and best use. The market analysis identified significant household and employment growth in the region over the next 20 years, which will drive demand for new housing, commercial, and industrial construction. The area is positioned to capture a significant share of this regional demand given the presence of large greenfield sites within the area—a situation which is relatively rare in the broader region.

The market analysis highlighted the most feasible development typologies based on rents and development trends. Generally, these typologies share similar characteristics, such as surface parking and a low-rise scale. Higher density development—such as mid-rise buildings—may face feasibility challenges and are not expected to be developed in the Three Mile Lane area during the planning horizon.

- **Residential demand** is strong for both single-family and multifamily housing, with rising home values, household incomes, sales volumes, absorption, and construction activity throughout McMinnville. The quantity of what would be built in the study area depends largely on the City’s vision for the area, applicable zoning, infrastructure capacity (and the ability for new development to pay for new infrastructure), and buildable land. Townhomes,

apartments up to four stories, single-family homes, and multiplexes are all residential development types that would likely be feasible in the study area.

- **Retail demand** is also strong, particularly for general merchandise—which is typically large-format retail—and neighborhood-serving retailers that will support existing and future households and tourism. The changing market for retail development due to e-commerce may present both challenges and opportunities for novel development in the area.
- **Lodging demand** exists due to the burgeoning tourism industry, potential airport activity, and existing needs for meeting space, although the limited office market means the bulk of lodging demand will fall during the summer months when tourism activity is highest.
- Market conditions reflect strong **industrial demand** due to the growth of agriculture, food and beverage production, and manufacturing, with potential pent-up demand because of the lack of appropriate—particularly large—industrial sites. The Three Mile Lane area is poised to accommodate large industrial users, but heavy industrial may negatively impact prospects for other land uses such as lodging and multifamily. However, the area could also capture a proportion of regional demand by focusing on “craft” or light industrial users, which may or may not include retail components.
- The **office market** is potentially strong but limited. Opportunities may arise because of McMinnville’s high quality of life and the corridor’s proximity to the airport and institutional users such as healthcare and education.

Case Study

In order to refine the feasibility of the market study findings on a real-world site, a redevelopment analysis for three largely vacant properties in the Three Mile Lane study area totaling approximately 180 acres was conducted. Referred to as a “case study,” this analysis involved an evaluation of site conditions for these properties and the surrounding area, an assessment of opportunities and constraints, the development of three building programs based on the market analysis, conceptual graphics of each program alternative, and an economic analysis that assesses the impact of each alternative on jobs, assessed property value, and other key indicators.³

Each case study scenario represents a different exploration of how the market-driven land uses could be arrayed across the sites in ways that support the community’s values and the goals, objectives, and criteria developed through the planning process. A property owner workshop was held to review findings and background information collected to date—including the market analysis—and included a broader discussion of visions, criteria, and principles.

The three case study scenarios illustrated distinct opportunities for large vacant parcels in the south side of the Three Mile Lane area to develop with new uses and new public infrastructure. They show that a wide range of opportunities is possible, allowing property owners and developers to react to changing market conditions. The concepts would significantly add jobs and tax base to McMinnville, ranging from 1,100 to 5,800 jobs and \$128 to \$386 million in added taxable value. Given the strong growth occurring throughout the region and McMinnville’s constrained land

³ The Case Study Report is available on the project website, www.threemilelane.com.

supply, this is a unique opportunity for McMinnville to capture economic growth while simultaneously providing needed community services, housing, and jobs.

Based on this information and input, and building from the case study land use alternatives, the consultant team created three land use concepts for the wider Three Mile Lane study area. The Concepts described in this report are intended to explore and evaluate different use mixes, urban design options, and transportation improvements across the entire study area.

LAND USE CONCEPTS

Three land use concepts were developed to illustrate how the goals and objectives for the Three Mile Lane area could be achieved. They have their origins in the development scenarios created for the case study focused on large, vacant parcels south of OR 18. The major elements of the case study scenarios logically have implications for the viability of land uses and transportation networks throughout the study area, and the land use concepts for the wider area were crafted to compliment the outcomes envisioned through the case study process.

Elements common to all three of the land use concepts, followed by a description of significant differences, are described in this section.

Common Elements

There are notable elements common to all three concepts. These include several transportation improvements and other items as discussed below.

- **Urban Growth Boundary (UGB).** No change is assumed to the City of McMinnville UGB, which surrounds the study area. For the purposes of this planning study, the agricultural uses and rural residential uses outside of the UGB are assumed to remain, while land within the UGB is assumed to eventually develop with urban uses and at urban densities.
- **Developable Land.** There is roughly 400 acres of developable land in each option⁴. Most of the existing employment land uses are expected to remain and the fundamental structure of built-out neighborhoods north of Three Mile Lane are not expected to change within the planning horizon. Constant in all three concepts is the assumption that there is some opportunity for higher density residential south of the highway, in the southwest corner of the study area.
- **Three Mile Lane (OR 18).** This evaluation looks at the long-term transportation needs of people traveling within and through the study area. The second half of this report contains a specific evaluation of two facility design options for Three Mile Lane, each of which would support the three land use concepts.
- **Local Transportation Network.** Needed transportation connections on the City's arterial and collector network are common between the alternatives, including:
 - Connecting Cumulus Avenue to SW Norton Lane through or adjacent to the Chemeketa Community College campus.

⁴ This figure does not include potential developable area near the McMinnville Municipal Airport.

- Collector and conceptual local street connections through new developments south of Three Mile Lane.
- An improved Three Mile Lane bridge with better bicycle and pedestrian facilities.
- New and improved bicycle and pedestrian connections throughout the study area.
- **Urban Design.** As part of this process, the City is considering updating the Three Mile Lane overlay to include design requirements that ensure new development has a cohesive, context-sensitive and sustainable aesthetic. These requirements may address tree planting/landscape design, pedestrian- and bike-friendly site design, views, protection of natural resources, and off-street parking, including others. This memorandum describes some of the elements expected to be incorporated into the Three Mile Lane Area Plan, but they are not distinguishing factors between the concepts presented.
- **Airport.** Airport-related uses are expected to be permitted according to existing City code requirements. The area adjacent to the airport is expected to continue to develop as an airport-oriented commercial and industrial center in all options, reflecting the economic value and potential of this infrastructure. The vacant property on the north side of Three Mile Lane at the eastern edge of the study area is within the Airport Approach zone and will remain undeveloped.
- **Natural Areas.** The northern and southern edges of the study area feature the riparian corridor and floodplain for the South Yamhill River, which provides a natural transition to current and future development, adding a sense of place and potential recreational access. In all concepts these natural features are intended to be preserved and enhanced for the enjoyment and benefit of all.
- **Gateways.** Each alternative proposes different locations for the consistent idea of new gateway elements or treatments, whose design will be determined at a later date. Conceptually, these elements could include large-scale welcome signage, vertical art pieces or sculptural elements or significant landscape designs or patterns.
- **Vehicle Trip Generation.** Each of the alternatives represent a change in land use that increases the number of future trips using and crossing OR 18. A Trip Generation Evaluation was performed to identify the level and location of new trip generators within the study area, comparing and contrasting the three land use concepts. The results of the assessment are summarized for each land use concept and detailed in Appendix A.
- **Facility Design Options.** Two options for the design of Three Mile Lane are discussed later in this memorandum, which have implications for multimodal connectivity through and across the highway. These options are separate from the three land use concepts.

Land Use Concept 1 – Industrial Campus

This concept is most similar to existing zoning south of Three Mile Lane. It allows for a large industrial user, potentially engaged in manufacturing or warehousing, in close proximity to retail services, Three Mile Lane, and other supportive or ancillary uses to the primary industrial employment use. Large flat ‘greenfield’ parcels may be very attractive to industrial users seeking space for large buildings and associated parking and loading.

Due to the emphasis on industrial development, Concept 1 is likely to result in the largest overall building square footage of the options. However, the overall economic impact of the plan area is contingent on the types of industrial uses that ultimately locate in the area. Low-intensity uses such as warehousing would generate fewer jobs, lower tax revenue, and less opportunity for high-quality amenities than high-intensity uses such as manufacturing and flex space.

Gateways. This concept includes specific gateway features for westbound traffic on Three Mile Lane associated with a future interchange at Cumulus Avenue, and at the western edge of the study area for eastbound traffic on 18.

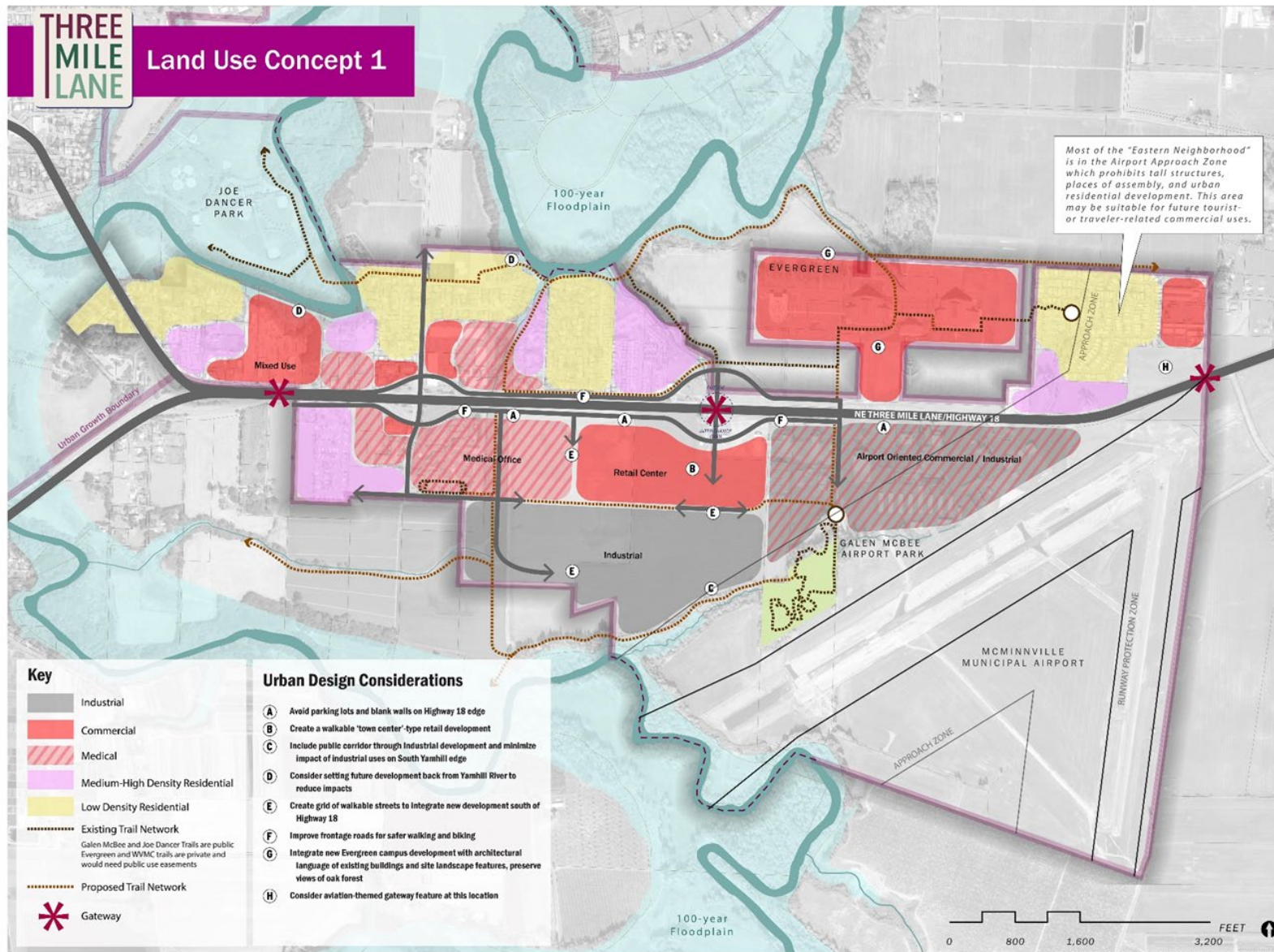
Parks and Trails. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. New connections to McBee Airport Park will be provided primarily via roadways and sidewalks as properties south of Three Mile Lane develop. North of OR 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond.

Evergreen Tourism Site. No changes to the site from existing conditions are assumed for Concept 1, other than the establishment of a more formalized trail loop network.

Willamette Valley Medical Center Area. This concept envisions a cluster of new medical office space near Norton Lane on both sides of Three Mile Lane, building off the central attractor of the Medical Center. This could include space for expansion of the Medical Center.

Cal-Portland Site. In this concept, the Cal Portland site is changed from its current industrial designation to a mixed-use designation, allowing for a mix of commercial and residential development. On the north side of this parcel, protection of the South Yamhill river edge, potentially with public access, is a key urban design goal.

Figure 2. Land Use Concept 1



Retail “Town Center.” This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process.⁵ Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville’s downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development.

Eastern Neighborhood. In this concept, a mix of new housing in the R-4 designation and commercial development is added in the eastern portion of the study area, including a Crossroads Commercial development at the corner of SE Loop Road and OR 18, designed to recognize its position at the eastern gateway to McMinnville, with significant landscape, gateway signage and context-appropriate buildings.⁶

CCC Campus. Potential for infill commercial uses to replace existing inward-facing buildings, in new buildings or renovated retail structures that have more of an active street presence on the visible Norton Lane frontage.

Vehicle Trip Generation. The greatest number of new vehicle trips in Option 1 are generated by planned commercial and multi-story medical office developments on the south side of OR 18, between the Willamette Valley Medical Center and Cumulus Avenue. New commercial lands at the eastern end of the study area and along Cumulus Avenue (Baker Rock site) will also generate significant vehicle trips. Industrial land at the southern edge of the study area is not expected to generate significant vehicle traffic.

⁵ Early design considerations have been provided. Design standards should be applied to this development to ensure that the architectural language is consistent with and respectful of regional agricultural and historic forms and scale. The entire retail center should include shade trees and lush landscape, which is consistent with other high-quality retail centers. The design of the edges of the center should also be carefully considered, so that travelers on Three Mile Lane are not viewing the loading docks and blank walls of an internally-focused center.

⁶ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

Land Use Concept 2 – Corporate Campus

The most significant feature of this concept is a sizable commercially-zoned “corporate campus” and a mix of office/industrial uses south of Three Mile Lane, which would add a significant amount of new office space. The balance between housing, commercial, and office) development in Land Use Concept 2 makes this scenario less dependent on one particular land use type. In this scenario, much of the job and development growth is driven by the corporate campus, so finding a good user for this space is key.

Gateways. This concept includes three gateway features; at the eastern edge of the Evergreen Campus, , and at the future interchanges of SW Cumulus and SW Norton Lane.

Evergreen Tourism Site. The Evergreen Tourism Site is envisioned to include a new hotel, retail, and event space in this concept, as infill development on undeveloped land within the current boundaries of the campus.

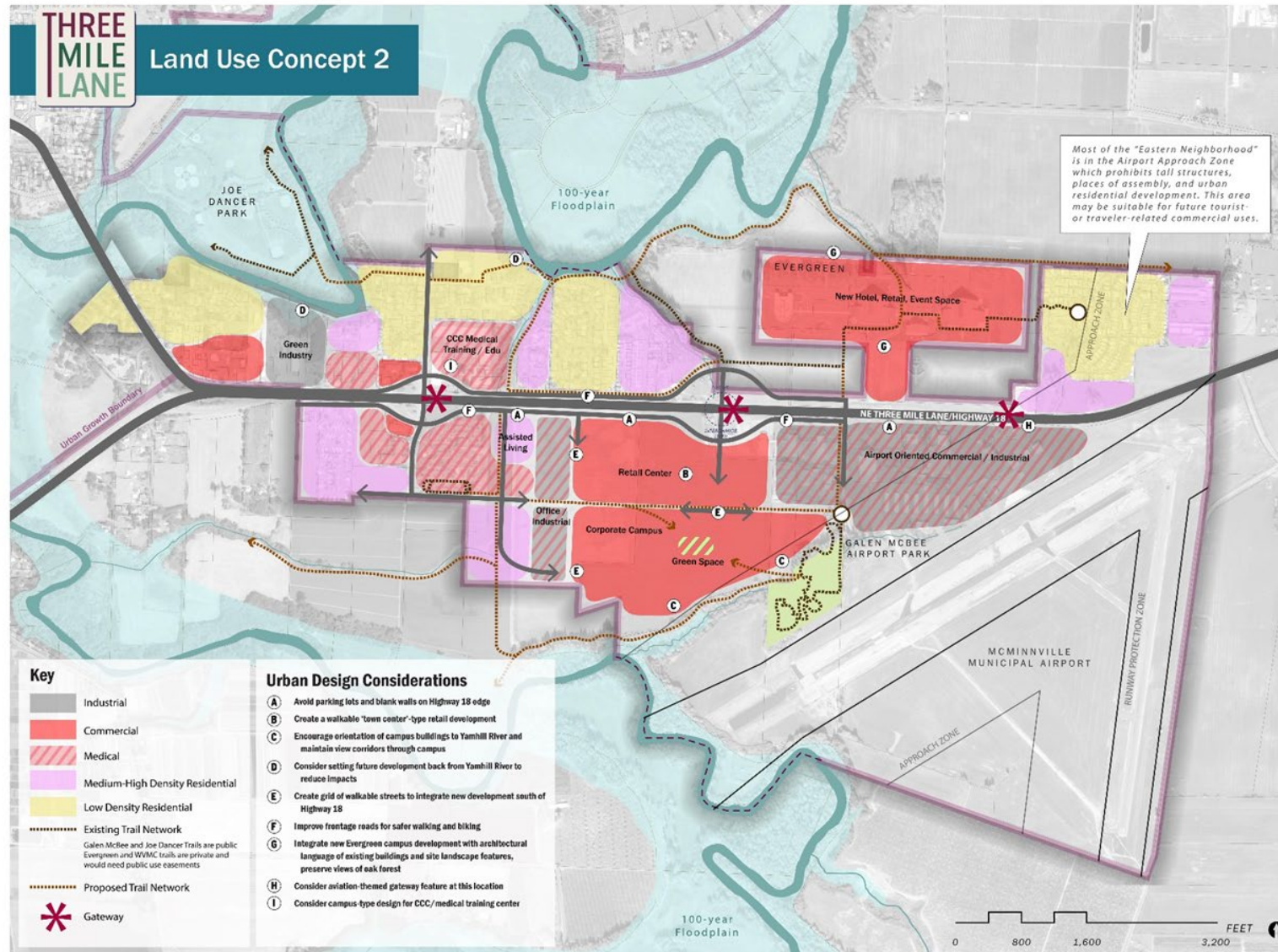
Parks and Trails. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. New connections to McBee Airport Park will be provided primarily via roadways and sidewalks as properties south of Three Mile Lane develop. North of 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond. This concept includes a new park as a central gathering space for the corporate campus area, connected to Galen McBee Airport Park via a trail system.

Willamette Valley Medical Center Area. This concept includes new medical office space near Norton Lane on both sides of Three Mile Lane. This concept also includes additional R-4 land for assisted living facilities near the Willamette Valley Medical Center—these two uses are complementary and can benefit from co-location. Chemeketa Community College’s focus on health and medical-related education is strengthened with complementary uses, including potential out-patient clinics that include training for students.

Retail “Town Center.” This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR 18 with additional smaller retail uses. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process.⁷ Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville’s downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development.

⁷ Design considerations are similar to those of Land Use Concept 1.

Figure 3. Land Use Concept 2



Corporate Campus. A roughly 90-acre corporate campus is proposed in the southern portion of the study area, which could take advantage of highway access and the nearby municipal airport. The scale of this parcel could make it attractive to a growing tech company that seeks to attract employees to a more affordable community with great natural amenities as well as access to an airport with corporate jet capacity. This campus would be a walkable hub of activity for many employees and could drive demand for additional business services in the surrounding retail and industrial areas. As part of this campus, a new public park is proposed with trail connections to the Galen McBee Airport Park and the campus could be oriented south to the river, to mountain views and the scenic backdrop of agricultural lands beyond. A ‘layer’ of office/industrial use to the west of this corporate campus could be a complementary use for smaller office development that seeks to be close to the larger company campus.

Cal-Portland Site. In this concept, the Cal Portland site remains in an industrial zoning designation but transitions to a greener industry that is a better neighbor to residential uses with a green edge to the South Yamhill River to the north.

Eastern Neighborhood. In this concept, a mix of new housing in the R-4 designation is added in the eastern portion of the study area.⁸

Vehicle Trip Generation. The total new vehicle trip generation is slightly larger in Option 2 than it is in Option 1, though more of the traffic is generated by commercial lands, located near (north and south of OR 18) and focused on Cumulus Avenue. Residential land at the eastern end of the study area will also generate new vehicle trips.

⁸ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

Land Use Concept 3 – South Yamhill Neighborhood

The most significant feature of Concept 3 is the inclusion of residential land in the southern portion of the study area. Along with a greater number of housing units comes a greater need for amenities such as parks, trails, and services to serve the population. Concept 3 provides the most diverse mix of uses in all parts of the study area. The City's Housing Needs Analysis (HNA) emphasized housing affordability as a challenge in the city. Providing a range of housing types and densities, as envisioned in this option's South Yamhill Neighborhood, is one way of addressing this need.

Gateways. Four potential gateway locations are included in this concept; at the eastern entrance to the study area and city, at the SW Cumulus and SW Norton overpasses and at the western end of the study area, where Three Mile Lane splits north from OR 18.

Parks and Trails. This concept includes an expanded Airport Park to serve residences throughout the study area, with new trail connections west to new residential development. Sports fields and active play space are envisioned. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. North of 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond.

New connections to Galen McBee Airport Park will be provided via roadways and sidewalks as properties south of Three Mile Lane develop, as well as a "greenway" trail through the south of the Three Mile Lane area.

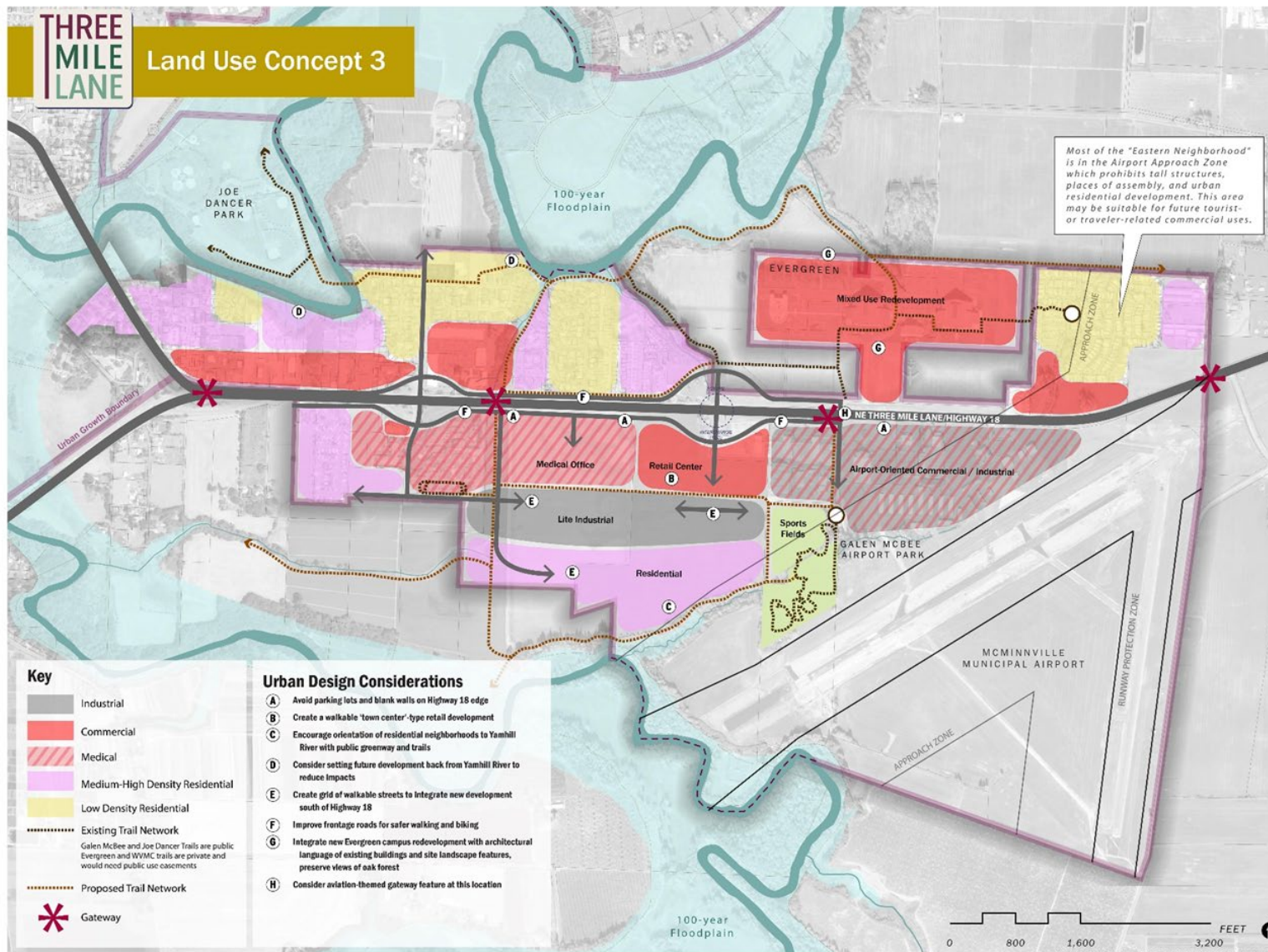
Willamette Valley Medical Center Area. This concept roughly doubles the area for medical office space and potentially new hospital facilities near the Willamette Valley Medical Center south of Three Mile Lane.

Evergreen Tourism Site. A mixed-use redevelopment of the Evergreen Tourism Site is envisioned in this scenario, including a mix of residential uses (likely multifamily or townhomes), office uses, and retail. This differs from Concept 2 in the sense that redevelopment is envisioned to be uses that are less determined by the actual Evergreen destination.

Cal-Portland Site. In this concept the Cal Portland site is redeveloped with commercial frontage on Cumulus Ave and residential uses to the north along the Yamhill River, matching the overall pattern of the rest of the neighborhood north of Three Mile Lane.

Retail "Town Center." This concept includes a somewhat smaller (~28 acre) retail center south of Three Mile Lane at Cumulus Avenue, but retail center design considerations similar to Concepts 1 and 2 should be applied where possible.

Figure 4. Land Use Concept 3



Light Industrial Area. This concept includes a light industrial area south of Three Mile Lane that could include warehousing, food and beverage-related industry, light manufacturing, or other uses. It could take advantage of nearby medical offices, the airport, and highway access. A grid of walkable streets through this area is important for overall connectivity south of the highway. The southern edge of this area will abut a new residential neighborhood (see below) so the southern edge should include buffer landscape and uses that minimize noise, traffic and night-time activity. As an employment base, there should also be walking and biking links to the residential uses.

New South Yamhill Neighborhood. This concept includes a 55-acre new neighborhood at the southern end of the study area, capitalizing on access to the river, nearby employment, and amenities. With the potential for several hundred homes, it would likely include a mix of attached and detached housing types such as single-family homes, townhomes, and apartments at a range of price points. Parts of the neighborhood could include elements that honor the agricultural heritage of McMinnville, with ‘agrihood’ features including community gardens or barns serving as central community space. The new neighborhood could include a grid of low-speed, walkable and bikeable streets, with homes served by rear alleyways to foster a more cohesive, walkable streetscape. While the neighborhood will be adjacent to an expanded McBee Airport Park, there could be additional smaller pocket parks dispersed through the neighborhood, including some that serve as overlooks or trailheads adjacent to the South Yamhill River.

Eastern Neighborhood. In this concept, the southern edge of the eastern neighborhood is developed with commercial uses.⁹

Vehicle Trip Generation. Concept 3 focuses more on retail-related lands within the Evergreen Aviation site, and eastern end of the study area (north of OR 18) and along Cumulus Avenue west of Norton Lane. New trip generation by medical office use near Willamette Valley Medical Center is the largest under Concept 3. Residential lands at the southern edge of the study near the airport will also generate a sizeable number of new vehicle trips. Concept 3 presents a higher total new vehicle trip generation than Concepts 1 or 2.




⁹ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

EVALUATION OF LAND USE CONCEPTS

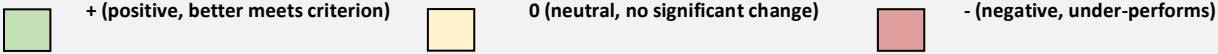
The three land use concepts described in this memorandum represent high-level concepts for potential future land use, transportation, and design elements in the Three Mile Lane area. The goals for the area, included earlier in this memorandum, and specific objectives associated with each, are met in each of the land use concepts to a greater or lesser degree. To help assess how alternatives meets community goals and objectives, evaluation criteria were suggested earlier in the planning process.¹⁰ These are included in Appendix A, as well as a preliminary assessment of how the alternatives address each criterion.




The Concept Evaluation table included in this section mines from this larger comparison exercise and focuses on criteria that can help evaluate the merits of each of the land use concepts as compared to each other. The table includes specific objectives related to individual project goals and indicates how the land use concept performs, relative to the other concepts. The table is not exhaustive but is intended to include criteria that present notable differences in the concepts in order to help the project’s advisory committees and broader community evaluate the three options.




Table 1: Concept Evaluation

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
<i>GOAL 1: Support and enhance the district's economic vitality and marketability</i>			
Amount and Type of Employment Land	A greater amount of industrial land	Large amount of commercial land south of Three Mile Lane	A smaller amount of commercial land on the south side of Three Mile Lane.
Opportunities for Additional Goods and Services in the Area	Mixed use area in NW, new retail center may provide goods and services.	Retail center, Evergreen Site provide goods and services	Evergreen site, commercial in NW, and smaller retail center provide goods and services
Relationship with and Impacts To the McMinnville Municipal Airport	Potential large industrial user of airport	Potential commercial campus user of airport	No single dominating user of airport – but an increased use compared to today due to greater activity

¹⁰ See Memorandum 4.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
			
Compatibility of uses adjacent to airport	Moderate amount of residential use near airport	Significant amount of medium-density residential in NE portion of study area (near end of runway)	Significant amount of new residential in southern portion of the study area, potential conflict.
Support for existing and new tourism opportunities	Preserves aviation complex. No significant increase of tourism capacity elsewhere	Significant commercial opportunities throughout district, and tourism-focused development of Evergreen site	Smallest amount of land for commercial of the three, but preserves aviation complex for continued tourism growth
<i>GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.</i>			
McMinnville Great Neighborhood Principles	New residential uses are limited primarily to infill development in this option.	This option includes smaller amounts of new residential uses focusing on assisted living. These pockets may be less able to utilize the great neighborhood principles purely due to their size and specialized purpose.	This option includes a large new residential neighborhood, which should be designed with McMinnville’s Great Neighborhood Principles in mind.
Residential uses, mix, and location	~1,400 new units, primarily in mixed use and multi-level mid-rise areas	~1,900 new units, located primarily in the far eastern and southern portions of the study area.	~2,500 new units, located primarily in the southern portions of the study area.
Transit-supportive land uses	Major new job and retail centers and high-density housing can help support transit.	Major new retail, corporate campus, and tourism areas, as well as high-density housing, can help support transit.	New residential neighborhood, Evergreen redevelopment, and medical office areas can help support transit.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
GOAL 3: Enhance multi-modal connections throughout the district			
Impacts to OR 18 as a key intercity/freight route.	<i>Specific impacts to OR 18 will be evaluated as part of more detailed analysis for the preferred land use alternative.</i>		
Vehicular connectivity through land use types (street density)	<i>Each of the alternatives can accommodate vehicular connectivity on the local street system through the study area. See DESCRIPTION OF LAND USE OPTIONS in this memorandum.</i>		
Bicycle/pedestrian connections to key locations outside of the study area	<i>Each of the alternatives accommodate enhanced bicycle and pedestrian through the study area. See DESCRIPTION OF LAND USE OPTIONS in this memorandum.</i>		
GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville			
Gateway features	One gateway feature located in interchange area, where it is likely to be auto-oriented in nature. Two others have the potential to be oriented toward other modes.	Two gateway features are located within interchange areas, which are more likely to be auto-oriented in nature. One other has the potential to be oriented toward other modes, but it is located at the edge of the study area away from much of the likely pedestrian/bicycle activity.	All gateway features are located outside of interchange areas, making them more likely to have human-scale design and orientation.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)	<p>All concepts have the potential for design requirements to be implemented through an overlay zone, however industrial structures tend to have lower values and special industrial needs that can conflict with these requirements.</p>	<p>Due to a lesser amount of industrial land in this concept, it may be able to better implement specific building design requirements.</p>	<p>Similar to Concept 1, industrial areas may be less able to incorporate some design requirements; however the new residential neighborhood may make these requirements even more important and be able to improve the aesthetics of the area generally through good neighborhood design.</p>
<p>Landscaping and Street Trees</p>	<p>Similar to the above topic, industrial land is less likely to provide high-quality street trees and other landscaping elements than other use types.</p>	<p>The corporate campus, retail center, and other uses are very compatible with high-quality landscaping.</p>	<p>New residential areas are envisioned to have a high quality network of street trees and other landscaping. The light industrial area may also be required to provide quality landscaping.</p>

FACILITY DESIGN OPTIONS

The consultant team developed two alternative facility designs for the section of Highway 18 within the study area to support the land use concepts. The study evaluation for OR 18 defines two distinctive facility design options:

- **Facility Option 1 - Interchanges** - focuses local access through two major interchanges, and one roundabout
- **Facility Option 2 - Roundabouts** - provides access through one interchange and three roundabouts

Both facility design options are expected to service and support the three land use options, including connectivity with the local street networks contained within each land use option (see Description of Land Use Concepts). The typical cross-sections of OR 18 described under each facility design option meet Oregon Highway Design Manual guidance for median, travel, and shoulder lane widths. Under both facility design options, notable design features or issues that may require further consideration are also described.

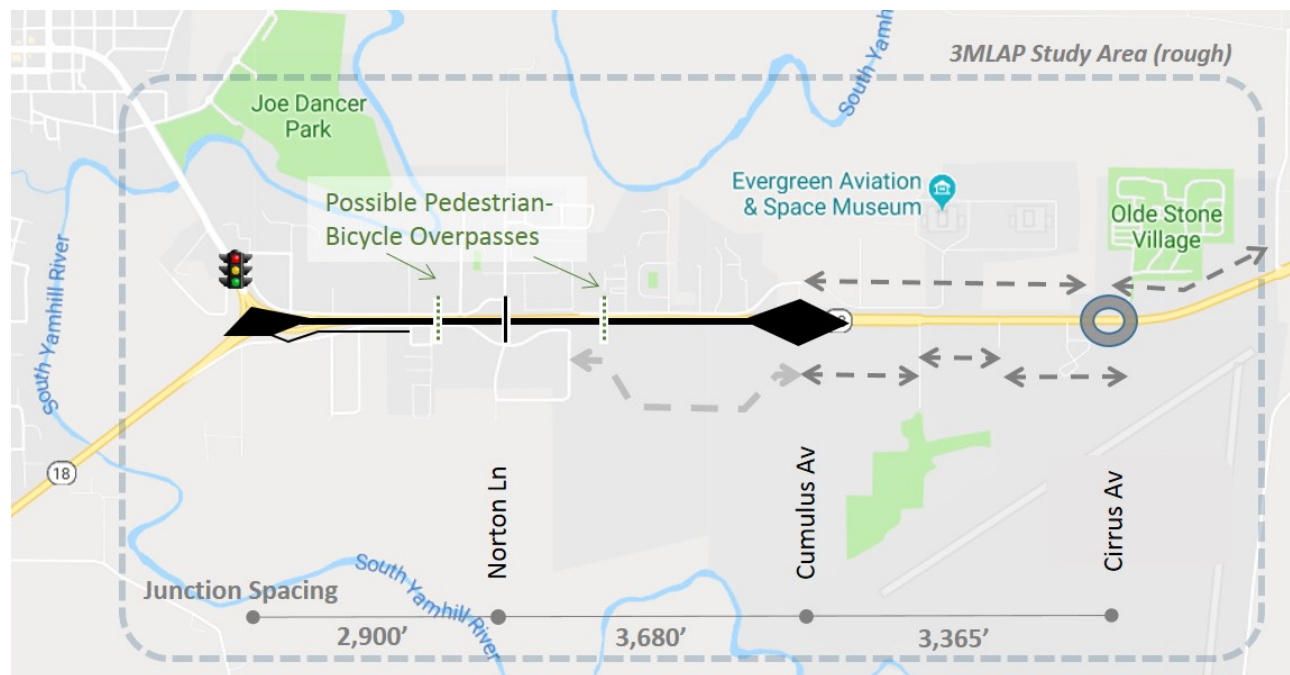
Facility Option 1 - Interchanges

Option 1 generally assumes that major interchanges on OR 18 are the primary junction design intended to balance local area access, circulation, and regional highway through-movement mobility. The interchanges and roundabout in Option 1 are connected by a series of parallel frontage streets. The Option 1 interchange location and spacing is similar to the 1996 Corridor Refinement Plan.

Long-Term Capacity Enhancements

Option 1 assumes that at some time in the future, more significant capacity improvements will be needed to provide local land access in the study area and maintain OR 18 mobility targets. Figure 5 illustrates this long-range interchange facility design option and depicts a series of interim intersection enhancements that could be constructed in advance of major interchange development. Option 1 also includes possible pedestrian-bicycle overpasses of OR 18 (east or west of Norton Lane) to better link study area neighborhoods.

Figure 5. OR 18 Interchange Facility Design Option 1 – Sketch Map



As shown, the interchange facility design option includes the following features:

- Replacement of the OR 18/Three Mile Lane interchange, including a new connection from Stratus Avenue¹¹, providing a more direct, local street (vehicle, bicycle and pedestrian) connection from the south study area to downtown McMinnville.
- Lowering the grade of OR 18 to better facilitate north-south street connectivity.
- New Norton Lane bridge over OR 18 (replacing the existing traffic signal), and possible pedestrian-bicycle bridges either east and/or west of Norton Lane.
- New OR 18 interchange at Cumulus Avenue (replacing the existing traffic signal).
- Possible pedestrian-bicycle only bridges over OR 18, located either east and/or west of Norton lane, providing greater study area connectivity.
- New roundabout on OR 18 at Cirrus Avenue, providing local land access in lieu of driveway closures.
- A series of parallel, east-west local access streets with connections to the future Cumulus interchange, Cirrus roundabout and Norton Lane. Loop Road is re-aligned to the Cirrus roundabout. The existing Loop Road and other local driveway connections to OR 18 in the study area are closed.

The plan view of the OR 18 interchange facility design option is illustrated in Figure 6. The reconstructed OR 18/Three Mile Lane interchange includes a direct connection to Stratus Avenue.

¹¹ Reconstruction of interchange and new Stratus Avenue connection will require a minor adjustment to the Urban Growth Boundary – for transportation facilities only.

As an alternative to OR 18 and Cumulus Avenue, the new Stratus Avenue link provides more direct connectivity between areas south of OR 18 and downtown McMinnville.

Two-way cycle tracks are added to Cumulus Avenue (north side) and Stratus Avenue (south side), with buffered treatments from adjacent vehicle travel lanes. These cycle tracks will provide better connectivity within, and from, the study area to downtown McMinnville, supporting a wider range of cycling residents and visitors. Wider sidewalks and planter strips along Cumulus and Stratus Avenues are also assumed under the interchange facility design option.

Figure 6. OR 18 Interchange Facility Design Option – Plan View / Corridor
West Section



East Section

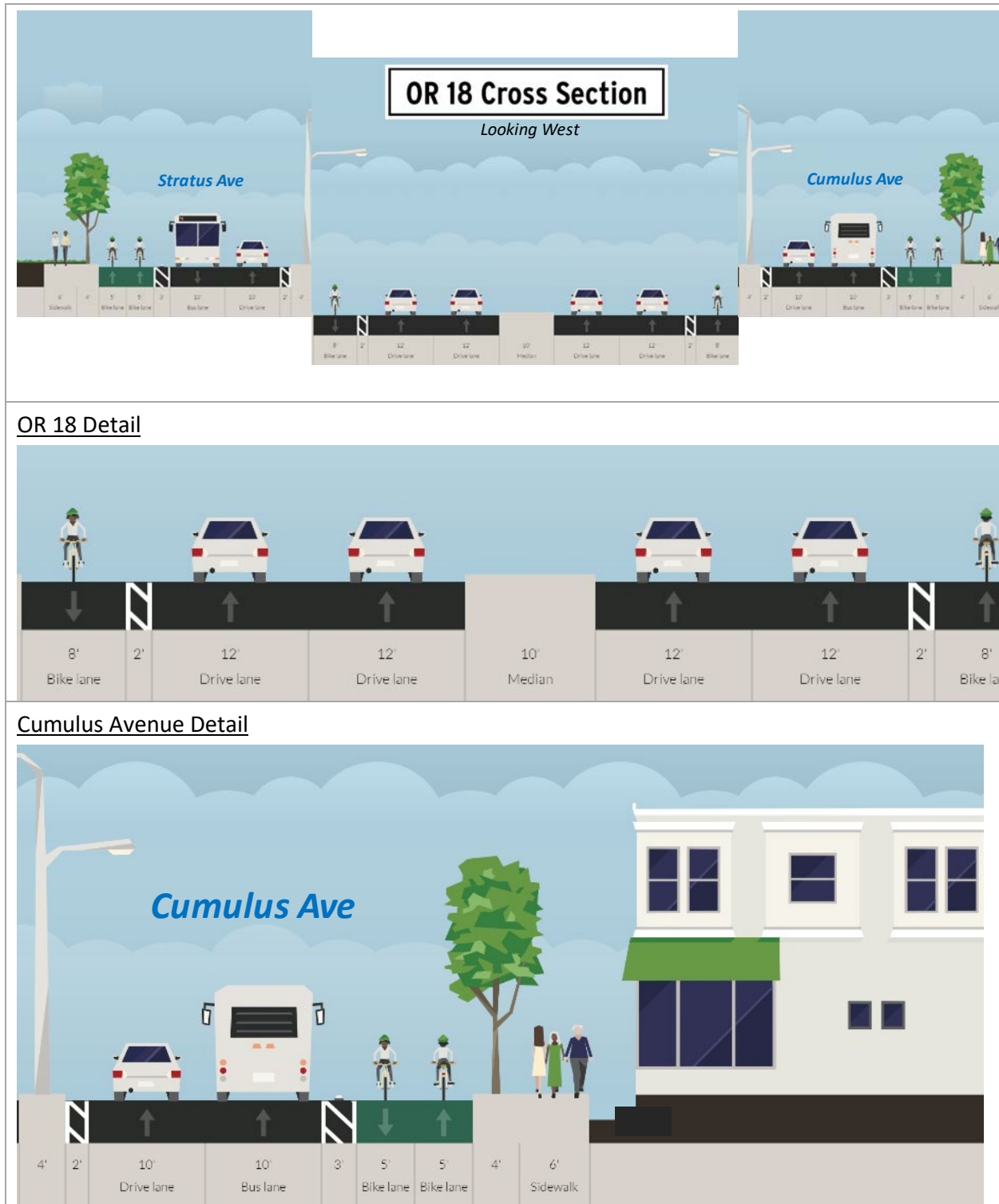


The profile view of OR 18 and Cumulus and Stratus Avenues is illustrated in Figure 7. As shown, the grade of mainline OR 18 is lowered, and both Cumulus and Stratus Avenues are widened to fit new, two-way cycle tracks, and buffered planting strips and wider sidewalks.

McMinnville gateway design treatments can be integrated into each of the major interchanges, overcrossings, and roundabout.

Plan views of more detailed design concepts for individual interchanges and junctions included as part of Option 1 are found in Appendix B.

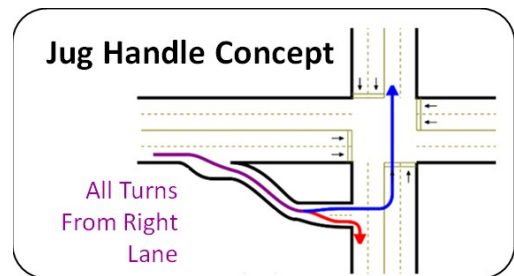
Figure 7. OR 18 Interchange Facility Design Option 1 – Profile View



Interim Capacity Enhancements

As noted in the Existing Transportation Operations and Safety Analysis Memorandum, the OR 18 signalized intersections at Norton Lane and Cumulus Avenue currently have an underutilized capacity for vehicular traffic. A combination of minor intersection improvements and the development of a frontage street network along OR 18 may also provide additional capacity. These capacity improvements may help achieve OR 18 mobility targets and provide local land use access within the 20-year planning horizon.

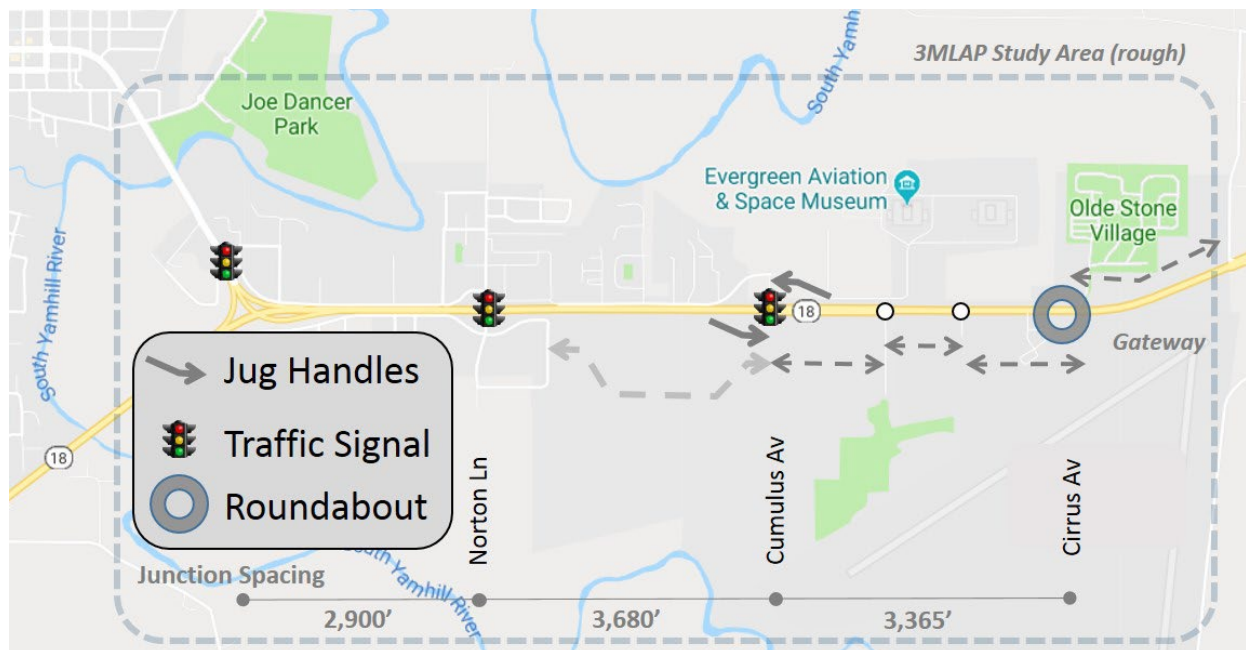
As shown in Figure 8, interim capacity enhancements may include the construction of “Jug Handle” right turn lanes on OR 18 at Cumulus Avenue (westbound and eastbound) and a roundabout at Cirrus Avenue. The Jug Handle turn lanes shift all turns from OR 18 to Cumulus Avenue, which may increase capacity and reduce delay for OR 18 through-movements at the Cumulus Avenue traffic signal.



The Jug Handle concept removes all turn movements from the major highway and shifts them to the cross-street via a right-turn lane.

The combination of these interim capacity enhancements may provide sufficient capacity to meet the Oregon Highway Plan mobility targets for OR 18 within the next 10-20 years.

Figure 8. Interim Intersection and Frontage Street Capacity Enhancements – Sketch Map



Concept Design Features for Further Consideration

Design features or issues related to Facility Option 1 that may require further consideration following the study include the following:

- Subsurface Water Table - Evaluation of subsurface water table and substrata to determine the suitability of lowering the mainline grade of OR 18, thus minimizing the height of new

structures within the study area. These measures help minimize the grade of future pedestrian and bicycle crossings of OR 18, reduce the visual impact of future structures, and reduce the height of new structure and street lights within the McMinnville Airport impact area.

- OR 18 Bicycle Facility Design – The shoulder lanes on OR 18 will require attentive design for future bicycle travel along OR 18, particularly through the on and off-ramp transition zones.
- Local Street Bus Stops - Potential additional right-of-way and design features to accommodate future bus stops along Cumulus Avenue (eastbound) and Stratus Avenue (westbound).
- Cycle Track Transition to New Yamhill River Bridge –The transition from two-way cycle tracks (Cumulus and Stratus Avenues) to the proposed bicycle and pedestrian facility design on the new Yamhill River Bridge requires further design considerations.
- Single-point Urban Interchange – Consideration of a more compact interchange form rather than tight-diamond (as depicted at Cumulus Avenue) to potentially reduce right-of-way impact.
- Roundabout Design – See Facility Option 2 below.

Facility Option 2 – Roundabouts

Option 2 generally assumes that a series of roundabouts on OR 18 is the intended primary junction design to balance local area access, circulation and regional highway through-movement mobility.

As shown in Figure 9, Facility Design Option 2 includes three new, dual-lane roundabouts along OR 18 within the study area: two replacing the current traffic signals at Norton Lane and Cumulus Avenue, and one at Cirrus Avenue (McMinnville Airport access). The general purpose of roundabout concept designs as part of Option 2 is to facilitate relatively continuous movement of OR 18 through-traffic, while providing local land use access to, and across, OR 18.

Each roundabout is presumed to include two-lane approaches on OR 18 (eastbound and westbound), two-lane approaches on Norton Lanes, and single-lane approaches on Cumulus and Cirrus Avenues. Spacing between the roundabouts is well over one-half mile. The OR 18 target design speed is assumed to vary under Option 2, from 55 mph at the study area's eastern entrance, to 30-45 mph within the study area.

Combined pedestrian and bicycle pathways are assumed around each roundabout, with designated crossings of OR 18 and the local street connectors. Median islands are assumed at each pedestrian-bicycle crossing as a refuge and safety feature.

Option 2 also assumes that the replacement of the existing OR 18/Three Mile Lane interchange with a dual-lane roundabout may not meet future OR 18 mobility standards. Option 2 assumes the same improvements to the OR 18/Three Mile Lane interchange as Option 1, including local street, pedestrian and bicycle connector enhancements along Cumulus and Stratus Avenues.

Figure 9. OR 18 Roundabout Facility Design Option – Sketch Map

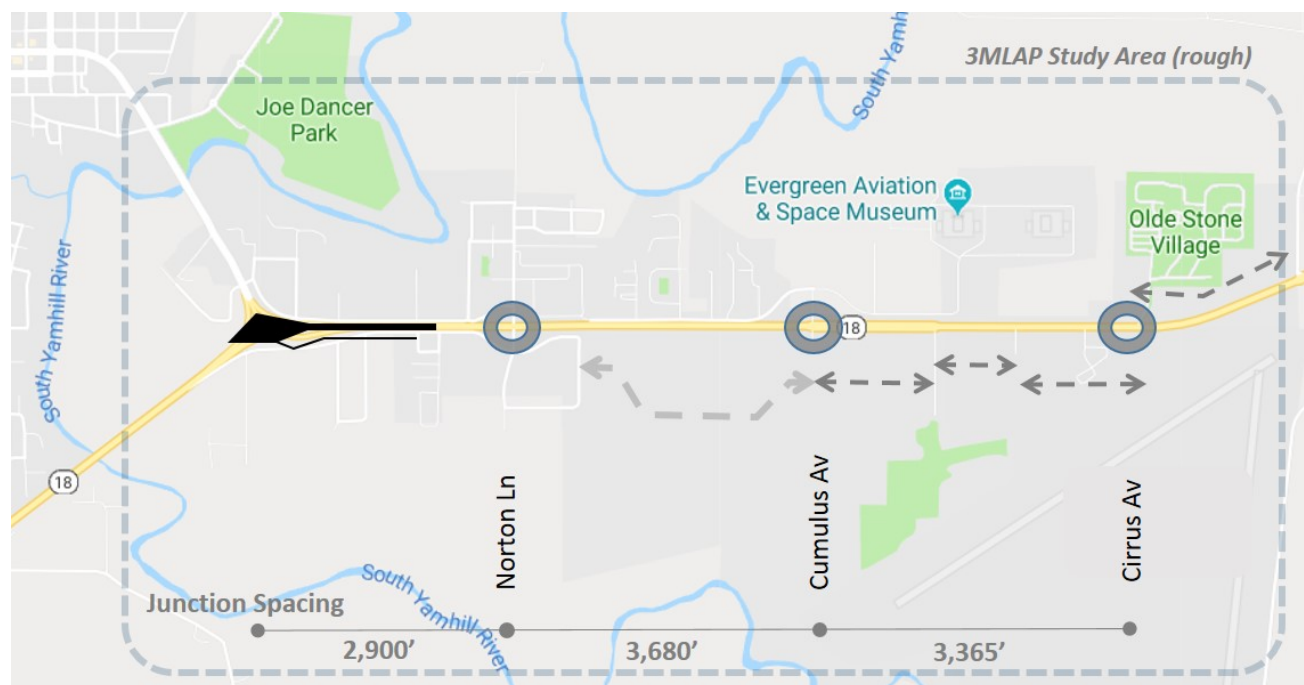


Figure 10 illustrates the plan view of the OR 18 roundabout facility design option. The existing Cumulus and Stratus Avenue intersections on Norton Lane are extremely close to OR 18, making it very difficult to fit a dual-lane roundabout on OR 18. It is more likely that both Cumulus Avenue and Stratus Avenue will require realignment further away from OR 18 under Option 2, as shown in Figure 6. A northern realignment of Cumulus Avenue to Norton Lane at Tanger Court will impact a number of residential and commercial properties.

In general, the existing OR 18 cross-section is retained between the roundabouts under Option 2.

Local street, pedestrian and bicycle connectivity within the study area across OR 18 is confined to the three roundabouts and Three Mile Lane interchange. McMinnville gateway design treatments can be integrated into the interchange and each of the three roundabouts, especially the eastern roundabout at Cirrus Avenue.

Plan views of more detailed design concepts for individual interchanges and junctions under Option 2 are included in Appendix B.

Figure 10. OR 18 Roundabout Facility Design Option – Plan View

West SectionEast Section**Concept Design Features for Further Consideration**

Design features or issues related to Facility Option 2 that may require further consideration following the study include the following:

- Inscribed Circle Diameter – The inscribed circle diameter of the concept roundabouts are conservatively assumed to be 250 feet, exceeding the Oregon Highway Design Manual guidance (200 feet minimum). The roundabout concepts also assume an 18-foot wide inside shoulder to assist truck maneuverability.

- OR 18 Design Speed and Design Vehicle – The targeted design speed of OR 18 will affect optimized roundabout operations and safety design. The target design speed may vary by OR 18 segment, from 55 mph at the study area’s eastern entrance, to potentially 30-45 mph within the study area. The target design vehicle for each roundabout concept design is WB-67.
- Roundabout Design Features – Other specific roundabout design features that require further examination (beyond this study) include approach lane deflection, roundabout radii, truck vehicle paths, pedestrian-bicycle pathways, splitter islands and many others.
- Pedestrian and Bicycle – Design features that best accommodate anticipated north-south pedestrian and bicycle crossings of OR 18 through the proposed roundabouts.

EVALUATION OF FACILITY DESIGN OPTIONS

The evaluation criteria used to test the two facility design options are derived from the project’s goal and objectives, as defined through the study’s public process.¹² Table 2 summarizes the evaluation criteria and ratings for each of the facility design options.

Table 2: Facility Design Option Evaluation Criteria and Ratings

Evaluation Criteria	Highway 18 Facility Design Options:	
	1 - Interchanges	2 - Roundabouts
Facility Design Features Help:		
Foster Economic Development*		
Ease of Access** to Existing and Planned Land Use	Interchange at Cumulus Avenue and Norton Lane overcrossing reduces direct accessibility to Willamette Valley Medical Center and other Norton Lane destinations.	Multiple, dual-lane roundabouts provide more direct access to existing and planned land uses both north and south of Highway 18.
Land Uses are Visible from Three-Mile Lane	Land uses are less visible from Three Mile Lane (Highway 18), when highway is lowered to fit interchange and overcrossings.	Land uses are more visible when highway is at-grade
Sustain Highway 18 as a Key Intercity Freight Route		
Desired Travel Speed on Highway 18	Limited access highway with single roundabout at Cirrus Avenue and interchange at Cumulus Avenue facilitates desired travel speed along Highway 18.	Multiple, dual-lane roundabouts (modestly) impede desired speed along Highway 18.
Highway 18 Truck Maneuverability	Limited access highway with single roundabout at Cirrus Avenue and interchange at Cumulus Avenue facilitates intercity truck maneuverability.	Multiple, dual-lane roundabouts impede intercity truck maneuverability.
* Within the Three-Mile Lane Study Area ** Auto, Truck, Pedestrian, Bicycle and Transit		
Enhance Multimodal Connectivity		
Within the Three-Mile Lane Study Area	Overcrossing at Norton Lane, interchange at Cumulus Avenue, roundabout at Cirrus Avenue and potential ped-bike overcrossings provide good vehicle (including transit), pedestrian and bicycle connectivity across Highway 18.	Evenly-spaced roundabouts provide good vehicle (including transit), pedestrian and bicycle connectivity across Highway 18. Dual-lane roundabouts may intimidate north-south pedestrian and bicycle connectivity, especially as Highway 18 traffic increases in the future.
Between Study Area and City Center	Replacement Three Mile Lane interchange with new Stratus Avenue connection, and new two-way cycle tracks and sidewalks along Cumulus and Stratus Avenues, significantly improve connectivity between the study area and city center.	Replacement Three Mile Lane interchange with new Stratus Avenue connection, and new two-way cycle tracks and sidewalks along Cumulus and Stratus Avenues significantly improve connectivity between the study area and city center.
Minimize Rights-of-Way And Cost Requirements***		
Rights-of-Way	ROW requirement for diamond interchange at Cumulus Avenue is greater than roundabout (Option 2).	ROW requirement for dual-lane roundabout at Cumulus Avenue expected to be less than tight diamond interchange (Option 1). Roundabout at Norton Lane will require additional ROW and impact several homes and possible businesses to re-align Cumulus and Stratus Avenues.
Cost (conceptual)	Costs are significant: new interchange at Cumulus Avenue, lowering Highway 18, and overcrossings at Norton lane and possible pedestrian-bicycle crossings.	Cost of roundabout at Cumulus Avenue is modest. Cost to re-align Cumulus and Stratus Avenues at Norton Lane is significant.

*** As differentiated between Options 1 and 2

Option 1 (Interchanges) is the most likely of the two options to positively impact and achieve desired travel speeds along OR 18 in the future, while minimizing adverse impacts on truck maneuverability. Option 2 roundabout junction designs will likely help maintain OR 18 through-movement traffic flow, but at a less than desirable or ideal speed than Option 1. Roundabouts are also likely to negatively impact truck maneuverability in the study area along OR 18.

Both facility design options are anticipated to help reduce serious crashes at key junctions within the study corridor.

¹² See Memorandum #4.

DISCUSSION AND NEXT STEPS

All of the alternatives presented in this memorandum will help the City of McMinnville meet the goals established for the Three Mile Lane area to some extent – the main differences are those of emphasis and degree. The information and analysis describe how the three distinct land use concepts and the two facility design options further the City’s goals. As described, the land use options meet most project objectives to some degree; Table 1 in this report uses select evaluation criteria to show how the alternatives match up, as compared to each other. The Facility Design options for OR 18 also largely meet project objectives, as demonstrated in Table 2, and can support the ultimate preferred land use option.

The next step of the project is to identify elements of the land use concepts and supporting transportation options that best meet the community’s goals and expectations in order to develop a Preferred Land Use Option and Facility Design Alternative. Project participants and stakeholders are asked to consider the following when envisioning an optimal future, or “preferred alternative,” for the Three Mile Lane area:

- Projects goals and objectives that are the most important and how they can best be reflected in existing and future land uses and transportation design.
- The overall character of the Three Mile Lane area and how it will be impacted by the use of the large vacant properties.
- The kinds of design guidance that will be important to create a high-quality environment given the wide range of uses existing and planned for the area.

As the process moves from the high-level concepts explored here to creating a preferred alternative and outlining its implementation, the project team will address the following:

- Consistent with project objectives, the preferred land use option will incorporate multi-modal design and allow for safe, efficient ways of traveling through and within the area. The high-level land use concepts described in this memorandum can all accommodate enhanced multi-modal connections if they are appropriately designed.
- Creating a walkable “town center” retail development with good multi-modal connections to other parts of the Three Mile Lane area.
- Creating a grid of walkable streets to integrate new development south of Three Mile Lane.
- Improving frontage roads for safer walking and biking.
- Orienting new residential areas toward existing and new trails and pathways to encourage walking and biking.
- Using design standards to prohibit long blank walls and reduce setbacks in pedestrian oriented areas.

Appendix A – Detailed Evaluation Tables

	Concept 1 - Industrial Campus		Concept 2 - Corporate Campus		Concept 3 - South Yamhill Neighborhood	
	Score	Notes	Score	Notes	Score	Notes
Goal 1: Support and enhance the district's economic vitality and marketability						
<i>This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism. Alternatives will be evaluated qualitatively for how well they address the area's development/redevelopment potential.</i>						
Amount of Commercial Land	0	Moderate amount of commercial land compared to other options	+	Largest amount of commercial land of all options	0	Moderate amount of commercial land compared to other options
Amount of Industrial Land	+	Largest amount of industrial land of all options	-	Least amount of industrial land of all options	+	Significant amount of light industrial land
Estimated number of new employment uses.	0	Somewhat limited mix of employment types relative to the other options	+	Wide diversity of employment zone types	+	Wide diversity of employment types in a finer grained mix of zones
Estimated number of new jobs, economic development and business opportunities.	0	Midpoint of the three alternatives	+	Corporate campus arguably will produce the greatest job density of the three concepts	-	Residential component reduces employment capacity
Opportunity for additional goods and services for employees in the study area.	+	Mixed use area in NW, new retail center may provide goods and services.	+	Retail center, Evergreen Site provide goods and services	+	Evergreen site, commercial in NW, and smaller retail center provide goods and services
Improved multimodal access of property	+	Proposed new criterion (not in Memo 4). More trails and assume most streets will be MM.	+	More trails and assume most streets will be MM.	+	More trails and assume most streets will be MM.
Improved airport access for business and tourism.	+	No difference	+	No difference	+	No difference
Economic feasibility of potential development scenarios for large contiguous vacant sites.		Reference to case study report.				
Support for physical expansion and increased capacity of airport.	+	Industrial user takes advantage of airport	+	Potential airport concerns about more residential in NE. Corporate campus takes advantage of airport	0	Airport concerns re: residential nearby
Preserves the functional integrity of Highway 18 for freight movement.	0	See facility option comparison - no difference between land uses.	0	See facility option comparison - no difference between land uses.	0	See facility option comparison - no difference between land uses.
Opportunity for enhanced or new tourism opportunities within the area. Includes multi-modal access and visibility.	0	Preserves aviation complex. No significant increase of tourism capacity elsewhere	+	Significant commercial opportunities throughout district	0	Smallest amount of land for commercial of the three, but preserves aviation complex for continued tourism growth

GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.					
<i>The study area contains several existing residential neighborhoods, including assisted-living and manufactured home residences, as well as major employers and tourism destinations. This plan aims to provide a mix of land uses that support one another to create a unique part of the city.</i>					
Furtherers McMinnville Great Neighborhood principles.	0	This scenario will introduce a greater mix of activities, some additional housing, while protecting Least number of new residential units	+	this scenario introduces a new park, new housing that may be multifamily near the medical center, and the	+
Estimated number of new residential units accommodated in study area.	0		0	Mid-point of the three alternatives	0
Residential housing mix.	+	Some Multifamily in NE, mixed use on Cal Portland, modest infill with some multifamily elsewhere.	+	Multifamily near medical center. Modest infill in NW. Cal portland site is partially multifamily. NE edge is multifamily.	+
Number of existing and proposed residential units with multi-modal access to parks/natural areas and goods/services.	0		0		+
Provides transit-supportive land uses.	+	All options provide some basic transit-supportive land uses (job centers and higher density residential developments). Concept 1, with a larger piece of industrial land, may be less transit-supportive	+	All options provide transit-supportive land uses (job centers and higher density residential developments)	+
Access to amenities	+	Improves access to amenities through mixed use in NW and retail center.	+	Improves access to amenities through evergreen retail and retail center.	+
Visual and physical access to natural resources	0	Greater amount of units close to Joe Dancer, fewer close to south fork and airport park	0	Lesser amount of residential (especially multifamily) in proximity to Joe Dancer via existing or proposed bridge. Greater number of MF units in proximity to south fork and airport park.	+

GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville						
<p>The study area is a primary gateway to the City of McMinnville. Alternatives will be evaluated qualitatively for how well they provide an identity for the district, reflect McMinnville's intrinsic character and highlight the landscape features of the district.</p>						
Gateway Features	+	One gateway feature located in interchange area, where it is likely to be auto-oriented in nature. Two others have the potential to be oriented toward other modes.	0	Two gateway features are located within interchange areas, which are more likely to be auto-oriented in nature. One other has the potential to be oriented toward other modes, but it is located at the edge of the study area away from much of the likely pedestrian/bicycle activity.	+	All gateway features are located outside of interchange areas, making them more likely to have human-scale design and orientation.
Building Design	0	All concepts have the potential for design requirements to be implemented through an overlay zone, however industrial structures tend to have lower values and special industrial needs that can conflict with these requirements.	+	Due to a lesser amount of industrial land in this concept, it may be able to better implement specific building design requirements.	+	Similar to Concept 1, industrial areas may be less able to incorporate some design requirements; however the new residential neighborhood may make these requirements even more important and be able to improve the aesthetics of the area generally through good neighborhood design.
Landscaping and Street Trees	0	Similar to the above topic, industrial land is less likely to provide high-quality street trees and other landscaping elements than other use types.	+	The corporate campus, retail center, and other uses are very compatible with high-quality landscaping.	+	New residential areas are envisioned to have a high quality network of street trees and other landscaping. The light industrial area may also be required to provide quality landscaping.

Appendix B - Plan Views of Detailed OR 18 Junctions – Options 1 and 2

Option 1 Plan View – Three Mile Lane Junction



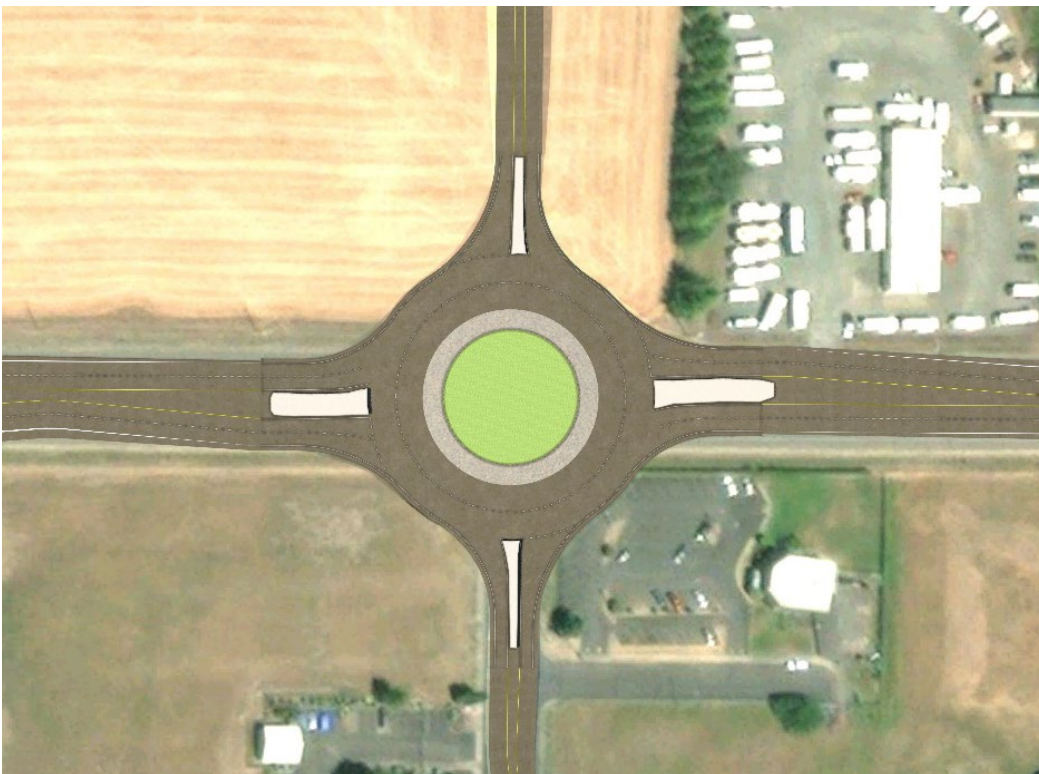
Option 1 Plan View – Norton Lane Crossing



Option 1 Plan View – Cumulus Avenue Junction



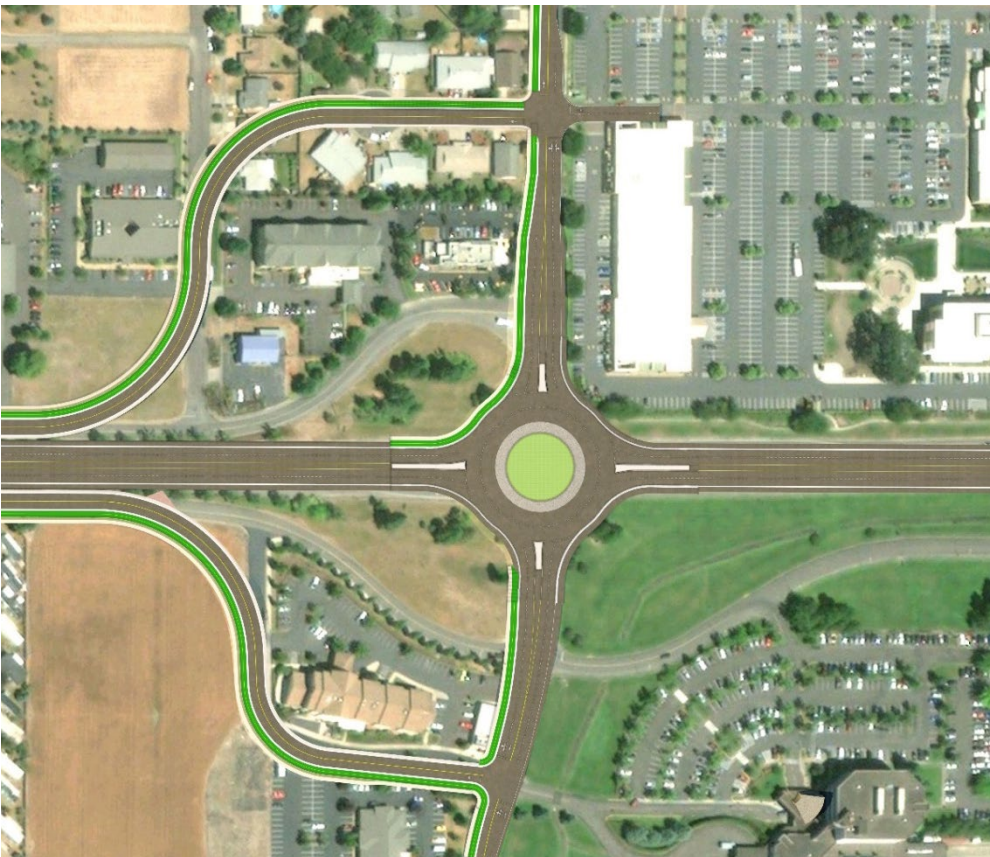
Option 1 Plan View – Cirrus Avenue Junction



Option 2 Plan View – Three Mile Lane Junction



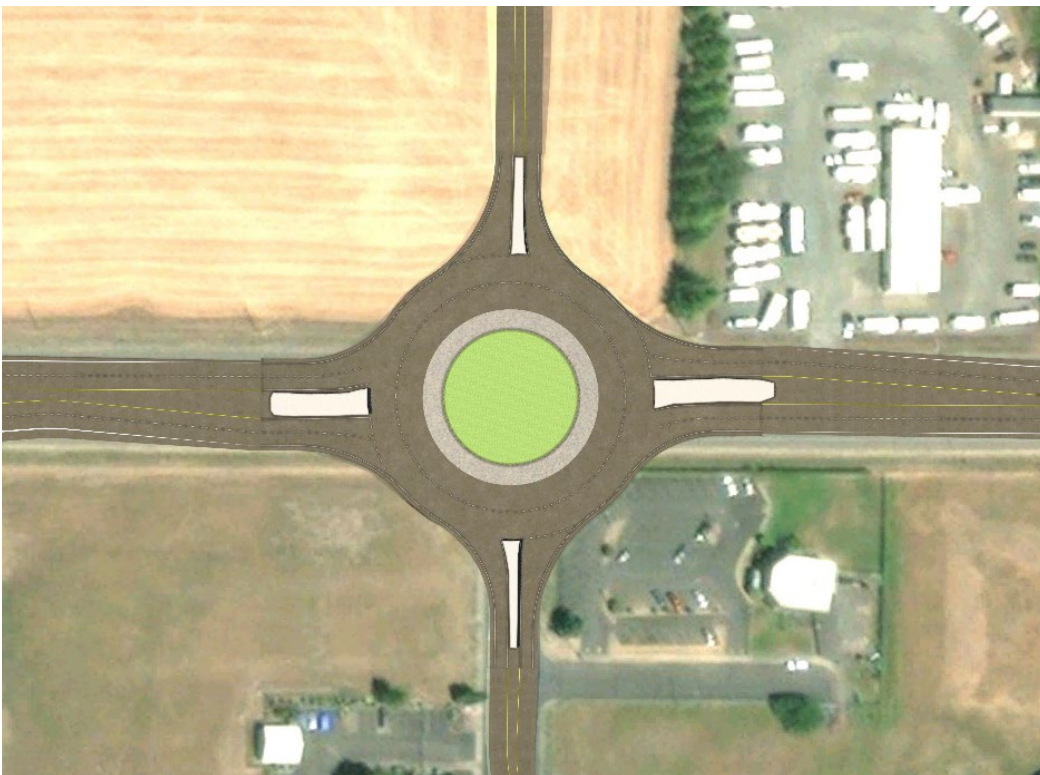
Option 2 Plan View – Norton Lane Junction



Option 2 Plan View – Cumulus Avenue Junction



Option 2 Plan View – Cirrus Avenue Junction



APPENDIX C: SUPPLEMENTAL EVALUATION - TRIP GENERATION ASSESSMENT

The original scope of work for this study anticipated applying future travel demand model estimates for each of the land use options (three) and two facility design options. Model data and estimates were not available at the time of the study. In lieu of applied travel model estimates, a supplemental trip generation analysis was completed. The trip generation assessment identifies the level and location of new trip generators within the study area, comparing and contrasting the three land use options. The assessment is predicated on the following assumptions:

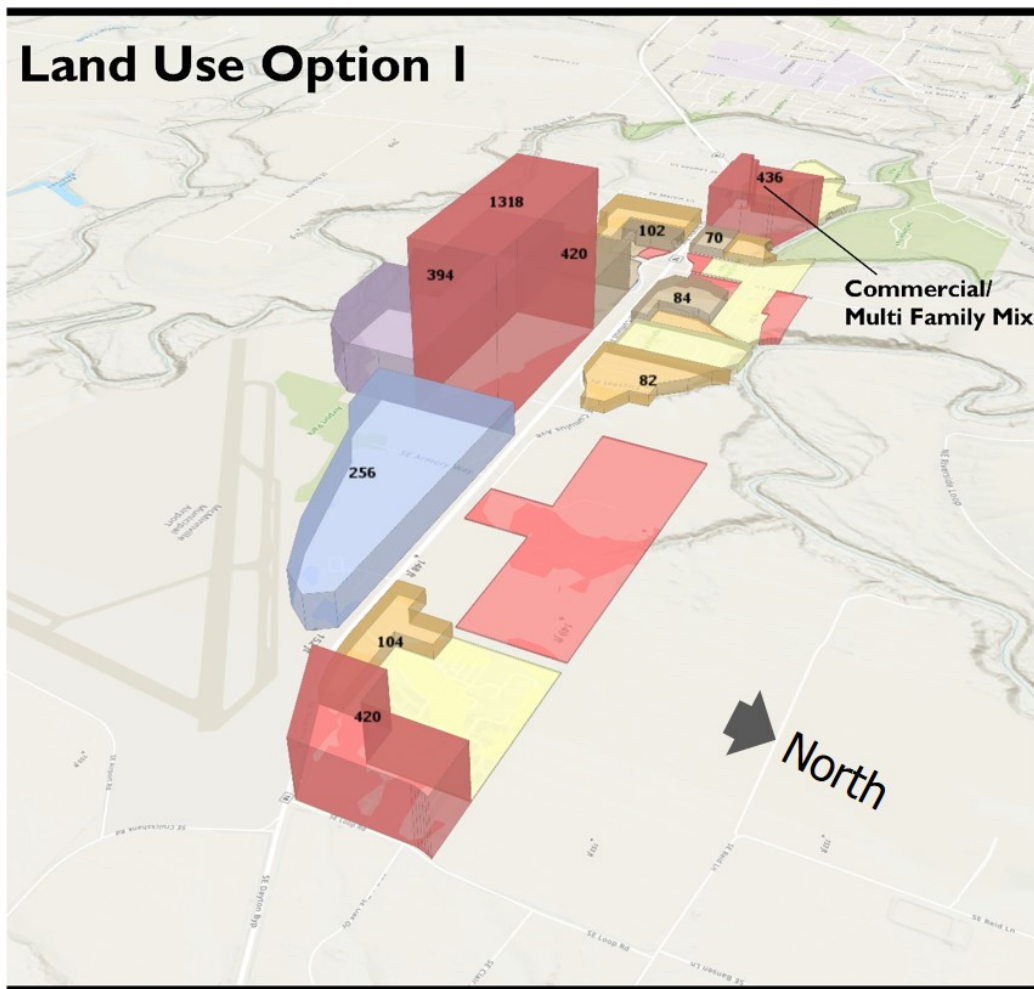
- Estimates of developable land by general type, assuming limited redevelopment
- Building density based on a range of floor area ratios by land use category
- Vehicle trip generation rates by land use type, as noted in the Institute of Transportation Engineers, Trip Generation (10th Edition), including pass-by trip rate reductions for commercial lands

Land Use Option 1

Figure 7 maps the net new vehicle trips generated in the study area under Land Use Option 1, by land use type.

The greatest number of new vehicle trips in Option 1 are generated by planned commercial and multi-story medical office developments on the south side of OR 18, between the Willamette Valley Medical Center and Cumulus Avenue. New commercial lands at the eastern end of the study area and along Cumulus Avenue (Baker Rock site) will also generate significant vehicle trips. Industrial land at the southern edge of the study area is not expected to generate significant vehicle traffic.

Figure 1: Net New Vehicle Trips – Land Use Option 1



Legend

Land Use

- Airport Commercial/Industrial
- Commercial
- Industrial
- Medical
- Single Family Residential
- Multi Family Residential

Net New PM Peak Hour Vehicle Trips

- 260
- 2,030
- 390
- 680
- 50
- 590

TOTAL

4,000

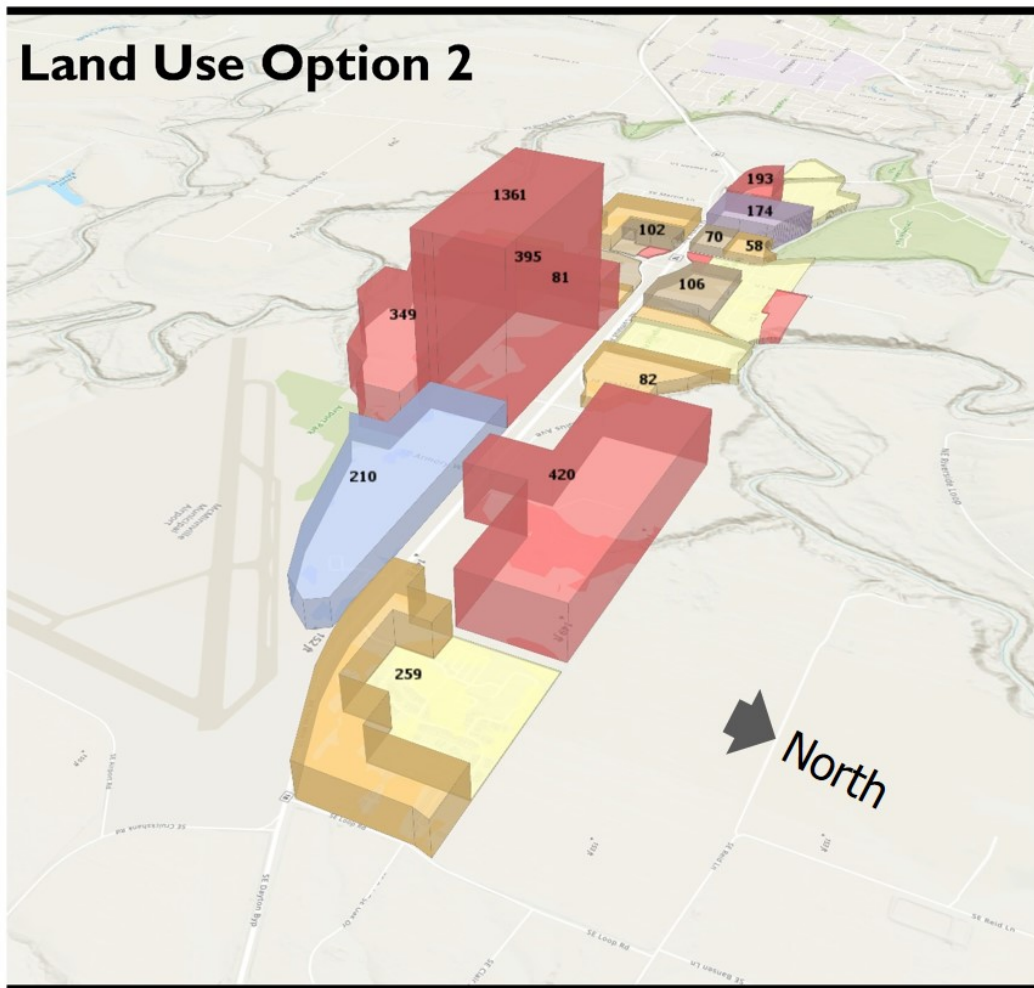
* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

Land Use Option 2

Figure 8 maps the net new vehicle trips generated in the study area under Land Use Option 2, by land use type.

The total new vehicle trip generation is slightly larger in Option 2 than it is in Option 1, though more of the traffic is generated by commercial lands, located near (north and south of OR 18) and focused on Cumulus Avenue. Residential land at the eastern end of the study area will also generate new vehicle trips.

Figure 2: Net New Vehicle Trips – Land Use Option 2



Legend

Land Use

- Airport Commercial/Industrial
- Commercial
- Industrial
- Medical
- Single Family Residential
- Multi Family Residential

Net New PM Peak Hour Vehicle Trips

- 210
- 2,720
- 170
- 360
- 60
- 780
- TOTAL**
- 4,300**

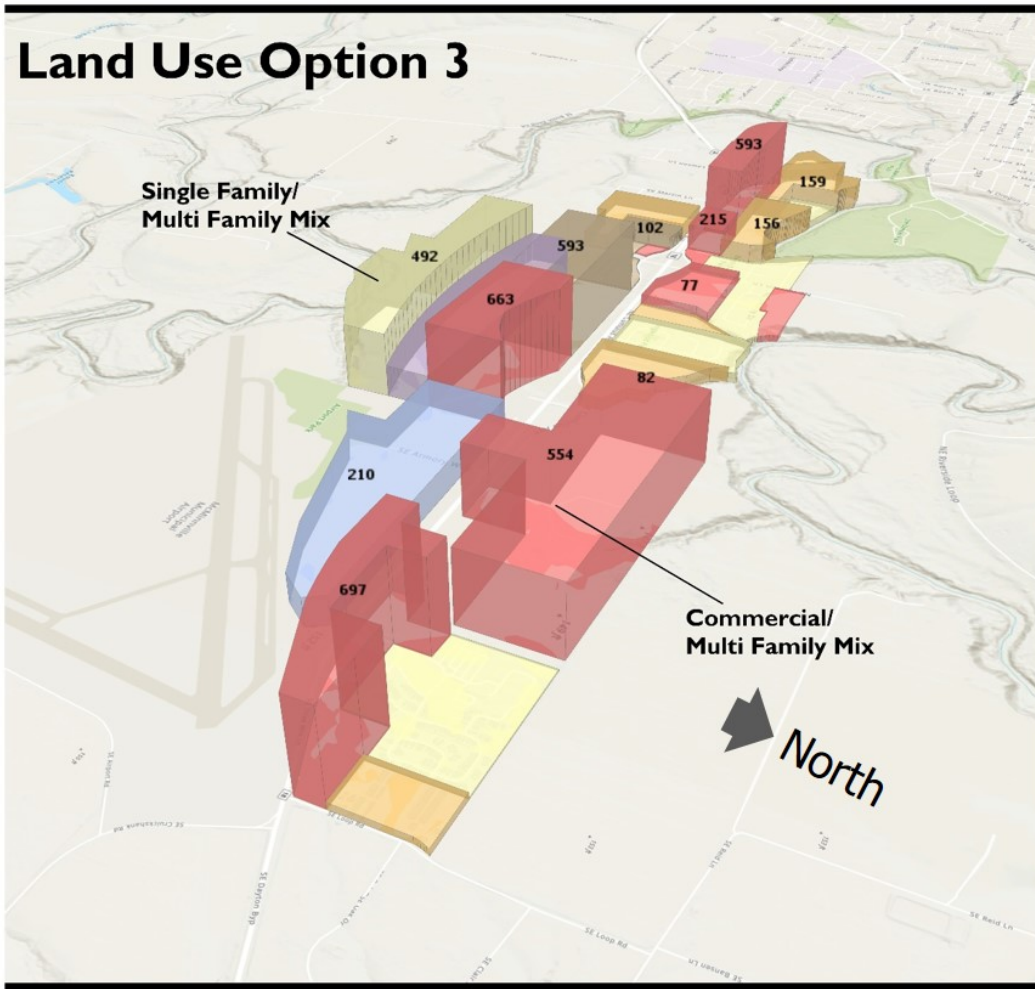
* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

Land Use Option 3

Figure 9 maps the net new vehicle trips generated in the study area under Land Use Option 3, by land use type.

Option 3 focuses more on retail-related lands within the Evergreen Aviation site, and eastern end of the study area (north of OR 18) and along Cumulus Avenue west of Norton Lane. New trip generation by medical office use near Willamette Valley Medical Center is the largest under Option 3. Residential lands at the southern edge of the study near the airport will also generate a sizeable number of new vehicle trips. Option 3 presents a higher total new vehicle trip generation than Options 1 or 2.

Figure 3: Net New Vehicle Trips – Land Use Option 3



Legend

Land Use	Net New PM Peak Hour Vehicle Trips
Airport Commercial/Industrial	210
Commercial	2,720
Industrial	240
Medical	700
Single Family Residential	230
Multi Family Residential	930
TOTAL	5,030

* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

Virtual Community Meeting

3310 SE Three Mile Lane
McMinnville, OR

November 17, 2020 – 6:00PM

Presented by: KIMCO McMinnville L.P. (an affiliate of Kimco Realty Corporation)



MEETING FORMAT

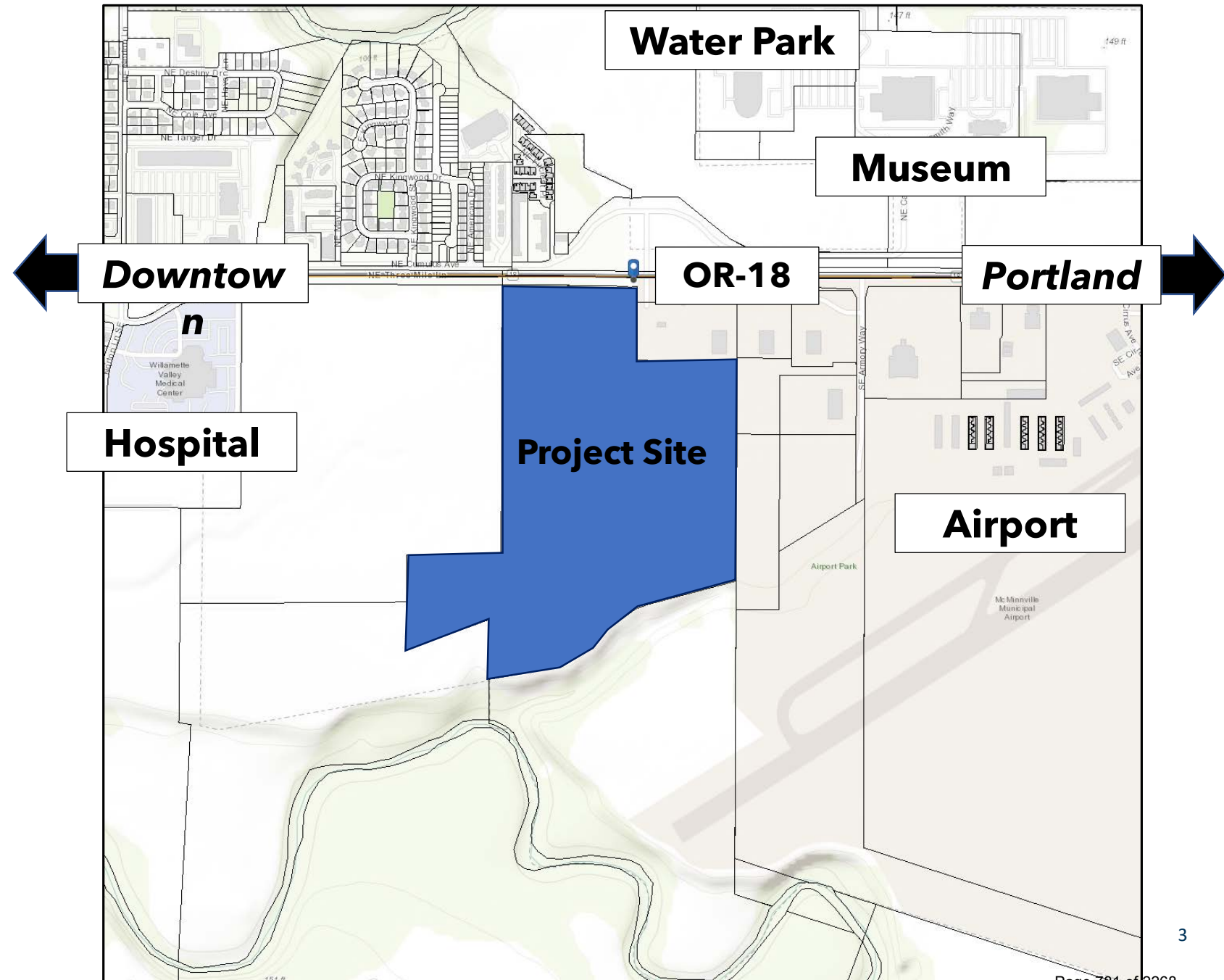
- 6:00 PM – 6:05 PM Introductions
- 6:05 PM – 6:20 PM Description of the Project by the Partnership
- 6:20 PM – END Questions

PROJECT LOCATION

3310 SE Three Mile Lane
McMinnville, OR 97128

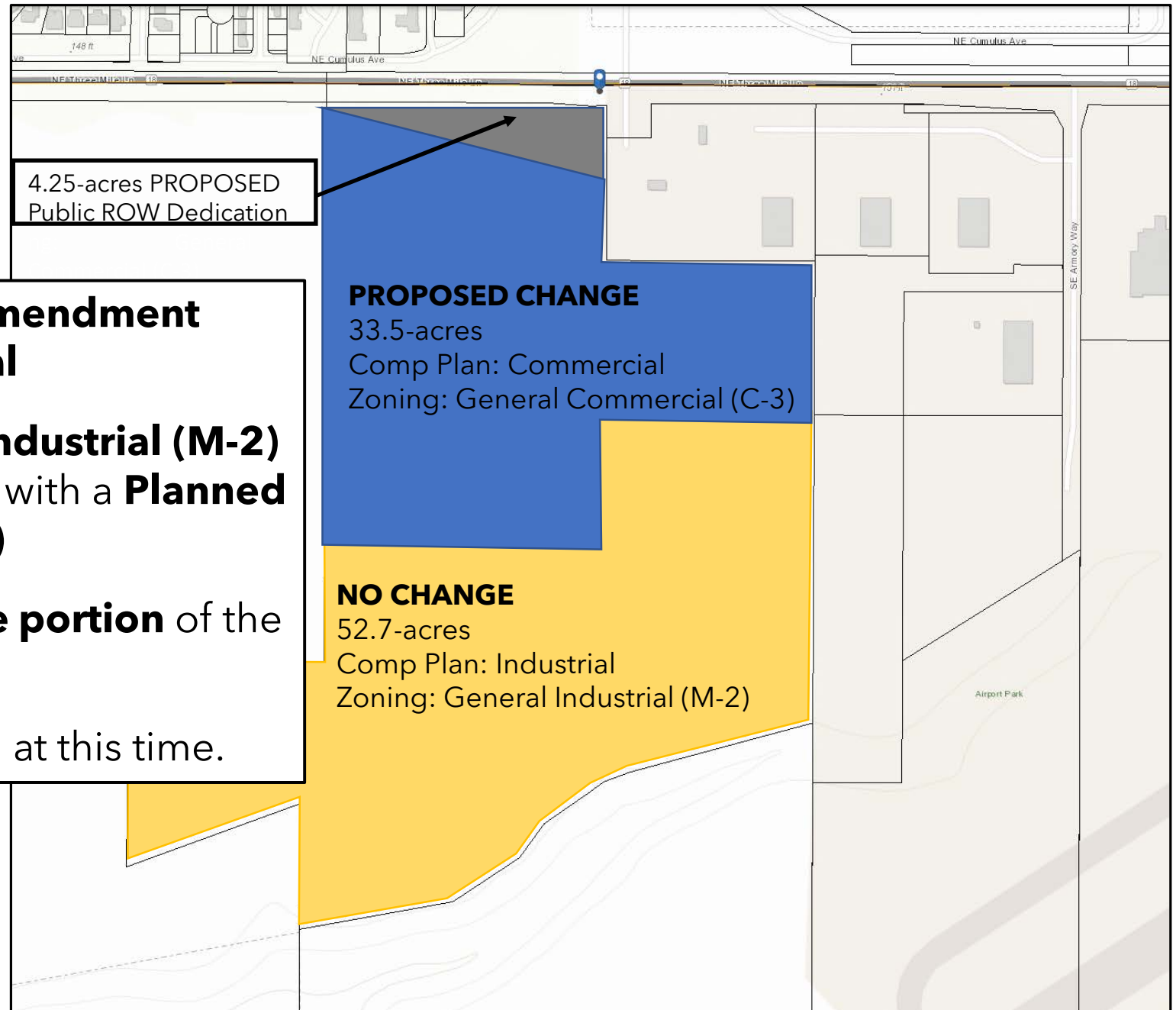
Tax Lot ID: R4426 00700

Lot size: 90.45 acres



PROJECT PROPOSAL

- **Comprehensive Plan Map Amendment** from **Industrial** to **Commercial**
- **Zone Change** from **General Industrial (M-2)** to **General Commercial (C-3)** with a **Planned Development Overlay (PDO)**
- Applies to **northern 33.5-acre portion** of the site along State Highway 18
- **No development** is proposed at this time.



PROJECT DETAILS

- Process and approvals required
- Community benefits
- Traffic impacts and improvements
- Future approvals required before development

CONCLUSION

- Q&A
- Contact **Sam Knutson** with any questions offline by e-mail at sknutson@kimcorealty.com or by phone at **(650) 757-2022**

Attachment 8

NOTICE OF NEIGHBORHOOD MEETING

ADDRESS: 3310 NE Three Mile Lane, McMinnville, OR 97128 (Tax Lot ID: 172164)

PROPOSAL:

- Comprehensive Plan Map Amendment from Industrial to Commercial;
- Zone Change from General Industrial (M-2) to General Commercial (C-3);
- Applies to northern 33.5-acre portion of the site along State Highway 18; and
- No development is proposed at this time.

APPLICANT CONTACT:

- Name: Kimco McMinnville, LLC (Sam Knutson)
- Email: sknutson@kimcorealty.com
- Phone: (650) 757-2022

VIRTUAL MEETING INFORMATION

DATE AND TIME: November 19, 2020 at 6:00PM

BY PHONE: (669) 900-6833 (Meeting ID# 923 4575 3326 and Password# 284715)

BY VIDEO CONFERENCE:

<https://kimcorealty.zoom.us/j/92345753326?pwd=cmhMTEFHM2NRWXNkUVlwV1JEMzJ2Zz09>

**Please contact Sam Knutson by e-mail or phone beforehand to receive the above weblink by e-mail.*

Attachment 8

NOTICE OF NEIGHBORHOOD MEETING

DATE AND TIME: November 19, 2020 at 6:00 PM

LOCATION: Due to the ongoing COVID-19 pandemic, this Neighborhood Meeting will be held virtually with options to join online and by phone. **Please contact Sam Knutson (info below) to receive a direct link by e-mail.**

- Join Zoom Meeting by Video Conference at:
<https://kimcorealty.zoom.us/j/92345753326?pwd=cmhMTEFHM2NRWXNkUVlwV1JEMzJ2Zz09>
- Telephone option: **(669) 900-6833** Meeting ID: **923 4575 3326** Passcode: **284715**

PROPOSAL: Comprehensive Plan Map Amendment (from Industrial to Commercial) and Zone Change (from General Industrial (M-2) to General Commercial (C-3)) for the northern 33.5-acre portion of the site. No development is proposed at this time.

- Property Address: 3310 NE Three Mile Lane, McMinnville, Oregon 97128
- Tax Lot ID Number: 172164
- Applicant: Kimco McMinnville, LLC
- Land Use Process: The proposal requires approval of a Comprehensive Plan Map Amendment and Zone Change under McMinnville Code Section 17.74.020

MEETING PURPOSE: We invite neighbors to attend this Neighborhood Meeting to begin a conversation about the proposal described above.

At a minimum the Neighborhood Meeting will provide the following:

- Opportunity for attendees to view the proposed map amendments
- Description of major elements of proposal
- Opportunity for attendees to speak and ask questions at the meeting. This is a time for attendees to identify any issues that they believe should be addressed.

TENTATIVE MEETING SCHEDULE:

Our tentative meeting schedule is as follows:

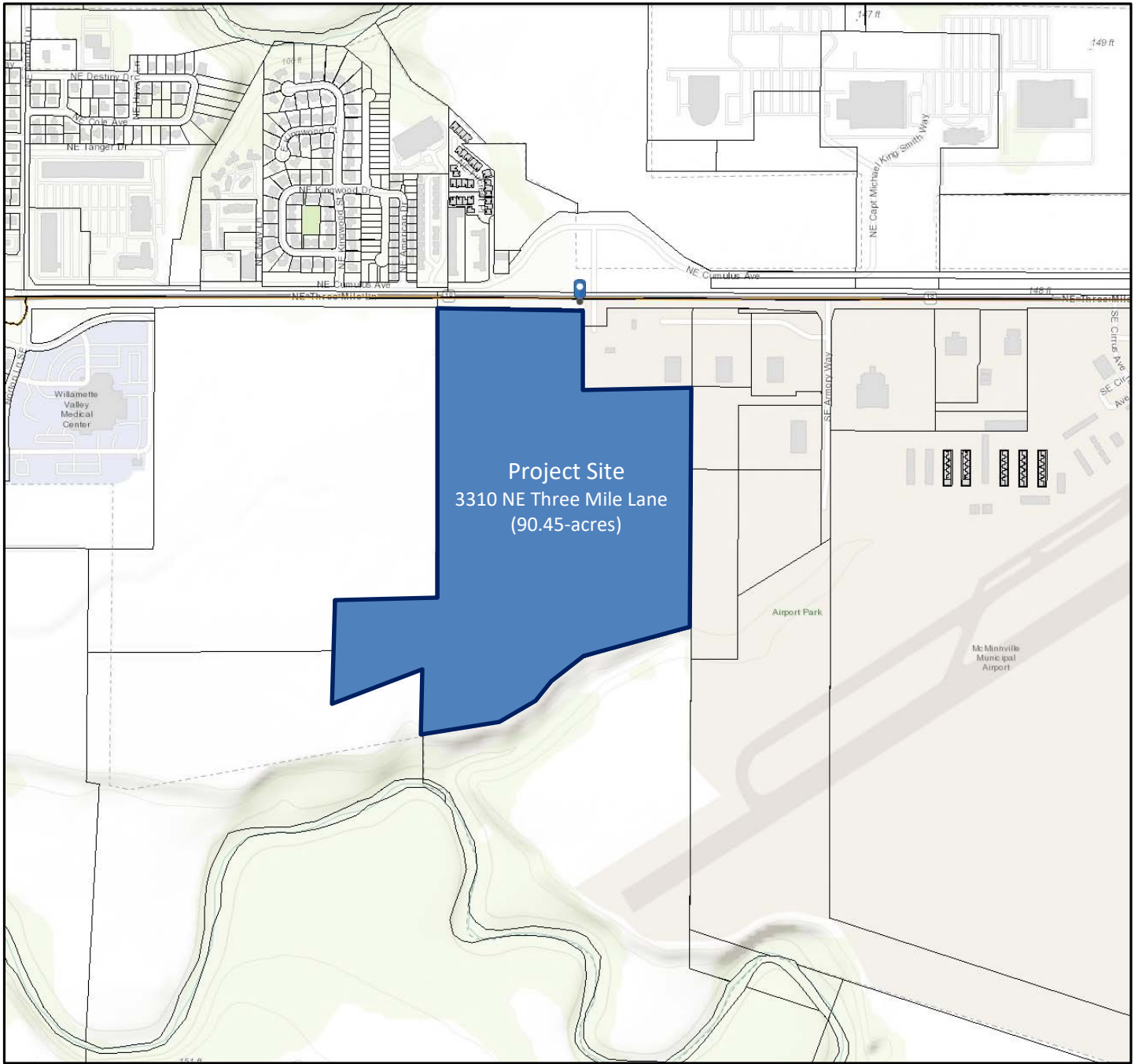
- 6:00 PM – 6:05 PM Introductions
- 6:05 PM – 6:20 PM Description of the Project by the Applicant
- 6:20 PM – END Opportunity for attendees to ask questions and offer feedback on the Proposal

MEETING CONTACT INFORMATION:

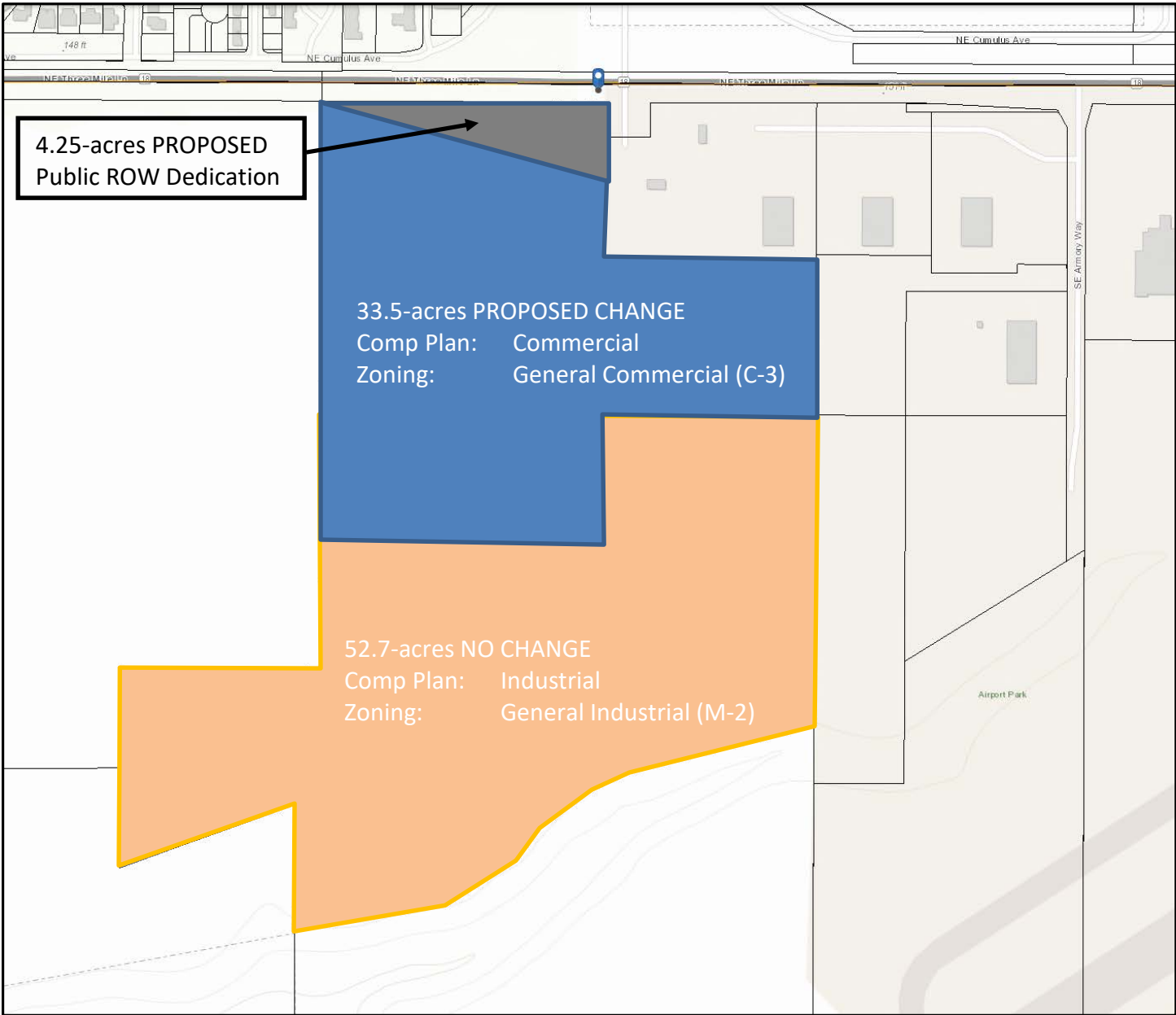
If you have questions about the meeting, please contact us at:

- Name: Sam Knutson
- Email: sknutson@kimcorealty.com
- Phone: (650) 757-2022

Property Location



Proposed Map Amendments



*Please note all boundary lines are approximate.

Attachment 8

Neighborhood Meeting - Mailing List

Map No.	Site Address	Tax Lot	Owner
0	3133 NE THREE MILE LN	R4422DD00101	KRE TIGER PARKLAND LLC
1	112 NE AMERICAN DR	R4422DD00215	SMITH RANDAL L
2	100 NE AMERICAN DR	R4422DD00216	LEWIS MATTHEW
3		R4422DD00217	CRAFTSMAN LANDING HOMEOWNERS
4		R4422DD00218	CRAFTSMAN LANDING HOMEOWNERS
5	107 NE AMERICAN DR	R4422DD00219	MANNING RON
6	3255 NE CUMULUS AVE	R4423 01000	WORLD FUEL SERVICES INC
7	3215 NE CUMULUS AVE	R4423 01100	WITTROCK BONNIE LEE TRUST
8	213 NE FIRCREST DR	R4423 01201	NHI-REIT OF OREGON LLC
9	219 NE FIRCREST DR	R4423 01203	NHI-REIT OF OREGON LLC
10	0 SE AIRPORT RD	R4426 00201	MCMINNVILLE CITY OF
11	3470 SE THREE MILE LN	R4426 00300	JACKSON FAMILY WINES INC
12	173 SE ARMORY WAY	R4426 00400	JACKSON FAMILY WINES INC
13		R4426 00500	MCMINNVILLE CITY OF
14	3330 SE THREE MILE LN	R4426 00600	3330 TML LLC
15	3310 SE THREE MILE LN	R4426 00700	KIMCO MCMINNVILLE LLC
16		R4426 00701	MCMINNVILLE CITY OF
17		R4426 00701	MCMINNVILLE CITY OF
18		R4427 00100	DRS LAND LLC
19	3030 SE THREE MILE LN	R4427 00200	DRS LAND LLC
20	7725 SE BOOTH BEND RD	R4427 02000	CRUICKSHANK BRIAN J CITY OF MCMINNVILLE

Attn:	Mailing Address	City	State	Zip
	19119 N CREEK PKWY	BOTHELL	WA	98011
	29661 NE PUTNAM RD	NEWBERG	OR	97132
LEWIS MELISSA	17800 SW PEAVINE RD	MCMINNVILLE	OR	97128
	133 NE AMERICAN DR	MCMINNVILLE	OR	97128
	133 NE AMERICAN DR	MCMINNVILLE	OR	97128
	PO BOX 605	NEWBERG	OR	97132
	9800 NW 41ST ST	MIAMI	FL	33178
WITTRICK BONNIE L TRUSTEE	13655 NW BERRY CREEK RD	MCMINNVILLE	OR	97128
	222 ROBERT ROSE DR	MURFREESBORO	TN	37129
	222 ROBERT ROSE DR	MURFREESBORO	TN	37129
	230 NE 2ND ST	MCMINNVILLE	OR	97128
	425 AVIATION BLVD	SANTA ROSA	CA	95403
	421 AVIATION BLVD	SANTA ROSA	CA	95403
	230 2ND ST	MCMINNVILLE	OR	97128
TRISTAN RYCHLICK LLC	401 NE EVANS ST	MCMINNVILLE	OR	97128
	3333 NW HYDE PARK RD NO 100	NEW HYDE PARK	NY	11042
	230 2ND ST	MCMINNVILLE	OR	97128
	230 2ND ST	MCMINNVILLE	OR	97128
	5801 SE BANSEN LN	DAYTON	OR	97114
	5801 SE BANSEN LN	DAYTON	OR	97114
CRUICKSHANK JEFFREY W	11400 SE STOCKHOFF RD	DAYTON	OR	97114
PLANNING DEPARTMENT	231 NE 5TH ST	MCMINNVILLE	OR	97128

Attachment 8

Neighborhood Meeting Notes

Summary of November 19, 2020 Virtual (Zoom) Neighborhood Meeting

Sam Knutson from KIMCO MCMINNVILLE, LLC called the meeting to order at 6:00 pm.

Developer Attendees were:

- *Sam Knutson, Alan Roodhouse and Michael Strahs with KIMCO MCMINNVILLE, LLC*
- *Dana Krawczuk, Esq. from Stoel Rives LLP, legal counsel to KIMCO MCMINNVILLE, LLC*
- *Kristine Connolly, PE from Kittelson & Associates, Inc., transportation engineer for KIMCO MCMINNVILLE, LLC*

Community Attendees were:

- *Stewart Kircher, from DRS LAND LLC (Owner of 180 acres to the west of the 90 acres owned by KIMCO MCMINNVILLE, LLC). Property is used to grow feed for dairy farm operation located offsite*

Applicant Presentation:

- *Sam Knutson made introductions, identified project location, and began PowerPoint Presentation*
- *Dana Krawczuk discussed:*
 - *Described aerial map and that proposal applied to only 33.5 acres of KIMCO MCMINNVILLE LLC's property*
 - *Proposal: Comprehensive Plan Map change from Industrial to Commercial and Zoning Map change from General Industrial (M-2) to General Commercial (C-3) for a portion of the site*
 - *No development or site plan proposed at this time – development will come later;*
 - *Steps:*
 - *File application*
 - *City reviews & Staff recommendation, public hearings before Planning Commission & City Council, lots more process to go – this is just the 1st step*
 - *Rationale: good site for retail, consistent with City's goals, good local access for community member convenience*
 - *Planning Efforts – too much industrial, surplus 200+ acres, deficit of commercial land of over 30 acres*
 - *More retail to capture growth*
 - *Address leakage, sales leaving area, to as far as Salem, missed opportunity for City*
 - *Three Mile Lane Planning process shows KIMCO property with commercial designation, consistent with City goals in Three Mile Lane plan*
 - *Zone Change – Traffic Study analyzes reasonable worst-case scenario, no actual site plan prepared or proposed, roadway network safe and can accommodate rezone, multimodal area with bikes and pedestrians also accommodated*

Community Comments

- *Stewart Kircher familiar with Three Mile Lane Zoning process and has participated*
- *Mr. Kircher has no questions or concerns about the proposal. Notes that access into KIMCO's property, and to adjacent properties is key.*
 - *Project team explains that when the KIMCO's property develops, we expect that access to the south will be by a signalized intersection, with roads that connect to adjacent properties.*
- *Mr. Kircher asks if KIMCO MCMINNVILLE rezone limits options for adjacent properties*
 - *Dana Krawczuk answers that no – rezone is consistent with Three Mile Lane plan, and the City's 2013 EOA and updated planning documents show that there is additional demand for retail development and that the Three Mile Lane corridor is an appropriate place for retail (and other) development. Ms. Krawczuk also explained that while this application will be considered in advance of the adoption of the Three Mile Lane Area Plan, which has been delayed, KIMCO's application is supportive of and consistent with the City's efforts*
 - *Group discussion about delays in the Three Mile Lane Area Plan and reconsideration of prior Urban Growth Boundary appeal as causing a delay with the Three Mile efforts.*
 - *Ms. Krawczuk clarifies that the UGB appeal process does not impact KIMCO's application. KIMCO's application will be processed under the 2013 EOA and is consistent with the goal of maintaining a compact urban form.*
- *Mr. Kircher expresses support for the project and asks whether there is any opposition.*
 - *Project team responds that it has not been contacted directly yet by any project opponents, but understands that there has previously been, and are currently ongoing, appeals to the City's long-range planning efforts.*

Meeting concluded at 6:30 pm.

Revisions to Application Based Upon Comments

- *None needed. Only supportive comments were received.*

Attachments:

*Mailed notice
Mailing list
Photograph of posted notice
PowerPoint presented at neighborhood meeting*

NOTICE OF NEIGHBORHOOD MEETING

ADDRESS: 3310 NE Three Mile Lane, McMinnville, OR 97128 (Tax Lot ID: 172164)

PROPOSAL:

- Comprehensive Plan Map Amendment from Industrial to Commercial;
- Zone Change from General Industrial (M-2) to General Commercial (C-3);
- Applies to northern 33.5-acre portion of the site along State Highway 18; and
- No development is proposed at this time.

APPLICANT CONTACT:

- Name: Kimco McMinnville, LLC (Sam Knutson)
- Email: sknutson@kimcorealty.com
- Phone: (650) 757-2022

VIRTUAL MEETING INFORMATION

DATE AND TIME: November 19, 2020 at 6:00PM

BY PHONE: (669) 900-6833 (Meeting ID# 923 4575 3326 and Password# 284715)

BY VIDEO CONFERENCE:

<https://kimcorealty.zoom.us/j/92345753326?pwd=cmhMTEFHFM2NRWXNkUVlwV1JEMzJ2Zz09>

**Please contact Sam Knutson by e-mail or phone beforehand to receive the above weblink by e-mail.*



Wetland Land Use Notification

OREGON DEPARTMENT OF STATE LANDS

775 Summer Street NE, Suite 100, Salem, OR 97301-1279

Phone: (503) 986-5200

This form is to be completed by planning department staff for mapped wetlands and waterways.

Responsible Jurisdiction

*

City of County of

Municipality*

McMinnville

Date*

4/20/2021

Staff Contact

First Name*

Tom

Last Name*

Schauer

Phone*

503-474-5108

Email*

tom.schauer@mcminnvilleoregon.gov

Applicant

First Name*

Michael

Last Name*

Strahs

Mailing Address*

Street Address

Kimco McMinnville LLC

Address Line 2

15 Southgate Avenue, Suite 201

City

Daly City

Postal / Zip Code

94015

State

CA

Country

USA

Phone

650-746-7501

Email (?)

mstra@kimcorealty.com

Is the Property Owner name and address the same as the Applicant?*

No Yes

Activity Location

Township* (?)

04S

Range* (?)

04W

Section* (?)

26

Quarter-quarter Section (?)

Tax Lot(s) *

00700

You can enter multiple tax lot numbers within this field. i.e. 100, 200, 300, etc.

To add additional tax map and lot information, please click the "add" button below.

Address

Street Address

3310 SE Three Mlle Lane

Address Line 2

City

McMinnville

Postal / Zip Code

97128

State

OR

Country

USA

County *

Yamhill

Adjacent Waterbody

Yamhill River

Proposed Activity



Local Case File # *

CPA 2-20/ZC 3-20

Zoning

M-2 (General Industrial)

Proposed

Building Permit (new structures)

Grading Permit

Site Plan Approval

Other (please describe)

Comprehensive Plan Map and Zoning Map Amendment

Conditional use Permit

Planned Unit Development

Subdivision

Project *

Proposed Comprehensive Plan Map Amendment from Industrial to Commercial and Zoning Map Amendment from M-2 (General Industrial) to C-3 (General Commercial) with a Planned Development (PD) Overlay for approximately 37.74 acres of a 90.43 acre parcel, including area proposed for future street right-of-way. No development plan is proposed at this time. As part of the Planned Development process, the development plan application must be submitted for review through a public hearing process in the future before any development can occur on the portion of the property subject to the PD overlay.

Required attachments with site marked: Tax map and site plan(s). (?)

4426.pdf

318.34KB

9. CPA 2-20_ZC 3-20_review response_3-30-21.pdf

3.42MB

Additional Attachments

Date

4/20/2021



Oregon


Kate Brown, Governor

Department of Transportation Region 2 Tech Center

455 Airport Road SE, Building A
Salem, Oregon 97301-5397
Telephone (503) 986-2990
Fax (503) 986-2839

DATE: May 4, 2021

TO: Dan Fricke
Senior Transportation Planner

FROM: 
Arielle Ferber, PE
Traffic Analysis Engineer

SUBJECT: Three Mile Lane Rezone (McMinnville, OR) – Transportation Planning Rule
TIA Review Comments

ODOT Region 2 Traffic has completed our review of the submitted traffic impact analysis (dated December 18, 2020) to address traffic impacts due to development on the southwest quadrant of Salmon River Highway No. 039 (OR 18) and Cumulus Avenue in the city of McMinnville, with respect to consistency and compliance with ODOT's Analysis Procedures Manual, Version 2 (APM). The APM was most recently updated in October 2020. The current version is published online at: <http://www.oregon.gov/ODOT/TD/TP/Pages/APM.aspx>. As a result, we submit the following comments for the City's consideration:

Analysis items to note:

- Region Traffic assumes all land uses and densities offered under both the current and proposed zones are consistent with the City's code as cited in the report.

Recommended analysis items to be addressed:

1. NE Three Mile Lane is classified as an ODOT district highway from OR 18 to just south of SE Brooks Street. As the *Oregon Highway Plan (OHP)* v/c mobility target for Three Mile Lane (district highway, within UGB, non-MPH, 40 MPH) is 0.90 at the NE Three Mile Lane at SE Nehemiah Lane/NE Cumulus Avenue this will not have effect on the conclusions of the study.
2. Analysis of the NE Three Mile Lane at NE 1st Street intersection included signalization of the intersection as mitigation. While it appears a preliminary traffic signal warrant analysis was conducted, the supporting documentation was not included in the Appendix and was not able to be reviewed. It is recommended the supporting documentation be provided.

Proposed mitigation comments:

3. ODOT maintains jurisdiction of the Salmon River Highway No. 039 (OR 18) and ODOT approval shall be required for all proposed mitigation measures to this facility. At this time, Region Traffic has the following comments regarding the proposed mitigation measures:
 - NE Three Mile Lane at NE 1st Street – Approval for installation of a traffic signal will require that the intersection meet MUTCD traffic signal warrants as well as approval under the authority of the State Traffic-Roadway Engineer with support from the City and Region Traffic. At the time an official request is submitted to Region 2 Traffic by the applicant, the request shall include an operational and queuing analysis, preliminary design layout, and a preliminary signal operations design (PSOD).
 - NE Three Mile Lane at SE Nehemiah Lane/NE Cumulus Avenue – Restricting left-turns from the minor approaches onto NE Three Mile Lane will improve operations at the intersection, however, no analysis was conducted to determine how the reassignment of traffic would affect operations at the Three Mile Lane at SE Mountain View Lane intersection.
 - OR 18 at SE Norton Lane and OR 18 at NE Cumulus Avenue – All proposed intersection and/or signal modifications (new installations or changes to existing phasing or timing), changes to lane configuration, and additional turn or receiving lanes will require ODOT approval. Both the City and the applicant shall be aware no approval for any proposed mitigations have been issued at this time and proposed mitigations shall not be considered approved for installation until formal written approval has been issued. Approval request will need to be submitted to Region 2 Traffic and be accompanied by the appropriate analysis justifying such request. The approval process takes time and any approval could possibly have added features required to obtain such approval.
 - OR 18 at SE Loop Road and OR 18 at SE Cruickshank Road – Restriction of left-turns from the side street onto the mainline is expected to improve operations and safety at the intersections, particularly at the OR 18 at Cruickshank Road intersection which is currently a top 5% SPIS location. However, these left-turns were either fully or partially reassigned to the OR 18 at SE Lafayette intersection which is also currently a top 5% SPIS location. Region 2 Traffic recommends that the OR 18 at SE Lafayette intersection be analyzed to determine if the reassignment of traffic would have any operations or safety impacts to the intersection.

Thank you for the opportunity to review this traffic impact analysis. As the analysis software files were not provided, Region 2 Traffic has only reviewed the submitted report. As the above comments request additional information, we look forward to a second round of review at which time we will comment on any and all proposed mitigation measures affecting the state highway system. If there are any questions regarding these comments, please contact me at (503) 986-2857 or Arielle.Ferber@ODOT.state.or.us



City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97128
(503) 434-7311
www.mcminnvilleoregon.gov

EXHIBIT 2 - STAFF REPORT

DATE: May 20, 2021
TO: Planning Commission Members
FROM: Tom Schauer, Senior Planner
SUBJECT: Public Hearing - CPA 2-20/ZC 3-20, Comprehensive Plan Map Amendment and Zone Change with Planned Development (PD) Overlay

STRATEGIC PRIORITY & GOAL:



GROWTH & DEVELOPMENT CHARACTER

Guide growth & development strategically, responsively & responsibly to enhance our unique character.

OBJECTIVE/S: Strategically plan for short and long-term growth and development that will create enduring value for the community

Report in Brief:

This proceeding is a quasi-judicial public hearing of the Planning Commission to consider a Comprehensive Plan Map amendment (CPA 2-20) and Zone Change (ZC 3-20) with a Planned Development (PD) overlay. The proposed amendment applies to approximately the northerly 33.5 acres of a 90.45 acres parcel, plus 4.25 acres along the Highway OR-18 frontage intended for right-of-way dedication. **See Vicinity Map (Figure 1), Comprehensive Plan Map (Figure 2), Zoning Map (Figure 3), and Applicant's Proposed Map Amendment (Figure 4).**

Please note Figures 3 and 4 don't yet reflect the land added to the UGB north of Three Mile Lane between the highway and the Evergreen Museum.

The proposed amendment would change the Comprehensive Plan designation from Industrial to Commercial and would change the zoning from M-2 (General Industrial) to C-3 PD (General Commercial with a Planned Development (PD) Overlay). The applicant is proposing the option of the PD overlay which allows the development plan to be deferred to a future review with a future public hearing process. By applying a planned development overlay to the property at this time, design and development standards can be established for the site, and it provides for a future opportunity to review the final development plan through a public hearing process.

Staff is recommending that, following the staff report, applicant's presentation, and public testimony, at the May 20 hearing, ***that the hearing be continued to a date certain to be announced at the May 20 hearing***, for additional time for the applicant to prepare and submit additional requested information regarding the transportation mitigation for ODOT review and approval, to be coordinated with the City.

Figure 1. Vicinity Map
 (See Figure 4 for portion proposed for map amendment).



Figure 2. Comprehensive Plan Map
 (See Figure 4 for portion proposed for map amendment)

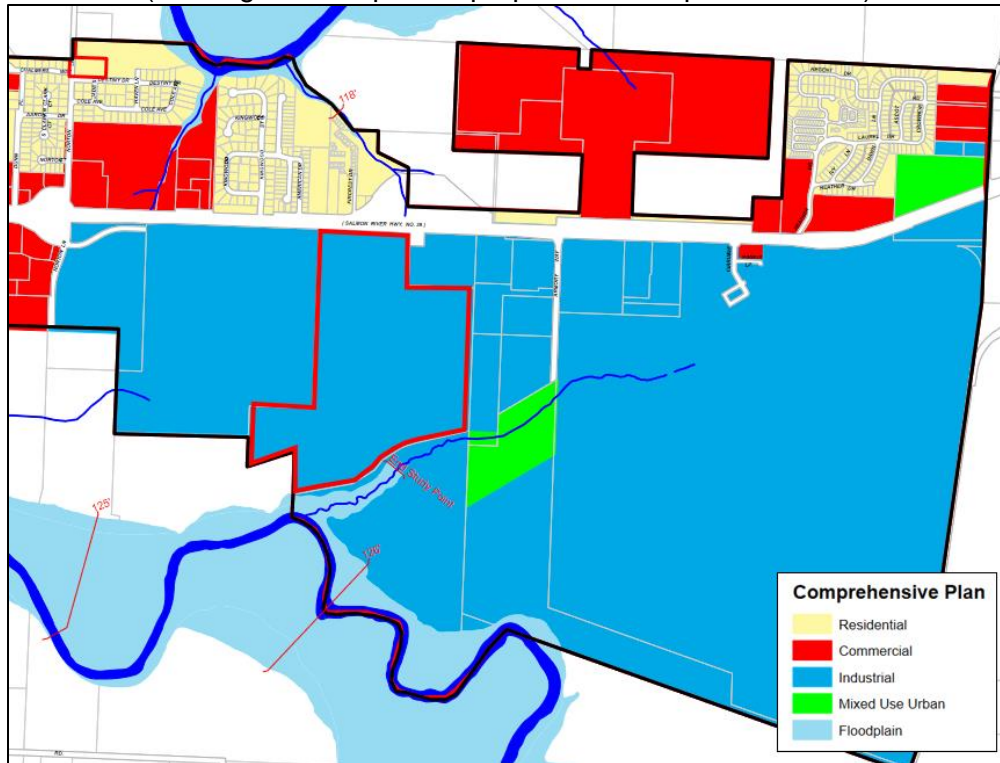


Figure 3. Zoning Map
 (See Figure 4 for portion proposed for map amendment)

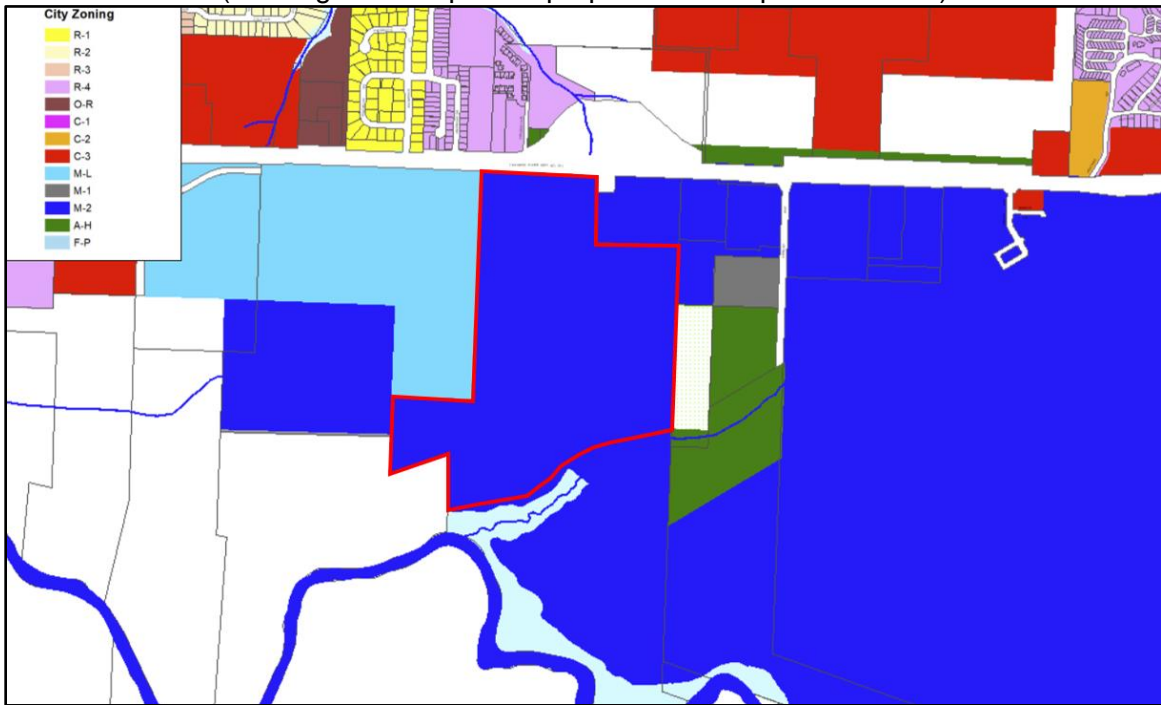
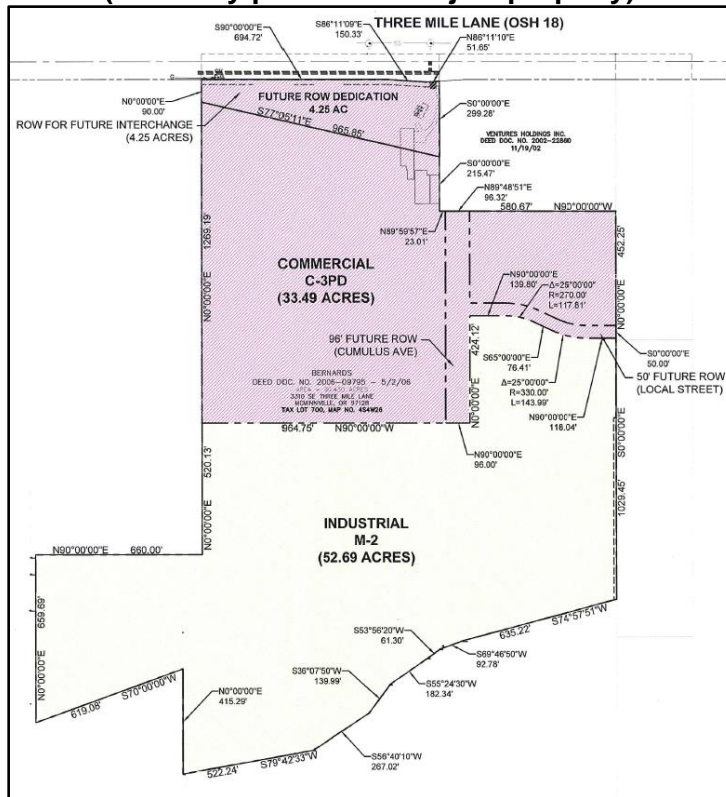


Figure 4. Applicant's Proposed Map Amendment
 (Northerly portion of subject property).



Background:

The City adopted an updated 2013 Economic Opportunities Analysis (EOA) in 2014, which was subsequently acknowledged (Ordinance 4976). The EOA identifies a deficit of 35.8 acres of commercial land and a surplus of industrial land. The proposed amendment would address about 33.5 acres of the commercial deficit, while still retaining an industrial surplus. The EOA found that in addition to commercial land associated with growth, there was also substantial “retail leakage” with residents of McMinnville and its market area spending money outside of McMinnville due to lack of available retail in key categories within McMinnville. The proposed amendment is intended to address most of McMinnville’s identified commercial land deficit and capture some of the retail leakage. Amendments to the Comprehensive Plan adopted in December 2020 also include a “Proposal” to rezone property at this location from industrial to commercial (Proposal 48.70).

The proposal meets the policies and criteria of the McMinnville Comprehensive Plan and Zoning Ordinance. However, there are two predominant issues with the application: (1) timing of the submittal relative to the Three Mile Lane Area Planning process which has identified the need for design and development standards in this area to support McMinnville’s unique qualities as a community with small town charm and agrarian roots and how to incorporate those standards into this land-use decision prior to the adoption of the Three Mile Lane Area Plan; and (2) the need for mitigation to address “significant effects” of the proposed map amendment on transportation facilities.

The applicant has agreed to the concept of a planned development overlay for this site to incorporate the Three Mile Lane Area Plan design and development standards, and the applicant hired a transportation consultant to evaluate and address the transportation impact of the proposed Comprehensive Plan Map and Zoning Map amendment on Highway 18 and the local transportation infrastructure. ODOT and the City have reviewed the mitigation measures proposed by the applicant for the transportation impact, and both agencies have requested additional information from the applicant to continue to evaluate those mitigation measures. The applicant has agreed to meet with ODOT and the City to discuss and prepare any additional information needed. This meeting will occur after the initial public hearing on May 20, 2021, so the City is requesting that the Planning Commission continue the public hearing to a date specific (date will be provided at the public hearing) to accommodate these additional discussions and to allow for additional public testimony as needed to evaluate the outcomes of the transportation mitigation discussions.

Discussion:

With the proposed Comprehensive Plan Map Amendment and Zone Change, the applicant must address the applicable criteria identified in the decision document. The applicant must also demonstrate compliance with applicable state law, including the Transportation Planning Rule (OAR 660 Division 12). OAR 660-012-0060 specifically addresses Plan and Land Use Regulation Amendments. One key provision specifies that if an amendment would “significantly affect an existing or planned transportation facility,” then a local government must put in place certain measures, unless the amendment is allowed under certain provisions of the rule. See OAR 660-012-0060(1).

As part of the map amendment request, the applicant has also requested a Planned Development (PD) overlay. The applicant has requested to use the option that allows the PD overlay designation without concurrent approval of a development plan. This requires the applicant to later submit the development plan through the same public hearing and review process. No development of any kind shall occur on land subject to the PD overlay until the final development plan has been submitted, reviewed, and approved.

There are separate criteria for approval of a PD overlay. In addition, to use the option for the deferred approval of the development plan, the property must have “unique characteristics (e.g., geological,

ecological location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole.” In addition, the Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.”

The City is in the midst of a comprehensive area-wide land and transportation planning process for the Three Mile Lane area, referred to as the Three Mile Lane Area Plan (3MLAP). This planning process will result in updates to the adopted and acknowledged land use plan, development standards, and transportation plan for the planning area.

The Planning Commission and City Council must find that the location of the subject property in the middle of this planning area presents “unique characteristics” that authorize the use of the PD process with the deferred development plan.

With this process, the Planning Commission and City Council must set forth the reasons of approval and areas of concern that must be addressed when the final development plan is submitted.

There are two principal “areas of concern” that must be addressed, both associated with the “unique characteristics” of the location of the subject property in the midst 3MLAP work underway, and the timing of this application (without a contemporaneous development plan) relative to the work on the 3MLAP:

1. **Consistency with Three Mile Lane Area Plan.** Development of the property must be consistent with the 3MLAP principles, land use, development and circulation plan and development standards.

This is to be addressed through a condition of approval of the PD overlay designation, requiring development to be consistent with the design and development principles and standards attached as an exhibit to the decision document and ordinance.

2. **Transportation Mitigation.** The Transportation Planning Rule requires that all comprehensive plan map amendments evaluate whether or not the proposed new use would require traffic mitigation on any adjacent state facilities. The applicant conducted a traffic impact study that does show impact on the state and local facilities and has presented plans for mitigating that impact. Both the City and ODOT have concerns about the mitigation plans presented and have requested more time and more information to evaluate them. ODOT has provided comments noting that they require some additional information for their analysis and must approve mitigation to OR-18. ***Therefore, the City can't adopt the applicant's proposed mitigation to OR-18 unless ODOT approves the mitigation.***

For example, the OR-18 Corridor Plan calls for phased improvements at the intersection of N/W Cumulus Avenue and OR-18. The first phase was partially completed, with an at-grade signalized intersection. It also called for a collector street system to serve properties to the east on the south side of the highway, which is now partially provided by private access. The OR-18 Corridor Plan long-term improvement calls for a grade-separated interchange at this location. This improvement would be required when warranted by traffic counts on the highway.

The 3MLAP identified that the long-term improvement of a grade-separated interchange was not warranted in the next twenty years (state and local planning horizon) even with the proposed comprehensive plan map amendment and zone map amendment. In fact, the 3MLAP identified an interim improvement of a jug-handled signalized intersection when warranted prior to the need to invest in a grade-separated interchange. These would be designed to change

intersection movements to eliminate left-turns off of the highway onto side streets, while allowing left-turns onto the highway.

The mitigation proposed by the applicant at this location would add an east-bound right-turn lane and a north-bound left turn lane, and update the traffic signal equipment accordingly and prioritize through movements. The applicant also noted that beyond the planning horizon, it would be possible to add a second north-bound left-turn lane. In addition, the applicant has agreed to dedicate the necessary right-of-way needed to accommodate a future jug-handled signalized intersection and grade-separated interchange.

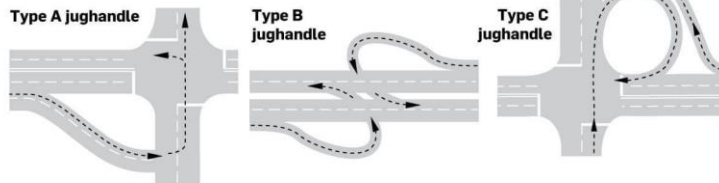
The applicant's proposed mitigation could be considered consistent with first phase of the OR-18 Corridor Plan for the at-grade intersection, providing additional intersection improvements. And their proposed dedication of public right-of-way for a future grade-separated interchange would be inconsistent with the long-term plan for the grade separated interchange.

The applicant's proposed mitigation could be considered consistent with the 3MLAP preferred alternative to retain the at-grade intersection, with the mitigation making intersection improvements needed to meet mobility standards.

The Kimco TIA and 3MLAP transportation analysis also both note that beyond the planning horizon, additional mitigation may be required. Kimco's TIA notes the possibility of a second north-bound left-turn lane, while the 3MLAP notes the possibility of jug handles. For the latter, that would apparently coincide with the elimination of left-turns from the highway and replacement of the right-turn lane with a "Type A" jug handle on the southeast corner.

JUGHANDLES

New Jersey uses three typical jughandle designs



Source: New Jersey Department of Transportation

THE STAR-LEDGER



Kimco's TIA identifies mitigation at five additional intersections on both OR Highway 18 and on the local street network.

At this time, both ODOT and the City has requested additional information from the applicant to further review certain aspects of the applicant's TIA and to determine if they would approve the applicant's recommended mitigation.

The criteria in the Zoning Ordinance, including the requirement for consistency with the Comprehensive Plan Goals and Policies, are specific, and addressed in the Conclusionary Findings section of this document. However, the main issues to be addressed with an application for a Comprehensive Plan Map Amendment and Zone Change, including a Planned Development Overlay, can be summarized as discussed below.

1. Is there a need for the change?

- Is there an identified need for the proposed zoning?
- What impact does the change have on the needed land supply of the current zoning?

There needs to be information in the Comprehensive Plan that shows a need for the proposed designation. If the need isn't demonstrated in the Comprehensive Plan, then the application needs to include updates to the Comprehensive Plan to show there is a need. The change from the current designation should not create a deficit of land supply in the current designation.

The need is demonstrated in the Comprehensive Plan, which already identifies a deficit of commercially-designated land and a surplus of industrially-designated land.

2. Is the proposal suitable to meet the need?

- If so, does the proposed amendment meet the identified need – both quantitatively (the acreage) and qualitatively (the type of zoning proposed)?
- Is the location suitable to meet the identified need for the proposed zoning?
- Are there any specific site features or characteristics that need to be considered to determine suitability for the proposed zoning?

The proposed amendment is consistent with the amount/acreage of need identified in the Comprehensive Plan for additional commercially designated land, without reducing the industrially-designated acreage below the identified need.

The EOA identifies characteristics of land commercial land need, and the applicant has described the suitability of this site to address the type of commercial need. The Comprehensive Plan, the economic analysis in the adopted and acknowledged Economic Opportunities Analysis (EOA), , as well as subsequent additional economic analysis conducted in conjunction with the Three Mile Lane Area Plan (3MLAP), identify the types of commercial land needed. The economic analysis identifies certain types of commercial uses for which 'retail leakage' is occurring. These are uses for which there is demand in McMinnville based on analysis of its market area – including residents of McMinnville and the surrounding area. The proposed C-3 PD designation is the appropriate designation. The C-3 zone generally allows uses for which there is demand and which are experiencing leakage. In addition, the design and development principles and standards attached to the PD overlay designation as a condition of approval provide greater regulatory control over the development characteristics and certain uses that may otherwise be permitted in the C-3 zone, but which could conflict with the critical issues being undertaken as part of the Three Mile Lane Areas planning process for this key gateway location into McMinnville and the importance of this area in creating first impressions and having the potential to influence the character of McMinnville.

The location and site are evaluated for suitability for the intended types of commercial use and commercial zoning. The site is also evaluated to determine if it has any specific features or attributes which might affect its suitability for intended uses. The location, topography, and general characteristics are suitable for commercial development. There aren't substantial areas of natural features which would preclude the use of the property for intended uses, although the design and development principles and standards attached as a condition of approval provide that special natural features or elements are to be incorporated into the site design.

3. Is the timing appropriate for the proposed amendment?

It is common for cities to have policies regarding urbanization that address timing and phasing of development and extension of services; however, these policies typically address rezoning of unincorporated urbanizable land within a UGB from a rural or urban holding zone to an urban zone.

With that said, when there is an identified deficit of urban commercial land and surplus of urban industrial land, the timing is appropriate to redesignate the land to address the deficit.

In some cases, this can also help ensure the land isn't developed or partially developed before it can be redesignated to the needed commercial designation. It can protect land needed for commercial development from incompatible development and/or parcelization.

The timing of the application prior to adoption of the 3MLAP does pose some unique issues to be addressed with the Planned Development overlay designation. Within the current context of the Three Mile Lane Area Plan, there may be more specific objectives for coordinated planning of the area. The Planned Development Overlay designation is the appropriate designation to allow the redesignation to commercial, but without the generic C-3 zoning that could allow development to occur without approval of a Planned Development master plan that responds to specific objectives of the area. The applicant has proposed the PD process that allows for deferred approval of a master plan, which is subject to the same public hearing provisions of the PD overlay designation. This approach allows for work to progress on the Three Mile Lane Area Plan, identifying specific issues and conditions up-front to be addressed when the master plan is submitted, and/or to be revised to be consistent with the final Three Mile Lane Area Plan and its implementing provisions when that work has been completed.

There is still the potential that the applicant could apply for the development plan through the PD process prior to completion of the 3MLAP work. That would provide a public forum for deciding on action on how and whether a specific development plan meets the applicable criteria and conditions of approval, including consistency with the design and development principles and standards attached to the C-3 PD overlay designation as a condition of approval.

Subject to the conditions of approval, of available options, the current timing and the proposed Commercial plan designation and C-3 PD overlay zone is the best alternative to re-designate the property to commercial, but provide a mechanism to delay timing of the development plan and development timing to further coordinate work with the Three Mile Lane Area planning.

The main options available to the applicant for timing and redesignation were:

- **The current application to redesignate the land to Commercial C-3 PD and apply the PD overlay with the deferred development plan option, which also precludes development until that is approved through the same PD process.** The main downside of this option is it doesn't allow for completion of work on the 3MLAP before finalizing the zone boundary through the public process. However, with deferred approval of the development plan, accompanied by design and development principles and standards as conditions of approval of the PD overlay, this provides an opportunity to incorporate principles from the 3MLAP work to date into the terms of the overlay.
- **Apply the C-3 PD overlay with a concurrent development plan.** This is not preferred – it would have resulted in an application for approval of a specific development plan prior to completion of work on the 3MLAP and the surrounding area planning context.
- **Redesignate the land to Commercial/C-3 without a PD overlay at this time.** This would allow development subject only to the current C-3 standards and other general development standards (such as Large Format Commercial Standards) without an area plan (with land use, transportation, and development standards) or approval of the plan through a separate public hearing process, which could occur in advance of the 3MLAP and could result in development that could conflict with the 3MLAP, and issues such as connectivity and associated development standards.

- **Redesignate the land to a new commercial zone or overlay that doesn't currently exist, tailored to the Three Mile Lane area.** This would still allow development to occur without the public process and oversight of the specific development plan provided by the PD process. It would have required the applicant to propose a new zone, then submit a development plan through the standard review process. This would have been premature rather than having any potential zones or overlays for the Three Mile Lane Area Plan come out of the public process, and without the accompanying level of oversight provided by the PD process.
- **Retain industrial zoning at this time, and wait until completion of the 3MLAP before seeking redesignation.** This would have postponed action to redesignate land necessary to meet needs for the identified commercial land deficit which already exists. However, the could have then been considered relative to, or together with the rest of the 3MLAP.

Now that the application has been submitted, the decision-making body must review the submitted application relative to the applicable criteria. In this case, that is the criteria for the proposed Comprehensive Plan Map Amendment, Zone Change, and Planned Development Overlay designation, including conditions of approval, including design and development principles and standards and specific issues that will need to be addressed with a future development plan.

4. Does the proposal create any impacts that need to be addressed?

- Does the proposed amendment require any updates to other aspects of the Comprehensive Plan, such as various public facility plans? Does the amendment affect required public facilities and services to serve the property or other properties that may be affected by the amendment? Are there any public facility plans that would need to be updated to serve more intensive development that would place additional demand on the facilities?
- The plan was routed to agencies and departments for review, and no issues were identified other than as addressed above for TPR compliance. It is also recognized that adequate public facilities will need to be provided at the time of development to serve the property. The intensity of the specific type of development, regardless of a map amendment, will determine certain development requirements.

5. Are there any special issues that need to be considered and addressed?

- Are there special issues that need to be addressed in conjunction with the amendment? As previously noted, there are several issues identified in Three Mile Lane Area Plan principles and planning documents, relating to commercial use and site development, and coordinated circulation with, and relationships to, development of other properties in the Three Mile Lane area, that will need to be addressed in the final Planned Development (PD) development plan. Therefore, the PD designation is subject to design and development principles and standards as a condition of approval to ensure consistency with the 3MLAP work.

As part of the PD criteria, there are additional requirements that apply beyond the CPA/ZC criteria. The purpose of a PD is articulated in the first paragraph of Section 17.51.010. In reviewing a PD to provide for a superior outcome, the Council and Planning Commission are to set forth reasons for approval and areas of concern that must be addressed when the final PD development plan is submitted.

As a result, the review will analyze issues addressed in the applicant's narrative, which will result in conditions that may be more specific than strictly development through a standard C-3 zone.

Some of the additional critical issues to be reviewed at the time of development plan submittal are:

- (1) How well the proposal will include uses and retail categories to address one of the key issues identified in the EOA: reduction of retail leakage, rather than cannibalization of local sales.

- (2) How the proposed use and development will fit with the objectives of the Three Mile Lane Area planning work underway, so there is not premature commercial development that could potentially impact, conflict with, or preclude accomplishment of the coordinated planning of the broader Three Mile Lane area.
- (3) As part of the above, how the development will complement the uniqueness of McMinnville, not only in design and aesthetic choices, but through how well the uses, spaces, and relationship between buildings and on-site amenities achieves a mix of uses that complement McMinnville's ability to strengthen the local community and economy overall, both to serve residents and to serve as a destination for visitors, in a manner that draws visitors and encourages them to stay longer, draw people in to the community, and support the breadth of local businesses during their stay. This relies on a plan that does more than reduce retail leakage. The concept must be strong enough to showcase the local identity, uniqueness, and authenticity, and to provide an experiential destination, including a mix of uses and development pattern that supports "park and stroll," linger, and explore McMinnville experiences.

Staff recommends a continuance of the public hearing to allow for additional time for this review to occur.

Note: This application includes an amendment to the Comprehensive Plan map and is not subject to the 120-day processing timeline.

Attachments:

1. CPA 2-20/ZC 3-20 Decision Document
2. CPA 2-20/ZC 3-20 Application

Recommendation:

Staff recommends a continuance of the public hearing to allow for additional time for review of the proposed transportation mitigation at impacted intersections to occur for consistency as phased and/or interim improvements, or potentially full mitigation as specified in the OR-18 Corridor Plan and/or 3MLAP.



**CITY OF MCMINNVILLE
PLANNING DEPARTMENT**
231 NE FIFTH STREET
MCMINNVILLE, OR 97128

503-434-7311
www.mcminnvilleoregon.gov

DECISION, CONDITIONS, FINDINGS OF FACT AND CONCLUSIONARY FINDINGS FOR THE APPLICATION FOR A COMPREHENSIVE PLAN MAP AMENDMENT FROM INDUSTRIAL TO COMMERCIAL AND A ZONE CHANGE FROM M-2 (GENERAL INDUSTRIAL) to C-3 PD (GENERAL COMMERCIAL WITH A PLANNED DEVELOPMENT OVERLAY) FOR 37.7 ACRES OF A 90.4-ACRE PROPERTY LOCATED AT 3310 SE THREE MILE LANE, TAX LOT R4426 00700

DOCKET: CPA 2-20 (Comprehensive Plan Map Amendment), ZC 3-20 (Zone Change, including Planned Development Overlay Designation)

REQUEST: An application for an amendment to the Comprehensive Plan Map from Industrial to Commercial, and an amendment to the Zoning Map from M-2 (General Industrial) to C-3 PD (General Commercial with a Planned Development Overlay), for approximately 37.7 acres of a 90.4-acre property.

The 37.7 acres includes 4.25 acres intended for right-of-way dedication for a future public transportation improvement. The application also shows a portion of the area subject to the map amendment intended for a north-south extension of Cumulus Avenue and future east-west street connectivity.

The request is submitted per the Planned Development provisions in Section 17.51.010(B) of the Zoning Ordinance, which allows for a planned development overlay designation to be applied to property without a development plan; however, if approved, no development of any kind can occur on the portion of the property subject to the C-3 PD overlay until a final development plan has been submitted and approved in accordance with the Planned Development provisions of the Zoning Ordinance. This requires the application for the final development plan to be subject to the public hearing requirements again at such time as the final development plans are submitted.

LOCATION: Site Address: Part of 3310 SE Three Mile Lane
Map & Tax Lot: Part of R4426 00700

ZONING: M-2 (General Industrial), Three Mile Lane Overlay, Airport Overlay

APPLICANT: Kimco McMinnville LLC, c/o Michael Strahs

PROPERTY OWNER: Kimco McMinnville LLC

STAFF: Tom Schauer, Senior Planner

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

DATE DEEMED**COMPLETE:** April 8, 2021**HEARINGS BODY
& ACTION:**

The McMinnville Planning Commission makes a recommendation for approval, approval with conditions, or denial of the land use application to the City Council.

PLANNING COMMISSION**HEARING DATE****& LOCATION:**

May 20, 2021 at 6:30 P.M. Public hearing held virtually via Zoom meeting software. Zoom Online Meeting ID: 960 2576 9049

**DECISION-MAKING
BODY**

: The McMinnville City Council approves, approves with conditions, or denies the land use application.

**MEETING DATE
& LOCATION:**

To be determined.

PROCEDURE:

An application for a Comprehensive Plan Map Amendment and Zone Change, including a Planned Development Overlay, is processed in accordance with the procedures in Section 17.72.120 of the McMinnville Municipal Code. The application is reviewed by the Planning Commission in accordance with the quasi-judicial public hearing procedures specified in Section 17.72.130 of the McMinnville Municipal Code.

CRITERIA:

The applicable criteria for a Comprehensive Plan Map Amendment and Zone Change are specified in Section 17.74.020 of the McMinnville Municipal Code. The criteria for a Planned Development Overlay are specified in Chapter 17.51 of the McMinnville Municipal Code. In addition, the goals, policies, and proposals in Volume II of the Comprehensive Plan are to be applied to all land use decisions as criteria for approval, denial, or modification of the proposed request. Goals and policies are mandated; all land use decisions must conform to the applicable goals and policies of Volume II. "Proposals" specified in Volume II are not mandated, but are to be undertaken in relation to all applicable land use requests.

APPEAL:

The Planning Commission makes a recommendation to the City Council, and the City Council makes the final decision. As specified in Section 17.72.190 of the McMinnville Municipal Code, the City Council's decision may be appealed to the Land Use Board of Appeals (LUBA) within 21 (twenty-one) days of the date written notice of decision is mailed.

Note: *The City's final decision is usually subject to a 120-day processing timeline, including resolution of any local appeal. However, per ORS 227.178(7), the 120-day period does not apply to a decision of the city making a change to an acknowledged comprehensive plan or a land use regulation that is submitted to the Director of the Department of Land Conservation and Development under ORS 197.610.*

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

COMMENTS: This matter was referred to the following public agencies for comment: McMinnville Fire Department, Police Department, Engineering Department, Building Department, Parks Department, Public Works Department, Waste Water Services, City Manager, and City Attorney; McMinnville Water and Light; McMinnville School District No. 40; Yamhill County Planning Department; Ziplly Fiber (formerly Frontier Communications); Comcast; Recology; Northwest Natural Gas; Oregon Department of State Lands; and Oregon Department of Transportation. Their comments are provided in this document.

RECOMMENDATION

Based on the findings and conclusionary findings, the Planning Director finds that additional information from the applicant and review by ODOT in coordination with the City is needed regarding the application’s consistency with certain criteria pertaining to transportation facilities and mitigation to make conclusionary findings regarding those issues and criteria. Therefore, following the staff report, applicant’s presentation, and public testimony at the May 20 hearing, the Planning Director **RECOMMENDS A CONTINUANCE TO A DATE CERTAIN** to be specified at the May 20 hearing to address the remaining transportation issues. The Planning Director finds the other criteria are satisfied, or satisfied subject to the conditions in Section II.

////////////////////////////////////
RECOMMENDATION: CONTINUANCE TO A DATE CERTAIN
////////////////////////////////////

Planning Department: 
Heather Richards, Planning Director

Date: May 20, 2021

Attachments:
Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

I. APPLICATION SUMMARY:

Subject Property & Request

An application for an amendment to the Comprehensive Plan Map from Industrial to Commercial, and an amendment to the Zoning Map from M-2 (General Industrial) to C-3 PD (General Commercial with a Planned Development Overlay), for approximately 37.7 acres of a 90.4-acre property. The proposed map amendment includes 4.25 acres intended for right-of-way dedication for future highway transportation improvements. The 37.7 acres less the 4.25 acres is approximately 33.5 acres. The application also shows a portion of the area subject to the map amendment intended for future right-of-way for a north-south extension of Cumulus Avenue and future east-west street connectivity. **See *Vicinity Map (Figure 1), Comprehensive Plan Map (Figure 2), Zoning Map (Figure 3), and Applicant's Proposed Map Amendment (Figure 4).***

Please note Figures 3 and 4 don't yet reflect the land added to the UGB north of Three Mile Lane between the highway and the Evergreen Museum.

The request is submitted per the Planned Development provisions in Section 17.51.010(B) of the Zoning Ordinance, which allows for a planned development designation to be applied without a development plan; however, no development of any kind can occur on the portion of the property subject to the C-3 PD overlay until a final development plan has been submitted and approved in accordance with the Planned Development provisions. This requires the application for the final development plan to be subject to the public hearing requirements again at such time as the final development plans are submitted.

Summary of Criteria & Key Issues

Introduction

The proposal includes a requested comprehensive plan map amendment, zoning map amendment, and planned development (PD) overlay designation, with the deferred development plan option as described above.

Key requirements for the comprehensive plan map amendment and zoning map amendment are consistency with the Comprehensive Plan (including identified need, suitability of the property to meet the need, and whether the proposed zoning designation is appropriate to meet the identified need), and orderliness and timeliness of the amendment, and ability to efficiently provide utilities and services to serve uses permitted in the proposed zoning district.

With the PD overlay designation, when the option to defer the approval of the preliminary development plan is considered (Section 17.51.010(B)), there must be findings that the property has unique characteristics and the development of which may have an impact on the surrounding area or the city as a whole. In addition, the Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.

Some provisions of state law also apply to map amendments. In considering consistency with the Comprehensive Plan, the provisions of state law at OAR 660-012-0060 must also be addressed. This is part of the Transportation Planning Rule relating to Plan and Land Use Regulation Amendments.

As addressed in these findings, the following summarizes the key findings related to the applicable criteria for the map amendment in Chapter 17.74 and the Planned Development Overlay in Chapter 17.51.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- **17.74.020(A) (Consistency with the Comprehensive Plan).** The commercial land need, suitability of the site to meet the need, and the suitability of the C-3 PD commercial designation to meet the need are well documented in the Comprehensive Plan and 2013 Economic Opportunities Analysis (EOA) adopted on February 25, 2014 by Ordinance No. 4976 and referenced in the application submittal.
- **17.74.020(B) (Orderly and Timely) and (C) (Efficient Provision of Utilities and Services).** The agency notification process resulted in responses which indicated no significant issues in the ability to provide service to the property for uses permitted in the proposed zoning district, except for some expressed concerns by ODOT that still need to be addressed prior to approval of the application. Some upgrades to power feeder lines may be required at the time of development, depending on the specific use and development proposed.

Transportation: Regarding transportation facilities and the requirements of Transportation Planning Rule, OAR 660-012-0060(1) specifies:

If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule.

The rule provides detail about the definition of a “significant effect” and how a significant effect may be addressed. In short, the applicant’s Traffic Impact Analysis (TIA) found there would be significant effects associated with the amendment, and proposed mitigations to address those effects associated with the proposed map amendment for the subject property.

ODOT has provided comments that it needs to review additional information associated with the TIA recommendations and to approve any mitigation to OR-18 which is under their jurisdiction.

The City has also requested additional information to evaluate the proposed mitigation improvements.

Staff recommends a continuance of the public hearing to provide additional time to address this issue.

- **17.51.010(B).** Regarding the requirements associated with the approval of the planned development overlay and deferred development plan, there are unique characteristics associated with the property, and there are areas of concern that will need to be addressed at the time the final PD development plan is submitted.

Most notably, the City has been engaged in a three-year public planning process for the Three Mile Lane Area Plan (3MLAP) specifically for this area of the community. This process is nearing completion. In order to incorporate the outcomes of this planning process, the applicant has agreed to a planned development overlay that will incorporate the design and development standards that has been developed by the Three Mile Lane Area planning process.

It should be noted that while the proposal meets the criteria for being orderly and timely, the timing poses some unique issues that need to be identified and addressed as “areas of concern that must be addressed when final plans are submitted” for the PD approval. Those timing issues relate to the fact that a public planning process is underway for the Three Mile Lane Area, which is intended to update and guide the land use, circulation, design, development and

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

redevelopment, and other aspects of the area, to achieve a desired area-wide outcome. As a result, there are draft new standards and zoning to be adopted for the area which aren't yet in effect. In addition, there is a draft preferred transportation alternative which has some preferred circulation and intersection improvements which differ from those in the adopted Transportation System Plan and Highway 18 Corridor Plan.

Therefore, the timing of the application presents some unique issues which the application must address:

- As a condition of approval, the final development plan will be subject to the design and development principles and standards attached to this decision document, except that, if 3MLAP principles and standards are adopted prior to submittal of the PD final development plan, the more stringent principles and standards shall apply.
- The applicant will need to submit additional information for ODOT and City review and approval, and demonstrate the proposed mitigation is consistent with the OR-18 Corridor Plan and Draft 3MLAP Preferred Transportation Alternative as interim improvements consistent with each plan, and that they are providing the necessary public right-of-way dedication for the future long-term improvements needed. **Staff has recommended a continuance of the public hearing as both ODOT and the City have requested additional information from the applicant relative to this issue.**

Figure 1. Vicinity Map
(See Figure 4 for portion proposed for map amendment).



Attachments:

- Attachment 1 – Application and Attachments;
- Attachment 2 - DSL Wetland Land Use Notice Response

Figure 2. Comprehensive Plan Map
(See Figure 4 for portion proposed for map amendment)

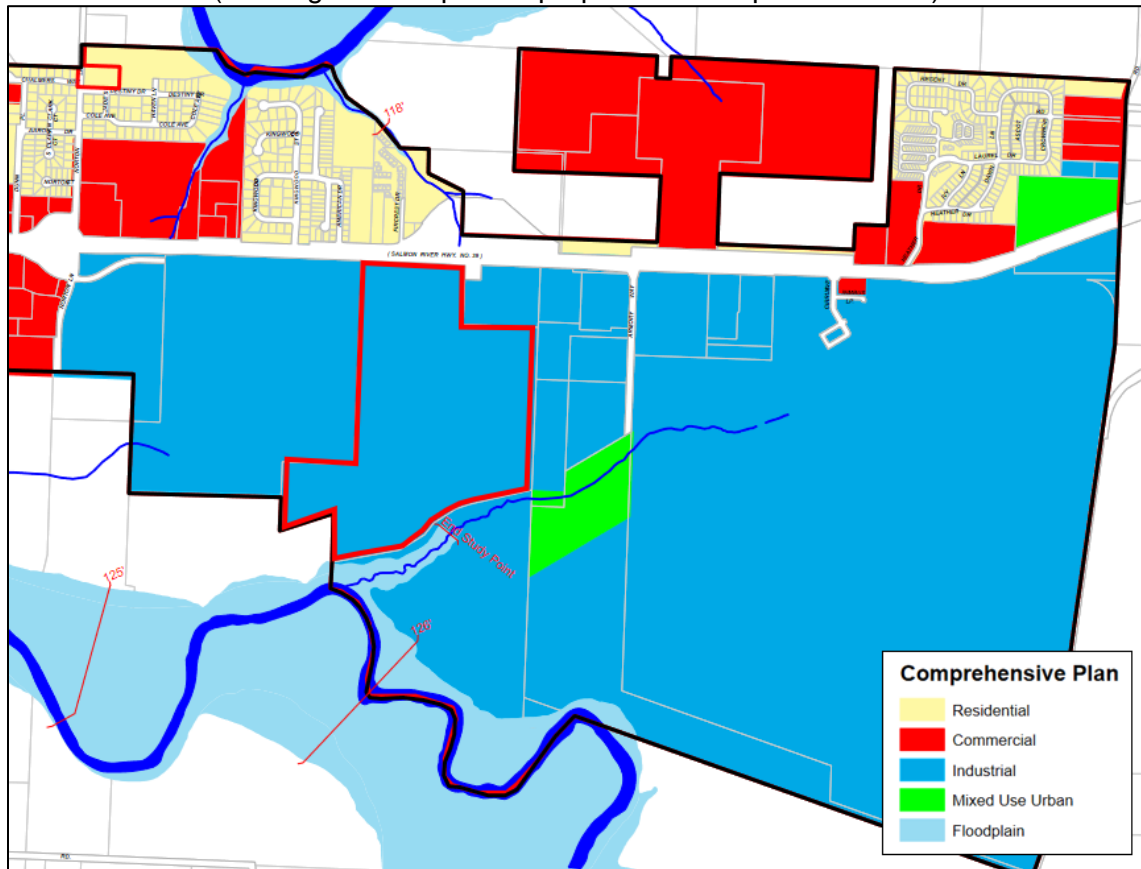
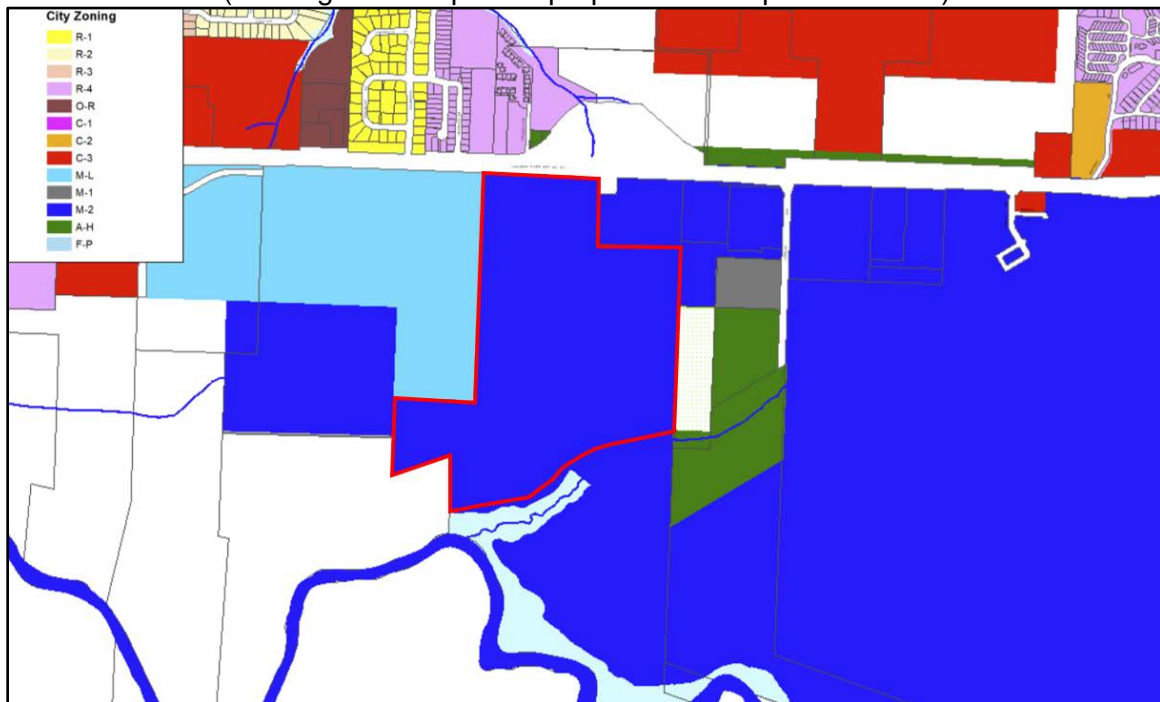


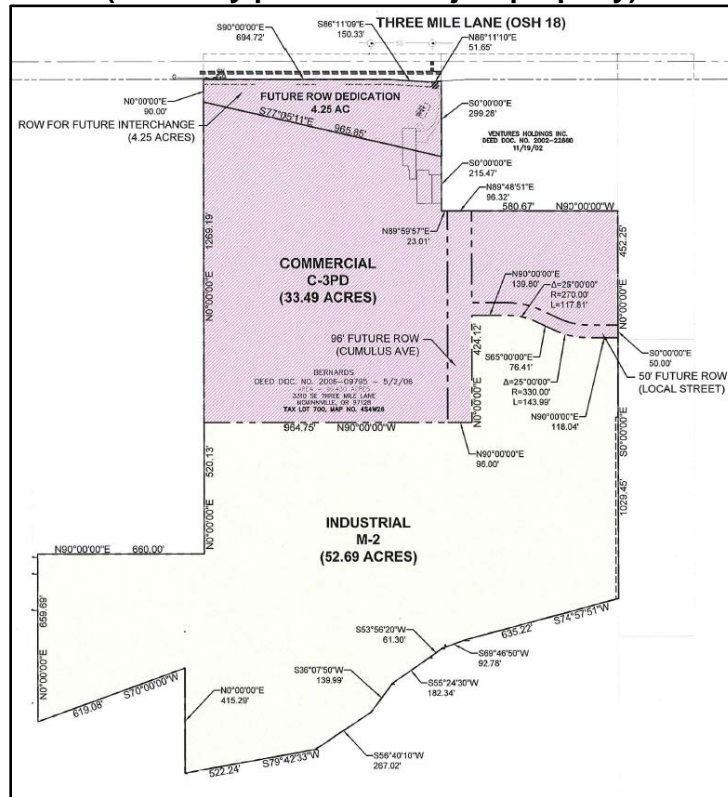
Figure 3. Zoning Map
(See Figure 4 for portion proposed for map amendment)



Attachments:

- Attachment 1 – Application and Attachments;
- Attachment 2 - DSL Wetland Land Use Notice Response

Figure 4. Applicant’s Proposed Map Amendment (Northerly portion of subject property).



II. CONDITIONS:

1. For transportation mitigation, the applicant shall provide additional information to the City and ODOT for their review and approval and shall obtain their approval for transportation mitigation of “significant effect” that affects the state and local systems. The specific designs of the mitigation improvements will need to be approved prior to the submittal of the preliminary development plan.
2. Prior to development, the applicant shall submit a preliminary development plan for the site to be reviewed in the same manner as a planned development amendment per Section 17.72 of McMinnville Municipal Code. The applicant will need to submit a development plan that meets all of the criteria of Section 17.51.030 (except that they only need to submit twelve (12) copies of the preliminary development plan and one electronic file). The preliminary development plan to be submitted shall also be subject to the design and development principles and standards attached as **Attachment 2**. If the 3MLAP is adopted prior to submittal of the preliminary development plan, then the most restrictive provisions shall apply.
3. Use and development of the property shall be subject to any overlays which apply to the property. Including the Three Mile Land Overlay and the Airport Overlay Zone.
4. Disposition of any wetlands on the property at the time of submittal of the development plan shall be subject to the design and development principles and standards, and subject to review and approval by DSL.

Attachments:

- Attachment 1 – Application and Attachments;
- Attachment 2 - DSL Wetland Land Use Notice Response

5. The applicant shall record a copy of the approving ordinance, disclosing these conditions of approval.

III. ATTACHMENTS:

1. CPA 2-20/ZC 3-20 Application and Attachments (on file with the Planning Department)
2. Development Standards Adopted as Condition of PD Overlay Approval
3. DSL Wetland Land Use Notice (on file with the Planning Department)
4. ODOT Comments

IV. COMMENTS:

Agency Comments

This matter was referred to the following public agencies for comment: McMinnville Fire Department, Police Department, Engineering Department, Building Department, Parks Department, Public Works Department, Waste Water Services, City Manager, and City Attorney; McMinnville Water and Light; McMinnville School District No. 40; Yamhill County Planning Department; Ziplly Fiber (formerly Frontier Communications); Comcast; Recology; Northwest Natural Gas; Oregon Department of Transportation; and Oregon Department of State Lands.

Responses were received from the following agencies, provided below:

- McMinnville Engineering Department
- McMinnville Building Department
- McMinnville Fire Department
- McMinnville Water & Light
- Oregon Department of State Lands
- Oregon Department of Transportation

- McMinnville Engineering Department:
No concerns from Engineering

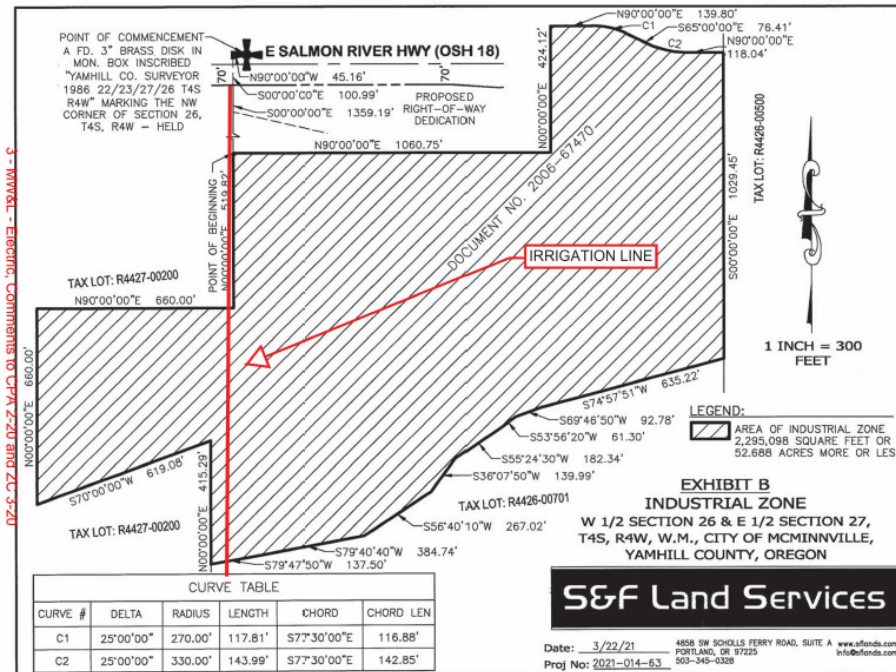
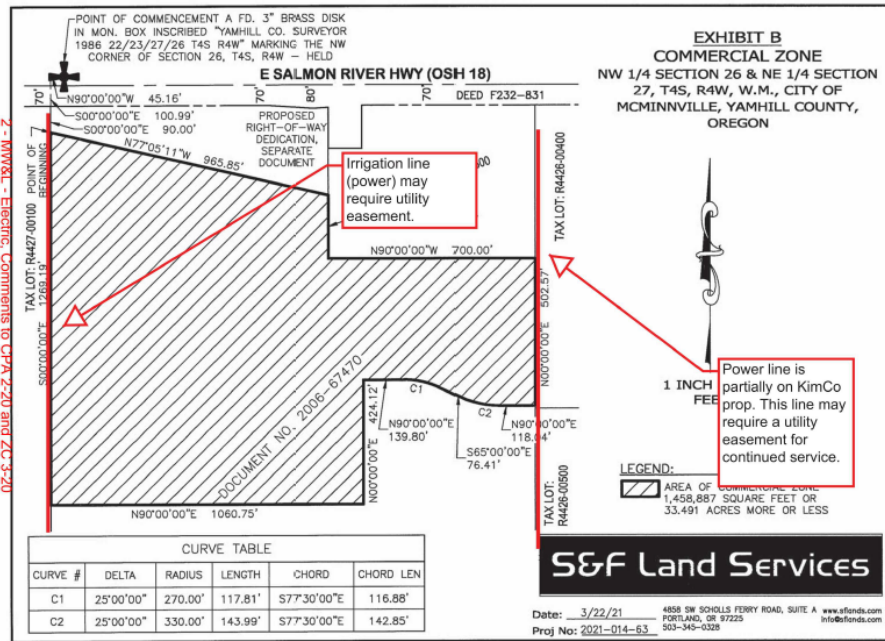
- McMinnville Building Department
No identified building code issues at this time.

- McMinnville Fire Department
No issues from the Fire Department for the development. Note: required access and water supply must be approved prior to development.

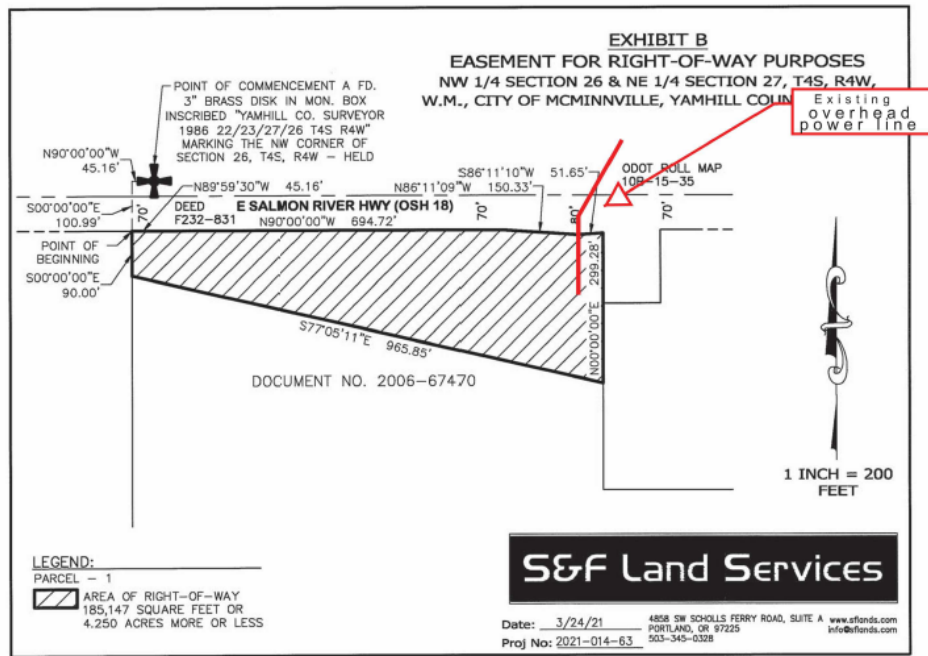
- McMinnville Water & Light
McMinnville Water & Light provided comments in mark-up text call-out boxes on pages excerpted from the application, summarized and shown below. (Some issues will apply at time of development, and not in conjunction with the map amendment).

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response



Attachments:
Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response



- Note provided on Page 9 of Applicant’s Narrative: “MWL’s ability to provide adequate electric service to the commercial and/or remaining industrial property is predicated upon the intensity of the development’s requirements. Additional infrastructure may be required to serve all or some of the site.”
- Note provided on Page 31 of Applicant’s Narrative: “In previous inquiries involving this parcel, MW&L has communicated that it may not have sufficient feeder/distribution capacity to serve a full development of the 90 acres. Significant upgrades to the existing electric system, or construction of a new feeder may be necessary.”
- Oregon Department of Transportation
 ODOT provided initial comments followed by a letter from ODOT Region 2 Traffic.

Initial Comments:

The following are provided as ODOT comments on the proposal:

1. The City and ODOT, working with the public and area stakeholders, have spent a great deal of time and effort developing the Three Mile Lane Area Plan which is close to completion. To respect those efforts, any mitigation required for this development should be consistent with the agreed upon recommendations of the city’s area plan.
2. No funding has been identified for any remaining improvements recommended in the original Three Mile Lane Refinement Plan or recommended improvements in the current plan discussed above. Therefore, any improvements necessary as a result of this project are considered development mitigation.
3. Region 2 Traffic staff are completing their review of the transportation impact analysis (TIA) and comments will be available tomorrow (May 4). I will forward those comments as soon as they are received.

Attachments:

- Attachment 1 – Application and Attachments;
- Attachment 2 - DSL Wetland Land Use Notice Response

Thank you again for the opportunity to comment on this proposal. These are ODOT's comments on the proposed CPA/ZC and should be included in the record of the project proceedings. You can contact me if you have any questions or need additional information.

Letter from ODOT Region 2 Traffic:

A May 4, 2021 letter from ODOT Region 2 Traffic is attached as **Attachment 4**.

- Oregon Department of State Lands

We have an OLD determination, WD2004-0629, and an old, now expired, delineation WD 2009-0013 showing wetlands on this property. We have no other records regarding this property. A new delineation will be needed. A WLUN submittal to verify this is appropriate. The proprietary program will review and comment separately if needed.

Public Comments

Notice of this request was mailed to property owners located within 300 feet of the subject site. No public testimony was submitted in advance of the hearing at the time this staff report was prepared.

V. FINDINGS OF FACT - PROCEDURAL FINDINGS

1. The application was submitted on December 21, 2020. The applicant submitted the necessary documentation to demonstrate a neighborhood meeting was noticed and held in accordance with the provisions of Section 17.72.095 of the Zoning Ordinance.
2. The application was initially deemed incomplete on January 20, 2021, and additional information was requested and submitted on March 29, 2021.
3. The application was deemed complete on April 8, 2021.
4. On April 8, 2021, notice of the application was provided to the Oregon Department of Land Conservation and Development (DLCD).
5. On April 13, 2021, notice of the application was referred to the following public agencies for comment in accordance with Section 17.72.120 of the Zoning Ordinance: McMinnville Fire Department, Police Department, Engineering Department, Building Department, Parks Department, Public Works Department, Waste Water Services, and City Manager; McMinnville Water and Light; McMinnville School District No. 40; Yamhill County Planning Department; Ziply Fiber (formerly Frontier Communications); Comcast; Recology; Northwest Natural Gas; Oregon Department of Transportation; and Oregon Department of State Lands. Notice of the application was also subsequently provided to the City Attorney.

Comments received from agencies are addressed in Section IV of the Decision Document.

6. On April 29, 2021, notice of the application and Planning Commission public hearing was mailed to property owners within 300 feet of the subject property in accordance with Section 17.72.120 of the Zoning Ordinance.
7. On May 11, 2021, notice of the application and Planning Commission public hearing was published in the newspaper in accordance with Section 17.72.120 of the Zoning Ordinance.
8. The Planning Commission held a public hearing on May 20, 2021 to consider the request.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

VI. FINDINGS OF FACT - GENERAL FINDINGS

1. **Location:**
 - o **Site Address:** Part of 3310 SE Three Mile Lane
 - o **Map & Tax Lot:** Part of R4426 00700
2. **Size:** The map amendment applies to 37.7 acres of a 90.4-acre property. The 37.7 acres includes 4.25 acres intended for right-of-way dedication for future highway improvements. The application also shows a portion of the area subject to the map amendment intended for a north-south extension of Cumulus Avenue and future east-west street connectivity.
3. **Comprehensive Plan Map Designation:** Industrial
4. **Zoning:**
 - a. **Subject Property:** M-2 (General Industrial)
 - b. **Surrounding Properties:**
 - i. **North:** Across Highway 18: Public right-of-way and R-4; M-2 south of the Highway to the north and east of the portion of the property proposed for amendment.
 - ii. **West:** M-L to the west of the portion of the property proposed for amendment
 - iii. **South:** To the south of the portion of the property proposed for amendment is the remainder of the property proposed to be retained with M-2 zoning.
 - iv. **East:** The property to the east of the portion of the property proposed for is zoned M-2. There is also an area of county AF-20 zoning within City limits to the southeasterly extent of the area proposed for amendment.
5. **Overlay Zones/Special Districts:**
 - a. Three Mile Lane Overlay (Ordinance 4131 as subsequently amended)
 - b. Airport Overlay
6. **Current Development:** The property is predominantly unimproved. There is an agricultural building on the northerly portion of the property to the east of NE Cumulus Avenue.
7. **Inventoried Significant Resources:**
 - a. **Historic Resources:** None
 - b. **Other:** Wetlands (See comments from DSL. Also, the Statewide Wetland identifies possible wetlands near the west property line (PEM1A)
8. **Other Features:**
 - a. **Slopes:** The property is generally level.
 - b. **Easements:** There are no public easements identified on the property.
 - c. **Trees:** There is a stand of trees near the OR-18 Highway frontage.
 - d. **Irrigation:** There is an irrigation line along the westerly portion of the property.
9. **Utilities:**
 - a. **Water:** A 24-inch distribution line is present along the OR-18 Highway frontage.
 - b. **Sewer:** 12" sanitary sewer is present along the north side of Highway OR-18, with an 8" crossing to the south side on the west side of NE Cumulus Avenue
 - c. **Stormwater:** There are storm drainage lines along OR-18 and along the south side of the property
 - d. **Power:** Overhead power is present near the NE corner of the property west of NE Cumulus Avenue and along the east side of the property.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

10. **Transportation and Access:** The property has frontage along Highway OR-18 and along the east side of the frontage of the NE Cumulus Avenue right-of-way which extends approximately 140' south of the OR-18 right-of-way. That right-of-way terminates on the adjacent property, with private access on that property continuing from the terminus of the right-of-way, extending to the south and east.

VII. CONCLUSIONARY FINDINGS:

The Conclusionary Findings are the findings regarding consistency with the applicable criteria for the application. The applicable criteria and standards for a Comprehensive Plan Map amendment and Zone Change are found in Chapter 17.74 of the Zoning Ordinance. The additional criteria for a Planned Development Overlay designation, including with a deferred development plan, are found in Chapter 17.51 of the Zoning Ordinance.

In addition, the goals, policies, and proposals in Volume II of the Comprehensive Plan are to be applied to all land use decisions as criteria for approval, denial, or modification of the proposed request. Goals and policies are mandated; all land use decisions must conform to the applicable goals and policies of Volume II. "Proposals" specified in Volume II are not mandated, but are to be undertaken in relation to all applicable land use requests.

Comprehensive Plan Volume II:

The following Goals, Policies, and Proposals from Volume II of the Comprehensive Plan provide criteria applicable to this request:

The implementation of many of the goals, policies, and proposals as they apply to quasi-judicial land use applications are accomplished through the provisions, procedures, and standards in the city codes and master plans, which are sufficient to adequately address applicable goals, policies, and proposals as they apply certain applications, and are not addressed below

The following additional findings are made relating to specific Goals and Policies:

CHAPTER II. NATURAL RESOURCES

GOAL II 1: TO PRESERVE THE QUALITY OF THE AIR, WATER, AND LAND RESOURCES WITHIN THE PLANNING AREA.

APPLICANT'S RESPONSE: No response.

FINDING: NOT APPLICABLE. The policies provided under this goal don't relate to a quasi-judicial application to amend the Comprehensive Plan map and zoning map. The land policies address issues such as unincorporated lands within the UGB, natural hazards, mineral and aggregate resources, and reclamation of aggregate site. The water policies address issues such as drinking water standards, floodplain, water quality standards, and drinking water source watershed protection. Other provisions of the Comprehensive Plan which address natural features such as wetlands, trees, etc. are addressed under the respective provisions herein.

CHAPTER III. CULTURAL, HISTORICAL, AND EDUCATION RESOURCES

HISTORIC PRESERVATION

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

GOAL III 2: TO PRESERVE AND PROTECT SITES, STRUCTURES, AREAS, AND OBJECTS OF HISTORICAL, CULTURAL, ARCHITECTURAL, OR ARCHEOLOGICAL SIGNIFICANCE TO THE CITY OF MCMINNVILLE.

GOAL III 3: INCREASE PUBLIC AWARENESS AND UNDERSTANDING OF McMINNVILLE’S HISTORY AND ITS HISTORIC PRESERVATION PROGRAM

Policies:

17.04. Increase interpretation effort’s of the City’s historic resources.

Proposals:

3.11. Support character and place identity of neighborhoods within the City through survey and historic context research to understand the unique history and their role relative to the growth and development of McMinnville. This can help support a connection between residents and their neighborhoods’ history, the preservation of buildings, and education through walking tours.

GOAL III 4: ENCOURAGE THE PRESERVATION AND REHABILITATION OF HISTORIC RESOURCES

GOAL III 5: DOCUMENT AND PROTECT HISTORIC RESOURCES

Proposals:

3.39. Evaluate a MPD (Multiple Property Designation) for “Historic Granaries of McMinnville.”

GOAL III 6: INCREASE HERITAGE TOURISM

Policies

17.14. Amplify the heritage tourism program for McMinnville.

APPLICANT’S RESPONSE REGARDING CHAPTER III GOALS, POLICIES, AND PROPOSALS: No response.

FINDING REGARDING CHAPTER III GOALS, POLICIES, AND PROPOSALS: SATISFIED WITH CONDITIONS. (Condition 2). The Goals, Policies, and Proposals of this Chapter of the Comprehensive Plan reflect the community’s desire to see it’s history and heritage reflected in the built environment and including increased interpretive efforts of it’s history and heritage. This theme is integral in the planning goals for the Three Mile Lane Area Plan (3MLAP). In addition, this chapter reflects an understanding of the economic development benefits of heritage tourism as a competitive advantage when the built form differentiates itself from other communities by incorporating it heritage into new development as growth occurs. In the Three Mile Lane area, this is reflected in the agricultural and aviation traditions. Retaining, interpreting, and incorporating elements of the heritage into the development of the property provide an authenticity which provides a competitive advantage.

As specified in Section 17.51.010(B)(2), the Council and Planning Commission shall set forth reasons for approval and the areas of concern that must be addressed when final plans are submitted.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

As a condition of approval, design and development principles and standards are attached to the PD overlay designation, specifying that this issue is to be addressed in the development plan, in order to address an area of concern that McMinnville retain its unique identify and that consistency with the Comprehensive Plan requires that this issue be addressed as part of a Planned Development. Specifically, development should address use of the existing agricultural building on the property and provide for landscape elements consistent with the agricultural character of the area.

This heritage is distinctly different from the history and heritage-based characteristics of the historic downtown area. The development plan should complement the downtown, and not duplicate or mimic the experience provided downtown.

CHAPTER IV. ECONOMY OF MCMINNVILLE

GOAL IV 1: TO ENCOURAGE THE CONTINUED GROWTH AND DIVERSIFICATION OF MCMINNVILLE'S ECONOMY IN ORDER TO ENHANCE THE GENERAL WELL-BEING OF THE COMMUNITY AND PROVIDE EMPLOYMENT OPPORTUNITIES FOR ITS CITIZENS.

COMMERCIAL DEVELOPMENT

GOAL IV 2: TO ENCOURAGE THE CONTINUED GROWTH OF MCMINNVILLE AS THE COMMERCIAL CENTER OF YAMHILL COUNTY IN ORDER TO PROVIDE EMPLOYMENT OPPORTUNITIES, GOODS, AND SERVICES FOR THE CITY AND COUNTY RESIDENTS.

Policies

21.00 *Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the City. Such uses shall locate according to the goals and policies in the comprehensive plan.*

APPLICANT'S RESPONSE: The 2013 EOA's conclusion about retail leakage, which is supported by the 2020 EOA and 3MLAP, is quoted above. The application summary findings in the "Property Description" and Project Background" sections and these findings describe the Property's suitability for capturing retail leakage and accommodate population-growth related retail demand. The proposed rezone will allow (upon subsequent land use reviews) which are not presently available or are underserved, to locate on the Property.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The application notes that retail leakage is occurring in part due to a lack of product offerings available in McMinnville. As a condition of approval, the development plan should include businesses that represent a mix of offerings, including those categories not already present in McMinnville to address retail leakage, expanding the mix of offerings rather than only duplicating those which are already available elsewhere in McMinnville, and which would not help address the retail leakage.

21.01 *The City shall periodically update its economic opportunities analysis to ensure that it has within its urban growth boundary (UGB) a 20-year supply of lands designated for commercial and industrial uses. The City shall provide an adequate number of suitable, serviceable sites in appropriate locations within its UGB. If it should find that it does not have an adequate supply of lands designated for commercial or industrial use it shall take corrective actions which may include, but are not limited to, redesignation of lands for such purposes, or amending the UGB to include lands appropriate for industrial or commercial use.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: In support of the requested land use change designation, the adopted 2013 EOA stated:

“As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.
- Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56)

The proposal to rezone 33.5 excess industrial acres to commercial is consistent with Policy 21.01 and the 2013 EOA. The Property is suitable for commercial zoning, as described in the “Suitability of the Property for Conversion from Industrial to Commercial” section of the application findings and detailed throughout these findings, the Property includes site characteristics which are conducive to capturing retail leakage and accommodating population growth-related retail, such as visibility from and access to Highway 18 and proximity to retail leakage markets.

FINDING: SATISFIED. As demonstrated by the EOA, McMinnville has a deficit of commercial land within the UGB, and redesignation of a portion of the industrial surplus to commercial consistent with the identified need is a corrective action that addresses the identified deficit.

21.02 *The City shall encourage and support the start up, expansion or relocation of high-wage businesses to McMinnville.*

1. *The City shall coordinate economic efforts with the Greater McMinnville Area Chamber of Commerce, McMinnville Industrial Promotions, McMinnville Downtown Association, Yamhill County, Oregon Economic and Community Development Department, and other appropriate groups.*
2. *Economic development efforts shall identify specific high-wage target industries and ensure that adequately sized, serviced, and located sites exist within the McMinnville urban area for such industries.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). This policy is included under the “**COMMERCIAL DEVELOPMENT**” section of Chapter IV of the Comprehensive Plan, so its references to “high-wage businesses” and “high-wage target industries” are not limited to industrial use “industries.” The design and development principles and standards document attached as a condition of approval includes some “recommendations” which are advisory only. One of the “recommendations” in the document is that, where there are multiple options to select businesses that will meet the same or similar need, including the need to offset retail

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

leakage on the property, the applicant is **encouraged** to select businesses which offer comparatively higher than average wages and/or benefits.

- 21.03 *The City shall support existing businesses and industries and the establishment of locally owned, managed, or controlled small businesses.*

APPLICANT’S RESPONSE: The 2013 EOA indicates that there is an annual leakage of \$192 million in consumer spending in Yamhill County to areas outside its boundaries (Pg 32) along with a shortfall of 36 commercially designated acres through 2033 (Pg 56). Furthermore, the 2013 EOA states local businesses suffer from “Limited duration of tourism visitation & low expenditure capture. While the McMinnville area and Yamhill County can now boast some of the state’s top tourism attractions, visitor spending does not appear to match visitation. This is because visitors tend not to stay overnight (but are often day visitors) and do not appear to be making substantial expenditures while in the area. A key challenge for the future is to provide more and better value-added opportunities for visitors to spend more time and money while visiting the McMinnville area.” (2013 EOA Pg 32-33)

The Property is suitable for capturing retail leakage documented in the 2013 EOA and further supported by the 2020 EOA and 3MLAP, as quoted above. Because the leakage sales are not being met in the market, existing businesses do not rely upon those sales, which means that satisfying the leakage will not impact existing business. Instead, existing businesses could be supported by retail development of the Property because consumers will stay within and be drawn to the market area.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2).

Note: *The 2013 EOA was completed prior to the formation of Visit McMinnville, McMinnville’s Destination Marketing Organization (DMO), and Visit McMinnville’s reports subsequent reports provided updated trends and visitor surveys regarding visitation and overnight stays.*

While direct conditions regarding specific tenants are beyond the scope of this quasi-judicial land use application, the development and design principles and standards attached as a condition of approval includes “recommendations” which are advisory only. Consistent with the objectives of the 3MLAP, it is **recommended** that the applicant seek out and market to local businesses consistent with the 3MLAP principles and seek to maximize the local multiplier effect. This may include (a) supporting existing local businesses, and (b) considering the needs of locally owned, managed, and controlled small businesses that may seek a location in the Three Mile Lane Area consistent with the vision of the Three Mile Lane Area Plan which is under development. This can be in seeking to provide a mix of retail, entertainment, and hospitality uses that serve as a destination that complements the downtown and existing local businesses, serving to increase day trips and also providing additional reasons for visitors to make overnight trips and stay longer. This includes providing a development and mix of uses that support and complement local businesses and purchase of locally made products, and the planned innovation campus, providing an experiential concept that is uniquely McMinnville. The mix of uses should also be supportive of the needs of the neighborhoods planned in the surrounding area.

While it is beneficial to reduce retail leakage, it is also beneficial to maximize the Local Multiplier Effect. In effect, it is beneficial for money to be spent in McMinnville to reduce leakage; however, it is also important that dollars spent in McMinnville stay and in McMinnville and be “recycled” in the local economy.

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

The applicant is encouraged to give preference to tenants that maximize the positive economic impact to McMinnville and the region, including through the “Local Multiplier Effect”

For example:

- Businesses that offer comparatively higher wages and benefits to employees
- Locally and/or regionally-owned businesses
- Businesses that use locally-based services, such as banking, accounting, marketing, printing, etc.
- Businesses that source local raw materials or products and/or sell local products
- Businesses that support community causes

21.05 *Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the city. Such uses shall locate according to the goals and policies in the comprehensive plan. (Ord.4796, October 14, 2003)*

APPLICANT’S RESPONSE: See response to Policy 21.00.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). While some businesses may seek to maximize their saturation with multiple locations within a community, that doesn’t necessarily reduce retail leakage if that strategy doesn’t offer the diversified offerings of commercial uses and services which are not presently available to McMinnville residents. In marketing to tenants, the applicant has control over whether the mix of uses and services provides increased saturation of uses that are already present in the community, or whether the mix of uses and services offers a diversified mix and choice, more effectively reducing leakage. That is not intended to be mutually exclusive from encouraging clusters of similar or complementary uses that offer choice, may attract a greater breadth of consumers, and may help McMinnville be recognized as a destination for a cluster. As a “recommendation” in the development and design standards attached a condition of approval, the applicant is encouraged to seek and market to these uses consistent with the intent of this policy and the 3MLAP.

GOAL IV 3: TO ENSURE COMMERCIAL DEVELOPMENT THAT MAXIMIZES EFFICIENCY OF LAND USE THROUGH UTILIZATION OF EXISTING COMMERCIALLY DESIGNATED LANDS, THROUGH APPROPRIATELY LOCATING FUTURE COMMERCIAL LANDS, AND DISCOURAGING STRIP DEVELOPMENT.

APPLICANT’S RESPONSE: The 2013 EOA concluded that utilizing existing commercially designated lands are not sufficient to accommodate the demonstrated commercial land need, and that re-designating excess industrial land is the solution.

No specific development is proposed with this application. Once a formal project application is submitted to the City, the requested Planned Development overlay designation means that the development will be subject to the Planned Development Ordinance. The project application will be open to public comment, be reviewed by the Planning Commission, and approved at the discretion of the City Council. The project layout and design elements shall be assessed at that time.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As addressed in the 2020 UGB amendment, the Comprehensive Plan provisions specify that part of the commercial land need is to be met by the redesignation of surplus industrial acreage to commercial acreage. Otherwise, a larger industrial surplus would remain, and the City would have needed to increase the size of the UGB by about 35 acres to meet the identified commercial land need. The Three Mile Lane Planning work underway identifies the need and suitability for commercially-designated land at this location. Those project goals are also consistent with

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

the Goal to discourage strip development. That is achieved through a master planned development which has good circulation and connectivity to the surrounding area, while limiting piecemeal development and uncoordinated access to major streets. With the development plan subject to the development and design standards attached to the PD overlay as a condition of approval addressing site design issues, this criterion is satisfied with conditions.

General Policies:

- 22.00 *The maximum and most efficient use of existing commercially designated lands will be encouraged as will the revitalization and reuse of existing commercial properties.*

APPLICANT'S RESPONSE: The types of retail that is leaking from the City requires parcels that range from 5 to 20+ acres. The City's inventory of vacant and partially vacant commercially designated properties in that size range are very limited: the 2013 EOA, Figure 27 indicates there is one vacant commercially designated parcels that is 11 acres, and 2 over 20 acres, one of which is the Evergreen Aviation & Space Museum, which is encumbered with a tourism-related PUD; 2020 EOA, Exhibit 39 shows that there are zero vacant or partially vacant C-3 lot. This lack of inventory led the s, and a single 12.1 acre partially vacant C-3 lot the 2013 EOA concluded that utilizing existing commercially designated lands was not sufficient to accommodate the demonstrated commercial land need, and that re- designating excess industrial land is the solution. Therefore, the ability of existing commercial lands to be revitalized and reused will not be impacted by this amendment, because the needed retail uses that will be facilitated by this amendment cannot be accommodated on existing commercially zoned parcels.

FINDING: SATISFIED. The designation or redesignation of lands to meet identified needs does not conflict with policies to encourage the most efficient use of existing commercially designated lands and/or the revitalization and reuse of existing commercial properties. Different commercial needs can be met through a balanced approach.

- 23.00 *Areas which could in the future serve as commercial sites shall be protected from encroachment by incompatible uses.*

APPLICANT'S RESPONSE: No response.

FINDING: SATISFIED. There is an identified need in the Comprehensive Plan for redesignation of industrial land to commercial designation. It is appropriate to redesignate land needed for commercial use, rather than leave it in an industrial designation if that is not the intended use.

Further, the Three Mile Lane planning work is intended to evaluate the broader area and apply appropriate designations and compatible mix of uses for a variety of types of residential, commercial, and industrial uses.

- 24.00 *The cluster development of commercial uses shall be encouraged rather than auto-oriented strip development. (Ord.4796, October 14, 2003)*

APPLICANT'S RESPONSE: No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance which will discourage auto-oriented strip development. The project application will be open to public comment, be reviewed by the Planning Commission, and approved at the

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

discretion of the City Council. The project layout and design elements shall be assessed at that time.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The provisions of Section 17.51.010(B)(2), regarding an initial PD overlay designation without an initial specific development plan provide that the Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.

As a condition of approval of the PD overlay, the accompanying development and design principles and standards specify that the development plan shall not be auto-oriented strip development, and they provide guidance on what that means for site development.

Locational Policies:

- 24.50 *The location, type, and amount of commercial activity within the urban growth boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord.4796, October 14, 2003)*

APPLICANT'S RESPONSE: The 2013 EOA identified a deficit of at least 36 acres of commercial land, which should be accommodated by redesignating excess industrial land. The 2013 EOA Conversion Suitability Factors (detailed above), as well as the 3MLAP and 2020 EOA, support the conclusion that the Property is suitable to accommodate retail leakage and growth-related retail uses. Among the Property's key site characteristics are site size, proximity to retail leakage markets, and visibility and access to Highway 18.

FINDING: SATISFIED. The proposed map amendment is consistent with the type and amount of commercial land needs identified in the Comprehensive Plan and EOA, and provides opportunities for site design consistent with the needed site sizes for a mix of commercial uses.

- 25.00 *Commercial uses will be located in areas where conflicts with adjacent land uses can be minimized and where city services commensurate with the scale of development are or can be made available prior to development.*

APPLICANT'S RESPONSE: The only existing adjacent uses south of Highway 18 are the Jackson Family Winery and the US Army National Guard Armory and Recruiting Office, which are located on M-2 and M-1 land east of the Property, farming activity on the M-L zoned land to the west, and farming activity on the land zoned M-2 to the south. Given the width of Highway 18, land north of the highway is not "adjacent" to the Property. Nevertheless, the uses north and north east of the Property include a senior housing development and single family development (R1 and R-4 zoning) and to the northwest is the Evergreen Aviation & Space Museum (C-3PD zoning).

The Property is within the City's Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft "includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

shopping and services for adjacent office and residential development.” (3MLAP Memorandum 6, pg 10-13)

For the development of larger scale retail like the Project is expected to include, the Property’s location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. The only potential offsite impact is traffic. As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. In comparison, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville “feel.”

Specifically for the Property, Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. **(Attachment XX)** The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address and minimize potential conflicts, if any, through revisions or conditions of approval, and any deficiencies in city services can be addressed through conditions of approval.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. The applicant has submitted a TIA with recommended mitigation for “significant effect” on transportation facilities to be addressed for consistency with the Transportation Planning Rule. ODOT has requested additional information for review of the TIA and must approve any proposed mitigation affecting Highway 18. Further, at the time of a specific development plan, specific traffic characteristics of the specific use, development, and access configuration will need to be evaluated and addressed consistent with the OR-18 Corridor Plan, as may be amended, and the 3MLAP.

FINDING: SATISFIED WITH CONDITIONS. (Condition 1 and 2). The Three Mile Lane planning work underway has evaluated several concepts and developed a preferred alternative which demonstrates how a mix of different types of residential, commercial, and industrial uses and land use designations can be planned in a compatible configuration that can minimize conflicts and complement one another. Consistency of the PD development plan with the development and design principles and standards attached as a condition of

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

approval provides for compatibility with the 3MLAP work underway.

Notice of the proposed amendment was provided to service providers, and no issues were identified capacity of major utilities including sewer, water, or stormwater drainage based on the proposed map amendment. Specific issues will need to be reviewed when a final development plan is submitted. McMinnville Water & Light noted some potential issues related to power that may need to be addressed at the time of development, depending on the scale and intensity for the specific development (some of which could potentially apply to a more intensive development of the property with industrial use, and are therefore not comments which are specifically applicable to the proposed map amendment.

- 26.00 *The size of, scale of, and market for commercial uses shall guide their locations. Large-scale, regional shopping facilities, and heavy traffic-generating uses shall be located on arterials or in the central business district, and shall be located where sufficient land for internal traffic circulation systems is available (if warranted) and where adequate parking and service areas can be constructed.*

APPLICANT'S RESPONSE: As detailed in response to Policy 25.00 the Property is an appropriate location for commercial development. No specific development is proposed with this application. However, the type of retail that could be developed on the property that is intended to capture retail leakage would likely be considered large-scale or a regional shopping facility by Policy 26.00. The Property is a suitable location for these commercial uses based upon Policy 25.00's and 26.00's considerations. The Property is located on OR 18, which McMinnville's TSP classifies as a Major Arterial and a State Highway. The 33.5 acre Property is adequately sized to accommodate internal traffic circulation and parking. For example, the site plan at Exhibit XX includes an internal road system.

FINDING: SATISFIED. The location of the proposed commercial designation is suitable for a commercial site of approximately 34 acres, and includes the characteristics described by this policy. The Applicant's response effectively supports this finding.

Design Policies:

- 29.00 *New direct access to arterials by large-scale commercial developments shall be granted only after consideration is given to the land uses and traffic patterns in the area of development as well as at the specific site. Internal circulation roads, acceleration/deceleration lanes, common access collection points, signalization, and other traffic improvements shall be required wherever necessary, through the use of planned development overlays.*
- 30.00 *Access locations for commercial developments shall be placed so that excessive traffic will not be routed through residential neighborhoods and the traffic-carrying capacity of all adjacent streets will not be exceeded.*
- 31.00 *Commercial developments shall be designed in a manner which minimizes bicycle/pedestrian conflicts and provides pedestrian connections to adjacent residential development through pathways, grid street systems, or other appropriate mechanisms. (Ord.4796, October 14, 2003)*
- 32.00 *Where necessary, landscaping and/or other visual and sound barriers shall be required to screen commercial activities from residential areas.*
- 33.00 *Encourage efficient use of land for parking; small parking lots and/or parking lots that are broken up with landscaping and pervious surfaces for water quality filtration areas. Large*

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

parking lots shall be minimized where possible. All parking lots shall be interspersed with landscaping islands to provide a visual break and to provide energy savings by lowering the air temperature outside commercial structures on hot days, thereby lessening the need for inside cooling. (Ord.4796, October 14, 2003)

APPLICANT’S RESPONSE (Policies 29-33): No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project’s access, bicycle/pedestrian connections, landscaping/screening, parking, layout and design elements shall be assessed at that time.

FINDING (Policies 29-33): SATISFIED WITH CONDITIONS. (Condition 2). The issues identified in these design policies are areas of concern identified by the Council and Planning Commission to be addressed as part of the Planned Development Overlay designation, which are included in development and design principles and standards attached as a condition of approval, and which are to be addressed during review of the specific PD development plan.

34.00 *The City of McMinnville shall develop and maintain guidelines concerning the size, placement, and type of signs in commercial areas.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). This issue is an area of concern identified by the Council and Planning Commission as part of the Planned Development Overlay designation, which is included in development and design principles and standards attached as a condition of approval, and to be addressed during review of the specific PD development plan, in addition to the sign standards of the Zoning Ordinance and Three Mile Lane overlay.

GOAL IV 4: TO PROMOTE THE DOWNTOWN AS A CULTURAL, ADMINISTRATIVE, SERVICE, AND RETAIL CENTER OF McMINNVILLE.

Downtown Development Policies

36.00 *The City of McMinnville shall encourage a land use pattern that:*

1. *Integrates residential, commercial, and governmental activities in and around the core of the city;*
2. *Provides expansion room for commercial establishments and allows dense residential development;*
3. *Provides efficient use of land for adequate parking areas;*
4. *Encourages vertical mixed commercial and residential uses; and,*
5. *Provides for a safe and convenient auto-pedestrian traffic circulation pattern.*

APPLICANT’S RESPONSE: This application for designating additional land as “Commercial” in Comprehensive Plan under a C-3 zoning district would potentially permit additional retail development within the City that cannot be accommodated in the format of downtown merchant spaces. One fundamental goal of this land use change application is to maintain

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

consumer spending within the City limits and will contribute to the overall vibrancy and well being of residents. Rather than cannibalizing retail dollars from the downtown district, alleviating the shortage of commercial acreage that is attributable to retail leakage could draw shoppers to McMinnville for a spectrum of needs that currently cannot be found within the City limits.

FINDING: SATISFIED. The Comprehensive Plan identifies a deficit of commercial land of approximately 35 acres, which the proposed amendment would address. The Downtown Development policies provide strategies for the vibrancy of the Downtown core area.

- 41.00 *The City of McMinnville shall encourage the expansion of retail and other commercial enterprises east of the railroad tracks and north and south of Third Street consistent with the adopted “Downtown Improvement Plan.”*

APPLICANT’S RESPONSE: The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville’s commercial business district. Despite this land being designated “Commercial” land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the area east of the railroad tracks and north and south of Third Street.

FINDING: SATISFIED. The Comprehensive Plan identifies a deficit of commercial land just over 35 acres, which the proposed amendment would address. The Downtown Development policies provide strategies for the vibrancy of the Downtown core area, including the area east of the railroad tracks and north and south of Third Street.

- 46.00 *The City shall work to implement the recommendations of the adopted “McMinnville Downtown Improvement Plan.”*

APPLICANT’S RESPONSE: The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville’s commercial business district. Despite this land being designated “Commercial” land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the McMinnville Downtown Improvement area.

FINDING: SATISFIED. The Comprehensive Plan identifies a deficit of commercial land just over 35 acres, which the proposed amendment would address. The Downtown Development policies provide strategies for the vibrancy of the Downtown core area.

Proposals:

- 6.00 *A planned development overlay should be placed on the large cluster commercial development areas and the entrances to the City to allow for review of site design, on-site and off-site circulation, parking, and landscaping. The areas to be overlaid by this designation shall be noted on the zoning map and/or comprehensive plan map.*

APPLICANT’S RESPONSE: The application requests a Planned Development overlay, consistent with Policy 6.00. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project's site design, on-site and off-site circulation, parking, and landscaping, shall be assessed at that time.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The City is the planning process for the Three Mile Lane Area Plan intended to address the overall development of the area, including large commercial development areas. As a condition of approval of the PD overlay, development and design principles and standards specify issues that will need to be addressed at the time of submittal of a specific development plan. Those standards include provisions addressing site design, circulation, parking, and landscaping. Those issues are also “areas of concern” that must be addressed when final development plans are submitted.

8.00 *The City of McMinnville should encourage the development of a commercial planned development center in the southwestern portion of the city large enough in scale to serve the needs of the area's population. The center should be in proximity of the intersection of Old Sheridan Road, U.S. Highway 99W, and Oregon Highway 18.*

APPLICANT'S RESPONSE: This area is already zoned C-3, which allows large scale commercial development, and is currently undeveloped. The 2013 EOA included this area as a part of the City's inventory of available commercial land and concluded that there is nevertheless a 35.8 acre deficit. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the southwestern portion of the city.

FINDING: NOT APPLICABLE. This proposal is separate from, and in addition to, the need to designate an additional 35.8-acres of commercial land to address the identified deficit.

INDUSTRIAL DEVELOPMENT

GOAL IV 5: TO CONTINUE THE GROWTH AND DIVERSIFICATION OF McMINNVILLE'S INDUSTRIAL BASE THROUGH THE PROVISION OF AN ADEQUATE AMOUNT OF PROPERLY DESIGNATED LANDS.

APPLICANT'S RESPONSE: In support of the requested land use change designation, the adopted 2013 EOA stated:

“As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.
- Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56). Figure 27 of the 2013 EOA indicates that there are 5 industrial parcels that are 20+ acres in size, so the City will continue to have an adequate supply of larger industrial parcels if the Property is converted from Industrial to Commercial.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

FINDING: SATISFIED. The Comprehensive Plan and EOA identify a surplus of industrially-designated land. There is sufficient industrial acreage to redesignate the proposed area to a commercial designation while retaining a surplus of industrially designated land.

GOAL IV 6: TO INSURE INDUSTRIAL DEVELOPMENT THAT MAXIMIZES EFFICIENCY OF LAND USES, THAT IS APPROPRIATELY LOCATED IN RELATION TO SURROUNDING LAND USES, AND THAT MEETS NECESSARY ENVIRONMENTAL STANDARDS.

Locational Policies

49.00 *The City of McMinnville shall use its zoning and other regulatory methods to prevent encroachment into industrial areas by incompatible land uses.*

APPLICANT’S RESPONSE: The 2013 EOA concluded that there is an excess amount of industrial land. Converting some of that surplus land to commercial will have no impact on the uses permitted in the remaining industrial land. Further, 3MLP that is currently moving through the community and legislative review process recommends a mix of commercial and industrial uses within this area, specifically focusing commercial districts along the OR-18 frontage.

FINDING: SATISFIED. The Applicant’s response addresses this policy.

49.01 *The City shall designate an adequate supply of suitable sites to meet identified needs for a variety of different parcel sizes at locations which have direct access to an arterial or collector street without having to pass through residential neighborhoods. (Ord. 4961, January 8, 2013)*

49.02 *The location, type, and amount of industrial activity within the Urban Growth Boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord. 4961, January 8, 2013)*

50.00 *The City of McMinnville shall encourage industrial uses to locate adjacent to the airport and south of Three Mile Lane, adjacent to the existing Riverside Drive industrial area, and in existing industrial areas through the proper designation of lands on the comprehensive plan and zoning maps. Comprehensive plan and/or zoning map changes to industrial designations in other areas may be granted if all the applicable goals and policies of the plan can be met.*

APPLICANT’S RESPONSE: Policies 49.01, 49.02 and 50.00 are directed at the suitability of sites for industrial development. The 2013 EOA has “recommended to better match the commercial inventory to current and anticipated needs include re-designating a portion of the excess industrial inventory to commercial use including focus on needs for commercial sites across a range of size classes, increasing emphasis on redevelopment and density of development, and greater flexibility of use for mixed commercial/industrial areas. Also needed may be parcelization of some larger 20+ acre industrial sites for which there is no readily apparent demand to meet demonstrated needs for smaller industrial sites, especially in the 1-9- acre size ranges.” (2013 EOA, Pg 67).

The 2013 EOA Conversion Suitability Factors (detailed above) confirm that the Property has site characteristics that are more appropriate for commercial development than industrial development. Redesignating the Property from Industrial to Commercial will not impact the adequacy of the supply of suitable industrial sites; the City will continue to have a surplus of over 200 acres of industrial land, including four parcels that are 20+ acres. 2013 EOA, Figure 27.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

The Property is within the City's Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft "includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development." (3MLAP Memorandum 6, pg 10-13)

FINDING: SATISFIED. Policies 49.01, 49.02, and 50.00 address industrial land needs and attributes of land to be designated or redesignated for industrial use. The proposed amendment is to redesignate industrial land to commercial land. The amount of land to be redesignated is based on the need identified in the Comprehensive Plan, and retains an industrial surplus.

51.00 *The City of McMinnville shall encourage the location of airport-related industrial uses only on the industrial land which is adjacent to the airport. Those lands so reserved shall be designated in the planned development overlay covering this area.*

APPLICANT'S RESPONSE: The Property is near the airport, but does not abut it, and is separated from the airport by a public park (Galen McBee Airport Park), the South Yamhill River, a military base and the Jackson Family Winery. The portion of the Property closest to the airport is the southerly 52.5 acres that will retain an Industrial land use designation.

FINDING: SATISFIED. The proposed amendment doesn't redesignate industrial land adjacent to the airport.

52.00 *The City of McMinnville shall create a new "limited light industrial" zone which shall be placed on the industrial areas on the south side of Three Mile Lane in those areas where residential development is expected on the north side of the road. The new zone will allow only those types of industrial uses that will not conflict with the residential uses.*

APPLICANT'S RESPONSE: Policy 52.00 is directed at the City pursuing a legislatively created new zoning designation. Policy 52.00 reflects the City's desire to minimize conflicts with residential uses north of Three Mile Lane. As detailed elsewhere in these findings, the uses allowed by the proposed C-3PD designation are more compatible with residential uses than those uses permitted allowed by the current M-3 zoning, which is consistent with Policy 52.00. Further, the City is in the process of re-evaluating the Three Mile Lane Area through the 3MLAP. That city-led long range planning process is the forum for addressing Policy 52.00.

FINDING: NOT APPLICABLE. The proposed amendment is to redesignate land from industrial to commercial. A limited light industrial zone wouldn't be applicable to commercial land.

CHAPTER V. HOUSING AND RESIDENTIAL DEVELOPMENT

APPLICANT'S RESPONSE: No response.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

FINDING: NOT APPLICABLE. Chapter V addresses residential use, residential designations, and residential planned developments, which are not applicable to the proposed map amendment from industrial to commercial.

CHAPTER VI. TRANSPORTATION SYSTEM

GOAL VI 1: TO ENCOURAGE DEVELOPMENT OF A TRANSPORTATION SYSTEM THAT PROVIDES FOR THE COORDINATED MOVEMENT OF PEOPLE AND FREIGHT IN A SAFE AND EFFICIENT MANNER.

MASS TRANSPORTATION

Policies:

100.00 *The City of McMinnville shall support efforts to provide facilities and services for mass transportation that serve the needs of the city residents.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As a condition of the Planned Development overlay designation, the development and design principles and standards provide for coordination with the transit provider and provision of a conveniently located transit stop as part of the final PD development plan.

TRANSPORTATION DISADVANTAGED

Policies:

106.00 *The City of McMinnville, through public and private efforts, shall encourage provision of facilities and services to meet the needs of the transportation disadvantaged.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As a condition of the Planned Development overlay designation, development and design principles and standards will provide for coordination and provision of a conveniently located transit stop as part of the final PD development plan. Additional provisions address convenient and comfortable transportation facilities for other modes for all ages and abilities.

AIR

115.00 *The City of McMinnville shall encourage the development of compatible land uses in the vicinity of the airport as identified in current and future airport and comprehensive plans.*

APPLICANT’S RESPONSE: The Property is within .5 miles of the McMinnville Municipal Airport. While the Airport Layout Plan completed in 2004 discourages the expansion of residential use near the airport and encourages agricultural and manufacturing areas, it does not explicitly address commercial use (McMinnville Municipal Airport Layout Plan Study – December 2004, 1-9). The request to add a commercial element through the land use designation and zoning change would not run incongruent to the future sustainability and potential expansion of the airport.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

FINDING: SATISFIED. The Three Mile Lane Area Planning work underway addresses properties in the vicinity of the airport. Current comprehensive plan policies also address industrial use of properties adjacent to the airport. Some of these policies focus on the economic development aspect of compatible uses adjacent to the airport. The Airport Overlay zone also addresses safety and compatibility issues in the vicinity of the airport. Any development will be required to comply with the provisions of the different sub-areas of the Airport Overlay Zone, which include use, height, radio interference, and other safety considerations.

STREETS

119.00 *The City of McMinnville shall encourage utilization of existing transportation corridors, wherever possible, before committing new lands.*

APPLICANT’S RESPONSE: The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

FINDING: SATISFIED. The proposed commercial designation is located where it would be served by existing and planned major transportation corridors identified in the Transportation System Plan. Additional streets will be needed for local connectivity, to be addressed at time of submittal of a final development plan, and to address connectivity needs to be consistent with those to be identified in the Three Mile Lane Area Planning work underway.

123.00 *The City of McMinnville shall cooperate with other governmental agencies and private interest to insure the proper development and maintenance of the road network within the urban growth boundary.*

APPLICANT’S RESPONSE: Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The scope, methodology, findings and recommendations have been coordinated with the City of McMinnville and the Oregon Department of Transportation (ODOT). In addition, at the time development is proposed on the Property in the future, the City of McMinnville will notice the ODOT, surrounding project owners, and the city at-large, issue a staff report and conduct planning commission and city council hearings to assess that proper development and maintenance of the road network is ensured.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. The City is coordinating with ODOT in the 3MLAP process, and will coordinate review to ensure mitigation is consistent with the 3MLAP preferred transportation alternative and that interim mitigation measures don’t conflict with the 3MLAP alternative.

The applicant has submitted a TIA with recommended mitigation for “significant effect” on transportation facilities to be addressed for consistency with the Transportation Planning Rule. ODOT has requested additional information for review of the TIA and must approve

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

any proposed mitigation affecting Highway 18. Further, at the time of a specific development plan, specific traffic characteristics of the specific use, development, and access configuration will need to be evaluated and addressed consistent with the OR-18 Corridor Plan, as may be amended, and the 3MLAP.

FINDING: SATISFIED WITH CONDITIONS. (Condition 1 and 2). The condition of approval for the development and design principles and standards also specify that development of transportation facilities necessary to serve the final PD development plan will be required to be consistent with applicable transportation plans and development standards, and connectivity standards.

BIKE PATHS

Policies:

- 131.00 *The City of McMinnville shall encourage development of bicycle and footpaths in scenic and recreational areas as part of future parks and activities.*
- 132.00 *The City of McMinnville shall encourage development of subdivision designs that include bike and foot paths that interconnect neighborhoods and lead to schools, parks, and other activity areas.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The final development plan will need to address connectivity for all modes, including potential bicycle and footpath connections to amenities and neighborhoods, consistent with the 3MLAP if adopted, and consistent with the development and design principles and standards attached as a condition of approval.

Complete Streets

- 132.24.00 *The safety and convenience of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers shall be accommodated and balanced in all types of transportation and development projects and through all phases of a project so that even the most vulnerable McMinnville residents – children, elderly, and persons with disabilities – can travel safely within the public right-of-way. Examples of how the Compete Streets policy is implemented:*
1. *Design and construct right-of-way improvements in compliance with ADA accessibility guidelines (see below).*
 2. *Incorporate features that create a pedestrian friendly environment, such as:*
 - a. *Narrower traffic lanes;*
 - b. *Median refuges and raised medians;*
 - c. *Curb extensions (“bulb-outs”);*
 - d. *Count-down and audible pedestrian signals;*
 - e. *Wider sidewalks;*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- f. *Bicycle lanes; and*
 - g. *Street furniture, street trees, and landscaping*
3. *Improve pedestrian accommodation and safety at signalized intersections by:*
- a. *Using good geometric design to minimize crossing distances and increase visibility between pedestrians and motorists.*
 - b. *Timing signals to minimize pedestrian delay and conflicts.*
 - c. *Balancing competing needs of vehicular level of service and pedestrian safety.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final PD development plan, the street design, intersections, connectivity, and pedestrian amenities will be reviewed for consistency with these elements, to provide for safe, convenient, and comfortable facilities for all modes and all ages and abilities. The PD development plan will be reviewed for consistency with the development and design principles and standards attached as a condition of approval, and with the 3MLAP if adopted at the time of submittal of the development plan.

MULTI-MODAL TRANSPORTATION SYSTEM

132.25.00 *The transportation system for the McMinnville planning area shall consist of an integrated network of facilities and services for a variety of motorized and non-motorized travel modes. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final PD development plan, the proposal will be reviewed for circulation and connectivity to address motorized and nonmotorized travel modes, consistent with the 3MLAP if adopted and with the development and design standards attached as a condition of approval.

CONNECTIVITY AND CIRCULATION

132.26.00 *The vehicle, pedestrian, transit, and bicycle circulation systems shall be designed to connect major activity centers in the McMinnville planning area, increase the overall accessibility of downtown and other centers, as well as provide access to neighborhood residential, shopping, and industrial areas, and McMinnville’s parks and schools.*

APPLICANT’S RESPONSE: No response.

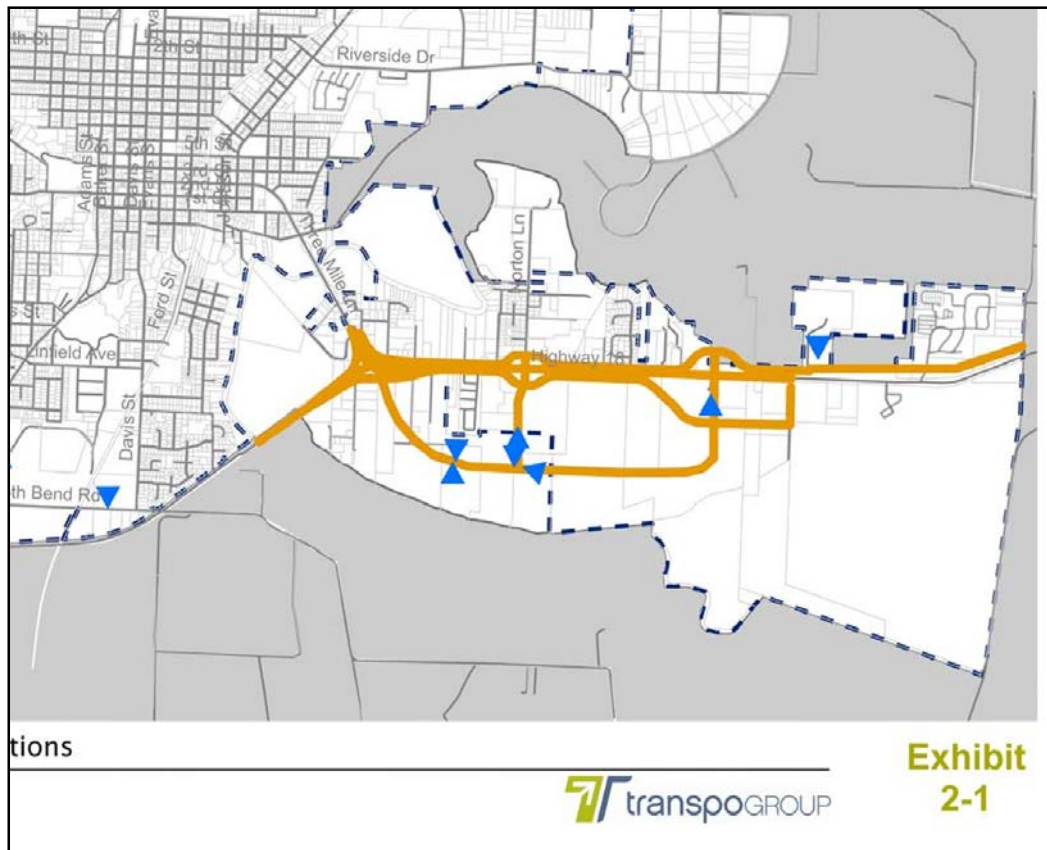
FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final PD development plan, the proposal will be reviewed for circulation and connectivity to and from the site and within the site, consistent with the 3MLAP if adopted and with the development and design standards attached as a condition of approval.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

132.26.05 *New street connections, complete with appropriately planned pedestrian and bicycle features, shall be incorporated in all new developments consistent with the Local Street Connectivity map.*

APPLICANT’S RESPONSE: The Local Street Connectivity (Exhibit 2-1 of the TSP) map identifies future east/west frontage road and back road connections south of OR 18, as shown in the figure below. The subsequent development of the Property under the proposed zoning will require the development of collector streets consistent with the transportation system plan and McMinnville (OR-18) Corridor Refinement Plan which require sidewalks and bicycle lane. The proposed development plan will need to show these connections as well as how pedestrians and bicyclists access the buildings on-site.



FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of the final development plan, the proposal will need to include complete street connections, consistent with connectivity requirements, consistent with the 3MLAP if adopted and with the development and design standards attached as a condition of approval.

Note: *The Local Street Connectivity Map shows critical points of local street connectivity where specific points of local street connectivity are critical for continuation of a street connection, but where the connection isn’t classified as a higher order street such as a collector or arterial and shown in the map of collectors and arterials. The Local Street Connectivity Map does not show all local street connections that may be needed to address other connectivity requirements to and within the subject property and surrounding areas and properties.*

Supportive of General Land Use Plan Designations and Development Patterns

Attachments:
 Attachment 1 – Application and Attachments;
 Attachment 2 - DSL Wetland Land Use Notice Response

132.27.00 *The provision of transportation facilities and services shall reflect and support the land use designations and development patterns identified in the McMinnville Comprehensive Plan. The design and implementation of transportation facilities and services shall be based on serving current and future travel demand—both short-term and long-term planned uses. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed transportation facility modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan. Development will include construction of the collector streets identified in the TSP Exhibit 2-1 (frontage and back roads). As part of the design of these roadways, sidewalks and bicycle lanes will be provided.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. The City is coordinating with ODOT in the 3MLAP process, and will coordinate review to ensure mitigation is consistent with the 3MLAP preferred transportation alternative and that interim mitigation measures don’t conflict with the 3MLAP alternative. Transportation analysis conducted in conjunction with draft 3MLAP work indicates that adequate transportation capacity to accommodate the preferred land use designations and development patterns analyzed through that work with specified mitigation.

An area of concern to be addressed at the time of submittal of the final PD development plan is how and whether the proposed site plan, circulation, and access proposal is consistent with and supportive of the land use plan designation and development patterns in the Three Mile Lane Plan work currently underway. This is an Area of Concern that shall be addressed at the time of final development plan – the circulation system shall be consistent with the work of the 3MLAP.

The applicant has submitted a TIA with recommended mitigation for “significant effect” on transportation facilities to be addressed for consistency with the Transportation Planning Rule. ODOT has requested additional information for review of the TIA and must approve any proposed mitigation affecting Highway 18. Further, at the time of a specific development plan, specific traffic characteristics of the specific use, development, and access configuration will need to be evaluated and addressed.

FINDING:: SATISFIED WITH CONDITIONS. (Condition 1 and 2). The condition of approval for the development and design principles and standards also specify that development of transportation facilities necessary to serve the final PD development plan will be required to be consistent with transportation plans and development standards, and connectivity standards.

GROWTH MANAGEMENT

132.29.00 *The construction of transportation facilities in the McMinnville planning area shall be timed to coincide with community needs, and shall be implemented so as to minimize*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

impacts on existing development. Prioritization of improvements should consider the City's level of service standards.

- 132.29.05 *Off-site improvements to streets or the provision of enhanced pedestrian and bicycle facilities in the McMinnville planning area may be required as a condition of approval for land divisions or other development permits.*

APPLICANT'S RESPONSE: No response.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. To address any significant effect on transportation facilities, ODOT requires additional information to review the TIA and must approve mitigation for TPR compliance. The City will coordinate with ODOT to ensure mitigation is consistent with the 3MLAP work underway. In addition, at the time of review of the PD final development plan, conditions of approval for specific transportation facilities will be included to ensure provision of transportation facilities and improvements necessary to serve the development and meet the City's performance standards as well as ODOT's mobility standards.

Off-site improvements, proportional to the proposed map amendment, which are necessary to address safety or mobility issues, will be required a condition of approval.

AESTHETICS AND STREETSCAPING

- 132.38.00 *Aesthetics and streetscaping shall be a part of the design of McMinnville's transportation system. Streetscaping, where appropriate and financially feasible, including public art, shall be included in the design of transportation facilities. Various streetscaping designs and materials shall be utilized to enhance the livability in the area of a transportation project. (Ord. 4922, February 23, 2010)*

APPLICANT'S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of submittal of the final development plan, the proposal will be reviewed for consistency with the policies of the Comprehensive Plan discussed above. The intent of the Three Mile Lane Area plan underway is to provide a unique identity of the Three Mile Lane area that reflects McMinnville's heritage within the context of the area. As a result, streetscape and on-site areas will be reviewed to incorporate thematic treatments consistent with the objectives of the Three Mile Lane Area plan to reflect this heritage through public art, landscaping and streetscaping treatments, interpretive information, and incorporation of existing agricultural features into the design of the streetscape and property. The development and design principles and standards adopted as conditions of approval address this issue).

GROWTH MANAGEMENT

- 132.40.00 *Mobility standards will be used to evaluate the transportation impacts of long-term growth. The City should adopt the intersection mobility standards as noted in Chapter 2 of the Transportation System Plan. (Ord. 4922, February 23, 2010)*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: The TIA study intersections within the City’s jurisdiction and ODOT’s jurisdiction and applied each jurisdiction’s applicable mobility standard as a basis for recommending mitigation measures. See, for example, TIA Table 2 and 18.

FINDING: SATISFIED WITH CONDITIONS. The TIA provides information used to evaluate the transportation impacts, and it shows consistency with performance standards with mitigation measures. The specific design, circulation, connectivity, and access configuration of the final development plan will need to be reviewed for consistency with mobility standards at the time it is submitted and reviewed.

132.40.05 *Conditions of Approval – In accordance with the City’s TSP and capital improvements plan (CIP), and based on the level of impact generated by a proposed development, conditions of approval applicable to a development application should include:*

1. *Improvement of on-site transportation facilities,*
2. *Improvement of off-site transportation facilities (as conditions of development approval), including those that create safety concerns, or those that increase a facility’s operations beyond the City’s mobility standards; and*
3. *Transportation Demand management strategies*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. At the time of submittal of a specific development plan, conditions will be attached to the development as necessary to address the level of impact.

CIRCULATION

132.41.30 *Promote Street Connectivity – The City shall require street systems in subdivisions and development that promote street connectivity between neighborhoods.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). At the time of submittal of the final development plan, the plan will be reviewed for connectivity for all modes between the site and the surrounding land uses and neighborhoods consistent with the Three Mile Lane planning work underway. Connectivity between the site and surrounding areas for all modes shall also be well-connected within the development site. This issue is addressed in the development and design principles and standards.

SYSTEMS DEVELOPMENT

132.51.15 *Connecting Shared-Use Paths – The City will continue to encourage the development of a connecting, shared-use path network, expanding facilities along parks and other rights-of-way. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The final development plan will be reviewed for convenient connectivity with shared shared use path system facilities identified through the Three Mile Lane area planning process. The site will be a key destination and attractor, and it should be well-connected to such a system, and nearby neighborhoods, and nearby parks and recreational destinations connected to that system. The connection to the system will need to consider the desirability of the system on-site, and it should be treated as

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

an amenity connected to pedestrian gathering places on the property. It should be more than an isolated circulation route through vehicular parking lots and vehicular circulation areas. This issue is addressed in the development and design principles and standards.

TRANSIT SYSTEM PLAN

132.57.05 *Transit-supportive Urban Design – Through its zoning and development regulations, the City will facilitate accessibility to transit services through transit-supportive streetscape, subdivision, and site design requirements that promote pedestrian connectivity, convenience, and safety. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The final development plan will be reviewed for provision of a transit stop, coordinated the current and planned transit routes, that will support safe, convenient pedestrian access from the transit stop to on-site destinations for all ages and abilities. This issue is addressed in the development and design principles and standards.

FREIGHT MOBILITY, AIR, RAIL AND PIPELINE PLANS

132.59.10 *Airport area land use – Do not permit land uses within airport noise corridors that are not noise compatible, and avoid the establishment of uses that are physical hazards to air traffic at the McMinnville Airport. (Ord. 4922, February 23, 2010)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. This policy is addressed through the Airport Overlay Zone and its sub-areas. Specific use and development will be required to comply with the standards of the Airport Overlay Zone.

McMinnville TSP Implementation

132.62.00 *TSP as Legal Basis – The City of McMinnville shall use the McMinnville TSP as the legal basis and policy foundation for actions by decision makers, advisory bodies, staff, and citizens in transportation issues. The goals, objectives, policies, implementation strategies, principles, maps, and recommended projects shall be considered in all decision-making processes that impact or are impacted by the transportation system.*

APPLICANT’S RESPONSE: The proposed rezone and subsequent development of the subject property is consistent with the goals, objectives, policies, implementation strategies, principles, maps, and recommended projects within the McMinnville TSP as shown below:

Goal: To encourage development of a transportation system that provides for the coordinated movement of people and freight in a safe and efficient manner.

The proposed rezone and subsequent commercial development work in the direction of achieving this goal by providing intersection improvements to increase the safety and traffic flow of the surrounding roadway network for all users. The proposed modifications are consistent with the implementation strategies (McMinnville (OR-18) Corridor Refinement Plan) as shown in Exhibit 4-6 (Projects and Programs) in the

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

TSP, as well as the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plan maps set forth in the TSP.

Policies:

1. Transportation System Plan

The proposed site plan will be developed consistent with the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plans set forth in the TSP. The proposed rezoning and subsequent commercial development will fund transportation improvements which will work toward implementing the TSP.

2. Complete Streets

The traffic signals and intersection improvements identified in the TIA will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines. Site development will aim to create a pedestrian and bicycle friendly environment.

3. Multi-Modal Transportation System

The site plan review process will ensure that the proposed site is consistent with the Local Street Connectivity map and provides connections for pedestrians and bicycles.

4. Connectivity and Circulation

The Local Street Connectivity map identifies a future east/west connection south of OR 18. The site plan will be developed consistent with this plan and providing this connection.

Pedestrian and bicycle facilities will be provided as appropriate for each roadway classification. Site development will preserve right-of-way for design of a future interchange at OR 18 and Cumulus Avenue.

5. Supportive of General Land Use Plan Designations and Development Patterns

The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

6. Regional Mobility

The location of the proposed site along OR 18 provides ease of access to regional centers such as downtown McMinnville, Lafayette, and Newberg. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may reduce regional transportation demand by

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

capturing existing trips that travel to the greater Portland and Salem area for these uses today.

7. Growth Management

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area. Additionally, the improvements recommended in the TIA bring local intersections (some of which do not meet level of service standards under existing conditions) up to standard. The proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

8. Transportation System and Energy Efficiency

The location of the proposed site along OR 18 provides opportunity for transportation system and energy efficiency with easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of- direction travel. In addition, the proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

9. Transportation Safety

The traffic impact analysis (TIA) recommends modifications to improve the safety of the OR 18 corridor and other intersections within the study area.

10. Public Safety

The site plan review process will ensure that emergency vehicle access is provided on the proposed site. In addition, the safety improvements identified in the TIA should result in crash reductions as a number of intersections within the study area.

11. Accessibility for Persons with Disabilities

On-site connections, as well as traffic signal and intersection improvements identified in the TIA, will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines.

12. Economic Development

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area.

13. Livability

The site plan review process will incorporate multi-modal facilities to increase the livability of the greater McMinnville area.

14. Health and Welfare

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

The proposed site will be accessible via many modes of transportation, including transit and active transportation (by bicycle and by foot).

15. Transportation Sustainability

The location of the proposed site along OR 18 provides easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today. The traffic impact analysis (TIA) recommends some modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site.

16. Aesthetics and Streetscaping

The site plan review process will incorporate aesthetics and streetscaping to enhance visitor experience and livability of the greater McMinnville area.

17. Intergovernmental Coordination and Consistency

Kittelson & Associates, Inc., prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The methodology, findings and recommendations have been coordinated with the City of McMinnville and ODOT Region 2.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. While the TSP serves as the legal basis for decisions, with a Planned Development request the TSP must also be considered in conjunction with the Planned Development provisions of 17.51.010(B)(1) and (2) and the context provided therein. One of the predominant “unique characteristics” which must be present under (B)(1) to authorize a PD overlay designation with a deferred development plan per Section 17.51.010(B) is the nature of the 3MLAP work underway for this area. One of the reasons for approval under this section and areas of concern that must be addressed in the development plan under (B)(2) is the ability to treat the application as timely and orderly while recognizing that the 3MLAP work underway could potentially result in revisions to certain aspects of the TSP, and that the deferred PD development plan for the subject property should be consistent with the efforts of the 3MLAP, which may result in amendments or refinements to certain aspects of the TSP.

Further, while the City and ODOT were involved in the scoping of the TIA, ODOT has indicated they need additional information for review of the TIA, and must approve mitigation to OR-18. The City will also coordinate with ODOT to ensure mitigation is also consistent with the draft preferred transportation alternative in the 3MLAP work underway.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- 132.62.20 *TSP Use in Review of Land Use Actions – The City of McMinnville shall consider and apply the goals, policies, planning principles, recommended projects, implementation strategies, and maps contained in McMinnville TSP in the review of land use actions and development applications.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. As evidenced in this review of the proposed map amendment, the applicable goals and policies serve as review criteria, and the planning principles, recommended projects, implementing strategies, provide the basis for applying the goals and policies. At the time of submittal of a final PD development plan, the TSP will also be used to evaluate the development plan. In addition, the proposal shall be consistent with the development and design principles and standards attached as a condition. If the 3MLAP subsequently amends the TSP, the PD development plan will need to be consistent with the 3MLAP, and mitigation will be reviewed to ensure it doesn’t conflict with potential amendments to the TSP resulting from the 3MLAP work. this manner to review the development plan.

CHAPTER VII. COMMUNITY FACILITIES AND SERVICES

GOAL VII 1: TO PROVIDE NECESSARY PUBLIC AND PRIVATE FACILITIES AND UTILITIES AT LEVELS COMMENSURATE WITH URBAN DEVELOPMENT, EXTENDED IN A PHASED MANNER, AND PLANNED AND PROVIDED IN ADVANCE OF OR CONCURRENT WITH DEVELOPMENT, IN ORDER TO PROMOTE THE ORDERLY CONVERSION OF URBANIZABLE AND FUTURE URBANIZABLE LANDS TO URBAN LANDS WITHIN THE McMINNVILLE URBAN GROWTH BOUNDARY.

APPLICANT’S RESPONSE: This Goal is targeted primarily at rural land that is included in the UGB and is transitioning to urbanizable and urban land, and directs the City to plan utilities for that transition. The Property is in the UGB, so this Goal is not applicable. Nevertheless, when development is proposed and evaluated through a public process in the future, the adequacy of public and private facilities for the development will be determined.

FINDING: SATISFIED WITH CONDITIONS. The application was provided to public facility and service providers for review and comment. Comments did not identify major issues with the ability to provide public facilities and services needed to serve development that would be enabled by the proposed map amendment. McMinnville Water & Light provided comments regarding feeder lines that may need to be addressed depending on the scale and intensity of proposed uses. At the time the final PD development plan is submitted for review, specific requirements for public facilities will need to be addressed as a condition of approval.

Sanitary Sewer System

- 136.00 *The City of McMinnville shall insure that urban developments are connected to the municipal sewage system pursuant to applicable city, state, and federal regulations.*
- 138.00 *The City of McMinnville shall develop, or require development of, sewer system facilities capable of servicing the maximum levels of development envisioned in the McMinnville Comprehensive Plan.*

APPLICANT’S RESPONSE: This Goal is targeted primarily at the City’s facility planning. There are no known sanitary sewer deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of sewer system facilities will

Attachments:

- Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.

FINDING: SATISFIED. No development is proposed at this time. Service providers were notified of the proposed map amendment and no concerns were noted regarding the ability to serve the property with the sanitary sewer conveyance system. At the time of development, construction and connection to the municipal sanitary sewer system will be required.

Storm Drainage

142.00 *The City of McMinnville shall insure that adequate storm water drainage is provided in urban developments through review and approval of storm drainage systems, and through requirements for connection to the municipal storm drainage system, or to natural drainage ways, where required.*

APPLICANT’S RESPONSE: No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project’s storm drainage shall be assessed at that time.

FINDING: SATISFIED. No development is proposed at this time. Service providers were notified of the proposed map amendment and no concerns were noted regarding the capacity of the municipal storm drainage system. At the time of development, the applicant will be required to comply with all federal, state, and local storm drainage permitting requirements, and comply with any requirements for detention and stormwater runoff quality.

WATER SYSTEM

144.00 *The City of McMinnville, through McMinnville Water and Light, shall provide water services for development at urban densities within the McMinnville Urban Growth Boundary.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. No development is proposed at this time. Service providers were notified of the proposed map amendment and no concerns were noted regarding the ability to serve the property with municipal water. At the time of development, the applicant will be required to construct and connect to the municipal water system to serve the property.

Water and Sewer-Land Development Criteria

151.00 *The City of McMinnville shall evaluate major land use decisions, including but not limited to urban growth boundary, comprehensive plan amendment, zone changes, and subdivisions using the criteria outlined below:*

1. *Sufficient municipal water system supply, storage and distribution facilities, as determined by McMinnville Water and Light, are available or can be made available, to fulfill peak demands and insure fire flow requirements and to meet emergency situation needs.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

2. *Sufficient municipal sewage system facilities, as determined by the City Public Works Department, are available, or can be made available, to collect, treat, and dispose of maximum flows of effluents.*
3. *Sufficient water and sewer system personnel and resources, as determined by McMinnville Water and Light and the City, respectively, are available, or can be made available, for the maintenance and operation of the water and sewer systems.*
4. *Federal, state, and local water and waste water quality standards can be adhered to.*
5. *Applicable policies of McMinnville Water and Light and the City relating to water and sewer systems, respectively, are adhered to.*

APPLICANT'S RESPONSE: There are no known water or sewage deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of water and sewer system facilities will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.

FINDING: SATISFIED. Notice of the application was provided to service providers. No issues with water supply, storage, or distribution facilities were identified. No issues with municipal sewage facilities were identified. No issues were identified regarding sufficient water and sewer system personnel or resources for the maintenance and operation of the water and sewer systems or that would differ for personnel and resources to provide service to commercially-zoned land rather than industrially-zoned land. No issues were identified with the ability to meet applicable standards and policies in serving the property with water and sewer.

Police and Fire Protection

155.00 *The ability of existing police and fire facilities and services to meet the needs of new service areas and populations shall be a criterion used in evaluating annexations, subdivision proposals, and other major land use decisions.*

APPLICANT'S RESPONSE: There are no known police or fire facility or service deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of these facilities and services will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.

FINDING: SATISFIED. Notice of the application was provided to service providers. No issues were identified with the ability of existing police and fire facilities and services to meet the needs of the property as a result of the proposed map amendment. At the time of development adequate water facilities will be required in order to meet applicable fire flow requirements of the applicable structural codes.

PARKS AND RECREATION

167.00 *The City of McMinnville shall encourage the retention of open space and scenic areas throughout the community, especially at the entrances to the City.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

168.00 *Distinctive natural features and areas shall be retained, wherever possible, in future urban developments.*

169.00 *Drainage ways in the City shall be preserved, where possible, for natural areas and open spaces and to provide natural storm run-offs.*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). As a condition of approval, the amendment is be subject to development and design principles and standards applicable to the PD development plan that address incorporation of natural features, open space elements, and scenic view considerations into the site design.

CHAPTER VIII. ENERGY

GOAL VIII 1: TO PROVIDE ADEQUATE ENERGY SUPPLIES, AND THE SYSTEMS NECESSARY TO DISTRIBUTE THAT ENERGY, TO SERVICE THE COMMUNITY AS IT EXPANDS.

ENERGY SUPPLY DISTRIBUTION

173.00 *The City of McMinnville shall coordinate with McMinnville Water and Light and the various private suppliers of energy in this area in making future land use decisions.*

ENERGY CONSERVATION

GOAL VIII 2: TO CONSERVE ALL FORMS OF ENERGY THROUGH UTILIZATION OF LAND USE PLANNING TOOLS.

APPLICANT’S RESPONSE: One of the fundamental policies backing the rationale for this land use change request is the consumer spending leakage highlighted in the 2013 EOA. By allowing more potential retail development within the City, residents will no longer be required to drive longer distances to destinations such as Salem or southwest Portland for their needs, which conserves energy.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). Subject to design and development standards as a condition of approval that will need to be addressed at submittal of the development plan, the amendment is consistent with provisions of the Comprehensive Plan, Economic Opportunities Analysis, as well as the Three Mile Lane Area Planning work underway to include commercial land at this location. It would be part of an overall area plan to reduce vehicle miles travelled associated with shopping outside of the McMinnville area and to provide commercial uses in this area to meets needs of surrounding neighborhoods existing and being planned for this area. The design and development standards included provisions to ensure good connectivity to the surrounding lands to reduce out of direction travel and encourage biking, walking, and transit.

Policies:

178.00 *The City of McMinnville shall encourage a compact urban development pattern to provide for conservation of all forms of energy.*

APPLICANT’S RESPONSE: Statewide Planning Goal 14 and its implementing statutes and rules require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need. The

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

2013 EOA demonstrates a need for retail and an excess of industrial land, and the proposed comp plan designation and zoning map amendments satisfy a portion of this need. Accommodating the identified land need within the UGB is consistent with Goal 14 and encourages a compact urban development pattern.

FINDING: SATISFIED. The commercial designation of this property is a key component of the 3MLAP work underway, which is intended to provide for a mix of land uses in a compact development pattern, form, and connectivity that is supportive and encouraging of all transportation modes, including walking, biking, and transit.

CHAPTER IX. URBANIZATION

GOAL IX 1: TO PROVIDE ADEQUATE LANDS TO SERVICE THE NEEDS OF THE PROJECTED POPULATION TO THE YEAR 2023, AND TO ENSURE THE CONVERSION OF THESE LANDS IN AN ORDERLY, TIMELY MANNER TO URBAN USES.

APPLICANT'S RESPONSE: The 2013 EOA quantifies the industrial and commercial land needs for the projected population and concludes that there is a need for retail and an excess of industrial land. The proposed Comprehensive Plan land use designation and zoning map amendments accommodate a portion of the commercial land need. Converting excess industrial land to needed commercial land is consistent with Statewide Planning Goal 14 and its implementing statutes and rules, which require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need.

FINDING: SATISFIED. The proposed commercial map designation is consistent with the identified commercial land needs specified in the Comprehensive Plan and EOA.

GOAL IX 2: TO ESTABLISH A LAND USE PLANNING FRAMEWORK FOR APPLICATION OF THE GOALS, POLICIES, AND PROPOSALS OF THE McMINNVILLE COMPREHENSIVE PLAN

LAND USE DEVELOPMENT TOOLS

186.00 *The City of McMinnville shall place planned development overlays on areas of special significance identified in Volume I of the McMinnville Comprehensive Plan. Those overlays shall set forth the specific conditions for development of the affected properties. Areas of significance identified in the plan shall include but not be limited to:*

1. *Three Mile Lane (north and south)...*

APPLICANT'S RESPONSE: The application requests a Planned Development overlay, consistent with Policy 186.00.1. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. Those ordinances require specific conditions for development of the Property, and will be reviewed in a public process.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The City previously adopted a Three Mile Lane overlay which is in effect, but addresses a limited scope of issues. The City is in the process of developing a new Three Mile Lane Area Plan which is comprehensive in scope of issues and will set forth specific conditions for development of the affected properties. Since this request was submitted prior to the adoption of that plan, staff has recommended conditions

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

of approval to include development and design principles and standards, consistent with the draft 3MLAP principles and objectives, which must be addressed in the PD development plan for this property at the time it is submitted for review and approval. If the Three Mile Lane Area plan and standards are developed prior to that submittal, more stringent provisions will govern.

GREAT NEIGHBORHOOD PRINCIPLES

Policies:

- 187.10 *The City of McMinnville shall establish Great Neighborhood Principles to guide the land use patterns, design, and development of the places that McMinnville citizens live, work, and play. The Great Neighborhood Principles will ensure that all developed places include characteristics and elements that create a livable, egalitarian, healthy, social, inclusive, safe, and vibrant neighborhood with enduring value, whether that place is a completely new development or a redevelopment or infill project within an existing built area.*
- 187.20 *The Great Neighborhood Principles shall encompass a wide range of characteristics and elements, but those characteristics and elements will not function independently. The Great Neighborhood Principles shall be applied together as an integrated and assembled approach to neighborhood design and development to create a livable, egalitarian, healthy, social, inclusive, safe, and vibrant neighborhood, and to create a neighborhood that supports today's technology and infrastructure, and can accommodate future technology and infrastructure.*
- 187.30 *The Great Neighborhood Principles shall be applied in all areas of the city to ensure equitable access to a livable, egalitarian, healthy, social, inclusive, safe, and vibrant neighborhood for all McMinnville citizens.*
- 187.40 *The Great Neighborhood Principles shall guide long range planning efforts including, but not limited to, master plans, small area plans, and annexation requests. The Great Neighborhood Principles shall also guide applicable current land use and development applications.*
- 187.50 *The McMinnville Great Neighborhood Principles are provided below. Each Great Neighborhood Principle is identified by number below (numbers 1 – 13), and is followed by more specific direction on how to achieve each individual principle.*
1. *Natural Feature Preservation. Great Neighborhoods are sensitive to the natural conditions and features of the land.*
 - a. *Neighborhoods shall be designed to preserve significant natural features including, but not limited to, watercourses, sensitive lands, steep slopes, wetlands, wooded areas, and landmark trees.*
 2. *Scenic Views. Great Neighborhoods preserve scenic views in areas that everyone can access.*
 - a. *Public and private open spaces and streets shall be located and oriented to capture and preserve scenic views, including, but not limited to, views of significant natural features, landscapes, vistas, skylines, and other important features.*
 3. *Parks and Open Spaces. Great Neighborhoods have open and recreational spaces to walk, play, gather, and commune as a neighborhood.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- a. *Parks, trails, and open spaces shall be provided at a size and scale that is variable based on the size of the proposed development and the number of dwelling units.*
 - b. *Central parks and plazas shall be used to create public gathering spaces where appropriate.*
 - c. *Neighborhood and community parks shall be developed in appropriate locations consistent with the policies in the Parks Master Plan.*
4. *Pedestrian Friendly. Great Neighborhoods are pedestrian friendly for people of all ages and abilities.*
- a. *Neighborhoods shall include a pedestrian network that provides for a safe and enjoyable pedestrian experience, and that encourages walking for a variety of reasons including, but not limited to, health, transportation, recreation, and social interaction.*
 - b. *Pedestrian connections shall be provided to commercial areas, schools, community facilities, parks, trails, and open spaces, and shall also be provided between streets that are disconnected (such as cul-de-sacs or blocks with lengths greater than 400 feet).*
5. *Bike Friendly. Great Neighborhoods are bike friendly for people of all ages and abilities.*
- a. *Neighborhoods shall include a bike network that provides for a safe and enjoyable biking experience, and that encourages an increased use of bikes by people of all abilities for a variety of reasons, including, but not limited to, health, transportation, and recreation.*
 - b. *Bike connections shall be provided to commercial areas, schools, community facilities, parks, trails, and open spaces.*
6. *Connected Streets. Great Neighborhoods have interconnected streets that provide safe travel route options, increased connectivity between places and destinations, and easy pedestrian and bike use.*
- a. *Streets shall be designed to function and connect with the surrounding built environment and the existing and future street network, and shall incorporate human scale elements including, but not limited to, Complete Streets features as defined in the Comprehensive Plan, grid street networks, neighborhood traffic management techniques, traffic calming, and safety enhancements.*
 - b. *Streets shall be designed to encourage more bicycle, pedestrian and transit mobility with a goal of less reliance on vehicular mobility.*
7. *Accessibility. Great Neighborhoods are designed to be accessible and allow for ease of use for people of all ages and abilities.*
- a. *To the best extent possible all features within a neighborhood shall be designed to be accessible and feature elements and principles of Universal Design.*
 - b. *Design practices should strive for best practices and not minimum practices.*
8. *Human Scale Design. Great Neighborhoods have buildings and spaces that are designed to be comfortable at a human scale and that foster human interaction within the built*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

environment.

- a. The size, form, and proportionality of development is designed to function and be balanced with the existing built environment.*
- b. Buildings include design elements that promote inclusion and interaction with the right-of-way and public spaces, including, but not limited to, building orientation towards the street or a public space and placement of vehicle-oriented uses in less prominent locations.*
- c. Public spaces include design elements that promote comfortability and ease of use at a human scale, including, but not limited to, street trees, landscaping, lighted public areas, and principles of Crime Prevention through Environmental Design (CPTED).*

9. Mix of Activities. Great Neighborhoods provide easy and convenient access to many of the destinations, activities, and local services that residents use on a daily basis.

- a. Neighborhood destinations including, but not limited to, neighborhood-serving commercial uses, schools, parks, and other community services, shall be provided in locations that are easily accessible to surrounding residential uses.*
- b. Neighborhood-serving commercial uses are integrated into the built environment at a scale that is appropriate with the surrounding area.*
- c. Neighborhoods are designed such that owning a vehicle can be optional.*

10. Urban-Rural Interface. Great Neighborhoods complement adjacent rural areas and transition between urban and rural uses.

- a. Buffers or transitions in the scale of uses, buildings, or lots shall be provided on urban lands adjacent to rural lands to ensure compatibility.*

11. Housing for Diverse Incomes and Generations. Great Neighborhoods provide housing opportunities for people and families with a wide range of incomes, and for people and families in all stages of life.

- a. A range of housing forms and types shall be provided and integrated into neighborhoods to provide for housing choice at different income levels and for different generations.*

12. Housing Variety. Great Neighborhoods have a variety of building forms and architectural variety to avoid monoculture design.

- a. Neighborhoods shall have several different housing types.*
- b. Similar housing types, when immediately adjacent to one another, shall provide variety in building form and design.*

13. Unique and Integrated Design Elements. Great Neighborhoods have unique features, designs, and focal points to create neighborhood character and identity. Neighborhoods shall be encouraged to have:

- a. Environmentally friendly construction techniques, green infrastructure systems, and energy efficiency incorporated into the built environment.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- b. *Opportunities for public art provided in private and public spaces.*
- c. *Neighborhood elements and features including, but not limited to, signs, benches, park shelters, street lights, bike racks, banners, landscaping, paved surfaces, and fences, with a consistent and integrated design that are unique to and define the neighborhood. (Ord 5066 §2, April 9, 2019)*

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). Subject to development and design principles and standards as a condition of approval that will need to be addressed at submittal of the development plan, the amendment is consistent with applicable provisions of the Great Neighborhood Principles. The development and design principles and standards recognize the type of regional uses that address retail leakage, but include provisions to ensure the property also meets commercial needs of surrounding neighborhoods identified in the 3MLAP work underway. Accordingly, the development and design principles and standards address key critical aspects of the Great Neighborhood Principles which apply to commercial use and development and its relationship to surrounding uses and neighborhoods.

NEIGHBORHOOD ACTIVITY CENTERS

GOAL: NEIGHBORHOOD ACTIVITY CENTERS PROVIDE SHOPPING, SERVICES, RECREATION, HIGH-DENSITY HOUSING, OFFICE AND INSTITUTIONAL FACILITIES NEEDED TO SUPPORT A SURROUNDING NEIGHBORHOOD OR URBAN AREA.

Proposals:

- 48.15 The City of McMinnville should develop an Area Plan for the Three Mile Lane area that supports and enhances the district’s economic vitality and marketability, provides opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district, enhances multi-modal connections throughout the district, and creates an aesthetically pleasing gateway to the City of McMinnville.

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The City is in the process of conducting the area planning work for the Three Mile Lane Area. As a condition of approval, at the time of submittal of the PD development plan, the plan shall comply with the development and design principles and standards attached as a condition of approval. If the PD development plan submittal is submitted after adoption of the 3MLAP, the development shall comply with those development and design principles and standards, and the most restrictive provisions shall apply.

- 48.70 **Redesignation to Commercial.** As an identified efficiency measure necessary to reduce the needed size of the “Phase 2” UGB amendment to meet additional Commercial land needs, the City shall initiate a change to the Comprehensive Plan and Zone Map to redesignate and rezone 40 acres of property along the south side of the Highway 18 frontage from commercial to industrial, leaving the rear portions in an Industrial designation. This recognizes that the City will retain an Industrial surplus as a result of adding the Riverside North area to the UGB as part of the “Phase 2” UGB amendment.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. The proposed amendment would amend the map designation for 37.7 acres, which includes 4.25 acres intended for right-of-way dedication for future highway improvements. The proposed map amendment also identifies additional acreage within the area of the proposed amendment for future right-of-way for additional street circulation. Therefore, the proposed map amendment is consistent with additional commercial need identified in the EOA, and a portion of the 40 acres to be redesignated consistent with Proposal 48.70 in the Comprehensive Plan.

CHAPTER X. CITIZEN INVOLVEMENT AND PLAN AMENDMENT

GOAL X 1: TO PROVIDE OPPORTUNITIES FOR CITIZEN INVOLVEMENT IN THE LAND USE DECISION MAKING PROCESS ESTABLISHED BY THE CITY OF McMINNVILLE.

GOAL X 2: TO MAKE EVERY EFFORT TO ENGAGE AND INCLUDE A BROAD CROSS SECTION OF THE COMMUNITY BY MAINTAINING AN ACTIVE AND OPEN CITIZEN INVOLVEMENT PROGRAM THAT IS ACCESSIBLE TO ALL MEMBERS OF THE COMMUNITY AND ENGAGES THE COMMUNITY DURING DEVELOPMENT AND IMPLEMENTATION OF LAND USE POLICIES AND CODES.

APPLICANT’S RESPONSE: This Goal obligates the City to periodically review its Comprehensive Plan, so is not applicable to this application. Nevertheless, the application is consistent with this Goal because the proposal to revise the comprehensive land use plan designation for the site is responsive to the oversupply of industrial and demand for retail as addressed in the 2013 EOA. While consistent with the Three Mile Line Area Plan currently moving through the legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue. This would be brought back for consideration at a subsequent public hearing continued to a date certain for consideration through the public process.

ALL OTHER ISSUES: SATISFIED WITH CONDITIONS. (Condition 2). The City is undertaking a 3MLAP process informed by a public process to engage the public in the development of that plan. With the timing of the application, including the PD overlay, as a condition of approval, the application includes development and design principles and standards, consistent with the 3MLAP principles and Great Neighborhood Principles, which will apply to the PD development plan. Review of the PD development plan will be subject to this same public hearing process, as specified in the Zoning Ordinance.

188.00 *The City of McMinnville shall continue to provide opportunities for citizen involvement in all phases of the planning process. The opportunities will allow for review and comment by community residents and will be supplemented by the availability of information on planning requests and the provision of feedback mechanisms to evaluate decisions and keep citizens informed.*

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

APPLICANT’S RESPONSE: No response.

FINDING: SATISFIED. Prior to submitting an application, the applicant is required to conduct a noticed neighborhood meeting, which the applicant satisfied. The public processes provide for review of the map amendment and PD overlay, as well as the subsequent PD development plan provided for citizen involvement through the quasi-judicial amendment to the adopted and acknowledged Comprehensive Plan and implementing ordinances. Due to the timing of the application, the conditions of approval specify development and design principles and standards which will be applicable to the PD development plan, thus capturing the publicly-informed objectives of the Three Mile Lane Planning work to date.

McMinnville Zoning Ordinance (Title 17 of the Municipal Code)

The following Sections of the Zoning Ordinance provide criteria applicable to the request:

Chapter 17.74. Review Criteria

Section 17.74.010. Purpose. The purpose of this chapter is to provide the approval criteria for the following applications:

- Comprehensive Plan Map Amendment
- ...
- Zone Change (Planned Development)

FINDING: SATISFIED. The criteria of this Chapter and applicable sections are the applicable criteria for the proposed Comprehensive Plan Map amendment and Zone Change.

Section 17.74. 020. Comprehensive Plan Map Amendment and Zone Change – Review Criteria

17.74.020. Comprehensive Plan Map Amendment and Zone Change - Review Criteria. *An amendment to the official zoning map may be authorized, provided that the proposal satisfies all relevant requirements of this ordinance, and also provided that the applicant demonstrates the following:*

- A. *The proposed amendment is consistent with the goals and policies of the Comprehensive Plan;*

APPLICANT’S RESPONSE: *The analysis provided in Section 3 of this attachment demonstrates the application’s compliance with the City’s Comprehensive Plan and other adopted policies.*

FINDING: SATISFIED WITH CONDITIONS. (Conditions 1, 3) Findings regarding the goals and policies of the Comprehensive Plan are provided above. Subject to conditions addressing development and design principles and standards and mitigation of “significant effects” to the transportation system resulting from the map amendment, this criterion is satisfied.

- B. *The proposed amendment is orderly and timely, considering the pattern of development in the area, surrounding land uses, and any changes which may have occurred in the neighborhood or community to warrant the proposed amendment;*

APPLICANT’S RESPONSE: *Criterion B is supported by the 2013 EOA, which found that the City could benefit from a regional retail center, that recapture of retail sales leakage*

Attachments:

- Attachment 1 – Application and Attachments;
- Attachment 2 - DSL Wetland Land Use Notice Response

could be achieved by concentrating retail along major highways, and that excess industrial land should be re-designated to commercial use when opportunities arise. While consistent with the Three Mile Line Area Plan currently moving through the legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue.

ALL OTHER ISSUES: SATISFIED WITH CONDITIONS. (Condition 2).

Timeliness for Designation for Identified Land Needs. In some respects, timing is not an issue for the proper designation of lands. Lands within the UGB should be properly designated to meet identified needs over the 20-year planning period as specified in the Comprehensive Plan, both in quantity and location. This serves to ensure an adequate supply of lands designated to meet the identified needs, and also to protect suitable lands that can meet those identified needs from other uses and development under a different plan designation and zoning district, should that not be the intent of the Comprehensive Plan.

In other words, if a subject property is needed and suitable for a specified land use, there is no benefit in retaining the land in a different comprehensive plan designation and zone which may conflict with the long terms needs to be met with a different designation and zoning district. This could also lead to the possibility that lands which are necessary to meet the identified future land use needs for a certain designation and zone could be irreversibly developed under the existing designation and zone before being redesignated and rezoned to the needed plan designation and zone.

This would be a different issue if the property were in an unincorporated portion of the UGB designated with an Urban Holding designation that would require annexation and redesignation/rezoning to an urban plan designation and zone before urban development could occur. However, with the subject application, the property already has an urban industrial plan map designation and zone.

The adopted and acknowledged Comprehensive Plan and EOA identify a deficit of commercial land and a surplus of industrial land. Therefore, the proposed amendment is timely in redesignating land from industrial to commercial consistent with the identified commercial need.

Analysis identifies retail leakage, meaning there is an identified need for certain commercial uses in the community which is not being met. This results in local dollars which could be spent in the community instead being spent in other communities, and also leading to an increase in vehicle miles traveled by local shoppers who are shopping elsewhere. There is also demand within the region and surrounding market area which isn't being met in McMinnville, resulting in those dollars being spent elsewhere, with some longer trips to those destinations and increased length of some trips also leading to increased vehicle miles traveled.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

However, the adopted and acknowledged Comprehensive Plan already specifies the identified need, so from a quantitative standpoint, the current application need not demonstrate that there is need, or the rationale for the need, but rather it needs to demonstrate that it would meet the need already identified in the acknowledged planning documents. Where the Comprehensive Plan may specify a need for different types of commercial land (neighborhood commercial, general commercial, etc.), the application must demonstrate the proposed amount of specified commercial land to be designated is consistent with the type of needed commercial land and is in a location suited for the type of needed commercial land.

Further, the Comprehensive Plan explicitly identifies the redesignation of industrial land to commercial land to meet the identified need. This site has characteristics to meet the need.

Timeliness for Coordinated Area Planning and Development. In planning for how to meet its identified land needs, McMinnville has opted to conduct area planning, including a “Three Mile Lane Area Plan (3MLAP),” to ensure development of properties in separate ownerships develop subject to a publicly vetted plan to occur in a cohesive and coordinated manner, and in a manner that reflects McMinnville’s unique character, and the unique characteristics of different part of McMinnville, avoiding a generic “Anywhere USA” appearance.

The application uses the two-step Planned Development process specified in Chapter 17.51 Zoning Ordinance. This process allows for the Planned Development (PD) Overlay designation to be applied to the property as the first step, without a specific development plan, provided that no development can occur on the portion of the property subject to the PD Overlay until a specific development plan has been submitted and approved through the second step, following the same public hearing process.

While the 3MLAP work is still underway, McMinnville wants to ensure that actions taken to meet identified land needs do not occur before that work is complete which could otherwise conflict with the goals and objectives to be addressed through an area plan. It is not a foregone conclusion that this could be achieved by simply rezoning to one of McMinnville’s existing commercial zoning districts absent a special overlay. Redesignation for commercial use would need to occur in a manner that addresses these issues. If a privately initiated application was not submitted at this time, the public goals and objectives would be addressed through adoption of an area plan with specific use and development provisions and standards. Because that is not adopted and in effect, any privately initiated application will need to demonstrate how it will be consistent with this intent and purpose. This is part of the “unique characteristics” (Section 17.51.010(B)(1)) which authorize use of the PD overlay process with the deferred development plan. Further, the development and design principles and standards specify “areas of concern” required by (Section 17.51.010(B)(2)) to be addressed when final plans are submitted.

Subject to the conditions of approval addressing design and development standards and mitigation of “significant effect” to transportation facilities, the proposed amendment is orderly and timely. The two-step PD process with the deferred submittal of the development plan helps ensure the application for amendment and PD overlay is timely and orderly.

Because the 3MLAP proposes to amend certain aspects of the TSP and OR-18 Corridor Plan, with the timing of the application, the applicant needs to address current requirements and ensure the proposal doesn’t conflict with the 3MLAP work. The

Attachments:

Attachment 1 – Application and Attachments;

Attachment 2 - DSL Wetland Land Use Notice Response

application needs to demonstrate that the identified mitigation can be approved by ODOT as well as the City. Further, if the City’s intent is to update aspects of the OR-18 Corridor Plan as part of the adoption of the 3MLAP, this is an “area of concern” that must be addressed as part of the PD approval process. This essentially requires the applicant to demonstrate that mitigation associated with the map amendment is consistent with and will not conflict with the 3MLAP mitigation, and that if the mitigation associated with this application is less than or different than the mitigation associated with changes resulting in the 3MLAP overall, that the mitigation identified by the applicant can developed as an interim improvement and/or phased in such a way that it doesn’t preclude or prevent the necessary 3MLAP mitigation. Finally, since the City has not yet adopted the 3MLAP, then the timing of the application may require greater burden on the applicant to show their mitigation is approvable by ODOT and won’t conflict with the 3MLAP work.

At this time, ODOT’s comments indicate they need additional information to complete their review of the applicant’s mitigation, and that the mitigation identified by the applicant related to ODOT facilities has not yet been approved by ODOT. The City will need to know whether the mitigation identified by the applicant is approvable and can be attached to the proposed amendment as a condition of future development. The City can’t make findings regarding this criterion until this has occurred.

Also, as the applicant hasn’t explicitly proposed that the map amendment include the mitigation as a condition of approval and obtained ODOT approval for the mitigation, they are in effect requiring the City to impose a condition of approval to make the application approvable. The applicant hasn’t demonstrated that the City could simply adopt their identified mitigation as a condition of approval as the “measures” required to address “significant effect” under the TPR. The burden of proof is on the applicant, not the City, to demonstrate that there is an approvable proposal as part of the application to address “significant effect.” Staff recommends a continuance for additional time for preparation and submittal of the additional information for ODOT review and approval of the mitigation to OR-18 and for City approval of the mitigation that doesn’t conflict with the 3MLAP preferred alternative.

C. Utilities and services can be efficiently provided to serve the proposed uses or other potential uses in the proposed zoning district.

APPLICANT’S RESPONSE: There are no known utility or service deficiencies. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will demonstrate the improvements required for City utilities and services to efficiently serve the site.

FINDING: SATISFIED WITH CONDITIONS. Service providers were notified of the proposal. No issues with efficient provision of utilities or services were identified to serve permitted uses in the commercial zoning district.

Per comments provided by McMinnville Water & Light, review of the intensity of any specific use and development will determine whether it will be necessary to upgrade power feeder lines to serve the specific sue and development.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

When the proposed amendment concerns needed housing (as defined in the McMinnville Comprehensive Plan and state statute), criterion "B" shall not apply to the rezoning of land designated for residential use on the plan map.

FINDING: NOT APPLICABLE. The application is a proposed amendment from an industrial comprehensive plan map designation and zoning district to a commercial comprehensive plan map designation and zoning district. It does not affect property with a residential comprehensive plan map designation or zoning district.

In addition, the housing policies of the McMinnville Comprehensive Plan shall be given added emphasis and the other policies contained in the plan shall not be used to: (1) exclude needed housing; (2) unnecessarily decrease densities; or (3) allow special conditions to be attached which would have the effect of discouraging needed housing through unreasonable cost or delay.

FINDING: NOT APPLICABLE: The application is a proposed amendment from an industrial comprehensive plan map designation and zoning district to a commercial comprehensive plan map designation and zoning district. It does not affect property with a residential comprehensive plan map designation or zoning district.

Section 17.74.070. Planned Development Amendment – Review Criteria

APPLICANT’S RESPONSE: No response.

FINDING: NOT APPLICABLE. The criteria in this section only apply to amendment of an existing Planned Development.

Chapter 17.51. Planned Development Overlay

17.51.010. Purpose. *The purpose of a planned development is to provide greater flexibility and greater freedom of design in the development of land than may be possible under strict interpretation of the provisions of the zoning ordinance. Further, the purpose of a planned development is to encourage a variety in the development pattern of the community; encourage mixed uses in a planned area; encourage developers to use a creative approach and apply new technology in land development; preserve significant man-made and natural features; facilitate a desirable aesthetic and efficient use of open space; and create public and private common open spaces. A planned development is not intended to be simply a guise to circumvent the intent of the zoning ordinance.*

FINDING: SATISFIED. The purpose of the PD overlay as applied to the subject property, rather than only a rezone to C-3 without a PD overlay, is to provide for application of specific design and development standards to the property consistent with the principles of the 3MLAP underway for the lands in the Three Mile Lane area, which include objectives consistent with those described in the Purpose above.

In approving a planned development, the Council and the Planning Commission shall also take into consideration those purposes set forth in Section 17.03.020 of this ordinance. A planned development shall be considered as an overlay to an existing zone, and the development of said property shall be in accordance with that zone's requirements, except as may be specifically allowed by the Planning Commission.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The purposes in Section 17.030.020 are as follows:

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

17.03.020. Purpose. The purpose of the ordinance codified in Chapters 17.03 (General Provisions) through 17.74 (Review Criteria) of this title is to encourage appropriate and orderly physical development in the city through standards designed to protect residential, commercial, industrial, and civic areas from the intrusions of incompatible uses; to provide opportunities for establishments to concentrate for efficient operation in mutually beneficial relationship to each other and to shared services; to provide adequate open space, desired levels of population densities, workable relationships between land uses and the transportation system, adequate community facilities; and to provide assurance of opportunities for effective utilization of the land resources; and to promote in other ways public health, safety, convenience, and general welfare.

The proposed map amendment is consistent with the land need identified in the Comprehensive Plan, and the location is suitable for commercial use and development as addressed in the EOA and work underway on the 3MLAP. With the conditions of approval to specify development and design principles and standards consistent with the 3MLAP principles, the proposed amendment is consistent with these purposes.

For purposes of implementing these objectives, two means are available:

- A. *The property owner or his representative may apply for a planned development to overlay an existing zone and shall submit an acceptable plan and satisfactory assurances it will be carried out in accordance with Section 17.51.030. Such plan should accomplish substantially the same general objectives as proposed by the comprehensive plan and zoning ordinance for the area; (The fee charged for processing such an application shall be equal to the one charged for zone changes.)*

FINDING: NOT APPLICABLE. The applicant's submitted the application under Subsection B, below.

- B. *The Council, the Commission, or the property owner of a particular parcel may apply for a planned development designation to overlay an existing zone without submitting any development plans; however, no development of any kind may occur until a final plan has been submitted and approved. (The Planning Director shall note such properties and direct that no building permit be issued in respect thereto.)*

FINDING: SATISFIED WITH CONDITIONS. (Condition 4). The application is submitted under this Subsection. No development of any kind may occur on the portion of the property subject to the PD overlay until a final plan has been submitted and approved as specified in this ordinance.

1. *A planned development overlay may be approved under these circumstances for a property which has unique characteristics (e.g., geological, ecological, location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole. A planned development overlay initiated by the Council or the Planning Commission shall address itself to the purposes set forth herein.*

APPLICANT'S RESPONSE: Comprehensive Plan Policy 6.00 recommends placing a Planned Development overlay on large cluster commercial development areas, and other polices encourage heightened review of proposed development to ensure compatibility with nearby uses. These policies provide a basis for imposing a planned development overlay on the Property, which has the unique characteristics of

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

accommodating needed retail uses to accommodate retail leakage and growth related demand.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The Planned Development submittal is authorized under Subsection (B) because of the unique characteristics of the property and surrounding area which are recognized in the Comprehensive Plan policies specifying unique areas within the UGB where PD overlays should be applied. This property and the Three Mile Lane are unique relative to their character, gateway entry location to the community, and the coordinated 3MLAP work underway for this area.

Approval under this section is subject to the condition of approval for development and design principles and standards that address themselves to the unique characteristics of this area and the planning objectives of the 3MLAP.

2. *The Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plan are submitted;*

FINDING:

TRANSPORTATION MITIGATION: CONTINGENT ON FURTHER REVIEW AND APPROVAL OF MITIGATION TO BE APPROVED BY ODOT IN COORDINATION WITH THE CITY. Staff has recommended a continuance to provide additional time to allow for preparation and submittal of additional information for review and response to this issue.

ALL OTHER ISSUES: SATISFIED WITH CONDITIONS. (Condition 2).

Reasons for Approval: The Comprehensive Plan map amendment and zone change are approved to meet identified need for commercial land, meeting part of the commercial deficit and reducing a portion of the industrial surplus. The location and proposed zoning is consistent with commercial land needs of the type identified in the Comprehensive Plan and EOA. Specific issues regarding the use and development characteristics are addressed through the PD overlay and the development and design principles and standards attached as a condition of approval. Subject to these conditions, the submittal under Subsection (B) to apply the PD overlay without a specific development submitted concurrently is the best alternative for coordination with the work underway on the 3MLAP.

Areas of Concern:

1. Development of the site should be consistent with the broader 3MLAP work underway and its objectives. Specific areas of concern, and how to address those, are articulated in the development and design principles and standards attached as a condition of approval.

2. The mitigation identified for “Significant Effect” of the map amendment on transportation facilities needs to be consistent with, and not conflict with, improvements and mitigation identified in the preferred alternative of the 3MLAP. Interim or partial mitigation at some locations needs to be reviewed for consistency with the 3MLAP mitigation. The applicant needs to provide additional information for ODOT’s review and demonstrate recommended mitigation can and will be approved by ODOT.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

- C. *The Council and Planning Commission, with the assistance of the Planning Director, shall ensure that no planned development overlay granted under Section A or B above which is merely a guise to circumvent the intent of the zoning ordinance shall be approved. A denial of such a zone request based upon this principle shall be enunciated in the findings of fact adopted by the Planning Commission;*

APPLICANT'S RESPONSE: No specific development is proposed at this time, so the requested Planned Development overlay is not an effort to circumvent the intent of the zoning ordinance. Instead, as noted above, the imposition of the Planned Development overlay is consistent with applicable Comprehensive Plan Policies.

FINDING: SATISFIED WITH CONDITIONS. (Condition 2). The PD overlay designation concurrent with the Comprehensive Plan map amendment and zone change is intended to provide greater oversight over the future development of the site. The development and design principles and standards attached as conditions of approval clearly demonstrate a means to ensure the intent of the zoning ordinance is not circumvented. Instead, there are specific provisions to address areas of concern and ensure the PD development addresses the objectives and areas of concern. Further, the development and design principles and standards establish expectations up-front regarding what the future PD development plan will need to address.

- D. *A planned development overlay shall be heard and approved under the public hearing procedures set forth in Chapter 17.72 (Applications and Review Process) of this ordinance. (A planned development overlay and change of the underlying zone may be processed simultaneously.)*

APPLICANT'S RESPONSE: The Planned Development overlay request is being considered concurrent with the Comprehensive Plan designation and Zoning Map designating amendment requests, in compliance with the application and review processes in Chapter 17.72.

FINDING: SATISFIED. The application is being processed in accordance with the applicable public hearing procedures and the applications are being process simultaneously.

- E. *A planned development overlay proposed by the Council, the Planning Commission, or the property owner under subsection B above shall be subject to all of the hearing requirements again at such time as the final plans under Section 17.51.030 are submitted, unless those requirements have been specifically changed in the planned development approval;*

APPLICANT'S RESPONSE: The property owner will comply with these requirements at the time final plans for development of the Property are submitted.

FINDING: SATISFIED. This procedure will be required at the time of submittal of the final plans, and this PD overlay approval does not change those requirements.

Attachments:

Attachment 1 – Application and Attachments;
Attachment 2 - DSL Wetland Land Use Notice Response

CPA 2-20/ZC 3-20

C-3 PD Overlay Zone

Development and Design Principles and Standards

For Review of PD Development Plan

Part of 3310 SE Three Mile Lane, R4426 00700

I. Intent and Purpose.

II. Consistency with Other Documents

III. Amendments

IV. Organization

V. Development and Design Principles, Standards, and Recommendations

V.1. Overall Thematic and Stylistic Design

V.2. Uses

V.3. Architectural Design

V.4. Site Design

V.5. Building Orientation

V.6. Transportation Connectivity

V.7. Views

V.8. Signs

V.9. Landscaping

V.10. Parking and Parking Lot Landscaping

V.11. Screening

V.12. Special Features

V.13. Lighting

V.14. Economic Benefit

VI. Examples with Attributes Noted and Discussed

(not all examples fully illustrate the intent or requirements of these principles and standards)

VI.1. Old Mill District, Bend

VI.2. Bridgeport Village, Tigard

VI.3. Old Town Square/Fred Meyer, Wilsonville

VI.4. The Village at Sunriver

VI.5. Keizer Station

VI.6. The Village at Sunriver

Attachments:

- **Attachment 1.** Three Mile Lane Area Plan (3MLAP) Design Booklet (Draft)
- **Attachment 2.** Three Mile Lane Area Plan (3MLAP) Preferred Alternative: Land Use and Design Analysis (March 23, 2021), including “Design Features” section

I. Intent and Purpose

- These principles and standards provide the basis for the review of the PD Development Plan to be submitted for the subject property.
- These supplement the standards in the Zoning Ordinance to achieve specific objectives for the development of the Three Mile Lane Area.
- The application for the PD overlay designation is submitted in advance of the adoption of the Three Mile Lane Area Plan. A draft preferred alternative has been developed, and the formal public review process will be initiated after May 2021, with adoption expected to occur no later than June 2022. The Development and Design Principles and Standards in this document will apply to the PD Development Plan for the subject property, unless the Three Mile Lane Area Plan and its design principles and standards are adopted prior to submittal of the PD development plan for the subject property. If they are adopted prior to submittal of the PD development plan for the subject property, the more restrictive provisions shall apply in the event of a conflict.

II. Consistency with Other Documents

1. The PD development plan shall be consistent with the Draft Design Booklet of the Three Mile Lane Area Plan (3MLAP), attached as **Attachment 1**.
2. The PD development plan shall be consistent with the Preferred Alternative of the Three Mile Lane Area Plan (3MLAP), including the “Design Features” Section, attached as **Attachment 2**.
3. The PD development plan shall be consistent with the final 3MLAP design principles and standards if adopted prior to submittal of the PD development plan.
4. In addition to these development and design principles and standards, the development shall be consistent with all provisions of the Zoning Ordinance, including the Large Format Commercial Development Standards of Chapter 17.56 of the Zoning Ordinance, except where they may conflict. In the event of a conflict, the standards that are more specific to the 3MLAP shall govern.
5. In addition to these principles and standards, the development shall be consistent with the provisions of the current Three Mile Lane Planned Development Overlay (originally adopted by Ordinance 4131, and subsequently amended), unless repealed prior to submittal of the PD development plan. In the event of a conflict, the more restrictive provisions shall apply.
6. The PD development plan shall pay special attention to the great neighborhood principles in the Comprehensive Plan which are applicable to commercial development, including its relationship to surrounding use and development, and consideration of special features on the site and iconic views.

III. Amendments

The City may amend these development and design principles and standards through the PD amendment process.

IV. Organization

This document is organized by topic, providing principles and standards by topic in each section, as well as recommendations in some sections.

- **3MLAP Design Booklet and Preferred Alternative (Draft)**. These are attached as **Attachment 1 and 2** and shall serve as guiding documents in interpreting and applying the development and design principles and standards in this document.
- **Design and Development Principles & Standards**. The PD overlay designation is subject to a condition of approval requiring that the PD development plan shall comply with these

development and design principles and standards. These will be used by the review body to evaluate the PD development plan when it is submitted for review through the applicable public hearing process. Design and development that meets individual minimum standards, but which as a whole is inconsistent with guiding design and development principles shall not be deemed consistent with this document.

- **Recommendations:** “Recommendations” are provided in some sections of this document. These are encouraged and advisory, but non-binding, as some of these may be outside the scope of land use review.

V. Design Principles, Standards, and Recommendations

V.1. Overall Thematic and Stylistic Design

1. Development shall be consistent with the draft Design Goals of the Three Mile Lane Area Plan attached as **Attachment 1**.
2. Development and site design shall be sensitive to the first impressions created at this gateway location into McMinnville, and the unique attributes of this location, to reflect a unique high-quality appearance, maintain iconic views, and welcome visitors and residents to McMinnville and its unique identity.
3. The site shall have a cohesive design vocabulary.
4. The thematic and stylistic design choices and vocabulary of the architecture and site shall reflect the unique aspects of McMinnville in the context of Three Mile Lane – predominantly drawing from its agriculture and aviation museum design cues, interpreted in a meaningful way. These architectural design cues include features such as the sloping roofs, glass, and grain cellar elements. Landscape elements include agricultural crops, vineyards, agricultural wind breaks, stands of natural trees, tree cover like what is present at Galen McBee Airport Park, riparian vegetation, etc.
5. The thematic and stylistic choices shall not seek to mimic or replicate the vocabulary of the historic downtown area.
6. Corporate branding, identity, and logos of individual tenants should be addressed in the signage, and not in a generic architectural vocabulary or in corporate “logo buildings” which are repeated in other communities, and which are not consistent with the unique identity of Three Mile Lane. There shall be a consistent thematic treatment of the site and development. The site shall not be a collection of corporate “logo building” designs.

V.2. Uses

1. **Number of stores larger than 135,000 square feet.** There shall be a limit of two anchor stores which have gross square footage exceeding 135,000 square feet, except that one additional anchor store exceeding 135,000 square feet may be permitted if the majority of the façade includes separate liner shops with individual exterior entrances.

Liner Shops Rather than Blank Walls



2. **Use Restrictions.** The following uses otherwise permitted in the C-3 zone shall not be permitted in this PD Overlay: self-storage units, mini-storage units, outdoor storage, outdoor sales uses including auto and equipment sales lots, except (a) as may be incidental to an indoor retail use and may include pedestrian-oriented outdoor retail use such as sidewalk sales, farmers' and/or crafters' markets, sidewalk activities; and (b) those which are predominantly the sale of living plant materials, such as nurseries and garden centers, where the predominant appearance of the outdoor sales areas is plants and living landscape materials.
3. **Drive-Through Uses.** The number and concentration of drive-through uses may be limited overall, and/or shall be restricted to certain portions of the site as determined necessary to achieve the pedestrian-orientation provisions of these principles and standards. Drive-throughs shall be limited if they disrupt pedestrian continuity of a building or buildings by creating drive-through aisles which wrap-around three or four sides of a building and/or require buildings to be separated into individual pad structures rather than a continuous multi-tenant row with pedestrian orientation and continuity.

Drive-throughs shall be designed and located to minimize drive-through dominated design and pedestrian disruptions. Drive-throughs shall be limited in design and configuration to achieve this purpose. To achieve this principle, this may include limiting them to u-shaped configurations at end units of buildings so the drive-through aisle doesn't separate the building from adjacent pedestrian street areas and pedestrian features, outdoor dining areas, etc. (See below). Drive-through kiosks may also be limited to a one-sided drive-through, with a second walk-up window allowed when the kiosk located is between a drive through aisle and a pedestrian street as needed to achieve this principle.



4. **Recommendation: Mix of Uses.** The applicant is encouraged to include a complementary mix of retail and entertainment uses, as well as “maker” businesses that make and sell artisan/craft products, including those which are complementary to the innovation district which is proposed as part of the 3MLAP.

V.3. Architectural Design

1. **Thematic and Stylistic Design Elements.** The architectural design shall be consistent with the provisions of the “Overall Thematic and Stylistic Design” section above.
2. **Scale and Massing.** Except upon findings by the review body that the design qualifies for “Exceptions to Scale and Massing” below, buildings shall meet the Large Commercial standards of the Zoning Ordinance in order to provide pedestrian-scaled buildings and facades designed for a comfortable walking environment.



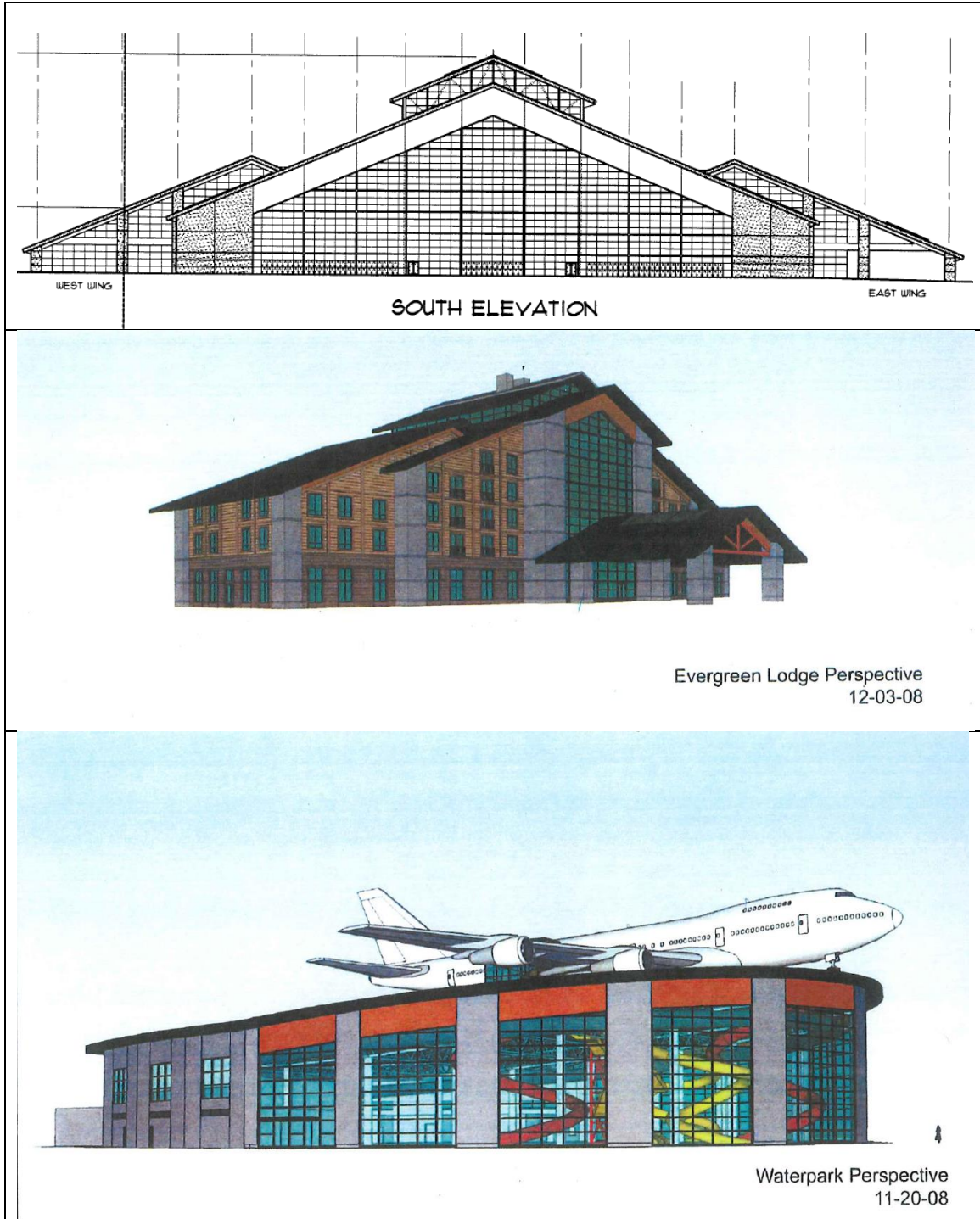


**Reference Designs in 3ML Area for Design Treatments for Large Format Retail Stores
(from Evergreen Campus Concept Graphics)**



Evergreen Lodge Perspective View

Group Mackenzie 2080153.01



- 3. Exceptions to Scale and Massing.** As part of the PD development plan review, exceptions to some aspects of the scale and massing requirements of Chapter 17.56 of the Zoning Ordinance may be authorized by the review body if the review body finds the designs of larger format anchor buildings instead provide for high quality design treatments and elements integral to the building design with features that draw from the larger scale aviation museum and agricultural building themes of the area. Two-dimensional facade treatments will not be considered sufficient to meet this intent. The designs must incorporate predominant elements including

roof forms, glazing, and variation in building height consistent with the design of reference buildings in order to qualify for this exception.

4. **Three-Dimensional Treatments.** Massing and façade articulation treatments shall be designed to provide a three-dimensional appearance that appears as changes in the volume of the building. Two-dimensional treatments, such as vertical changes in parapet height without corresponding changes in the horizontal depth are insufficient to meet the scale and massing requirements of the standards.
5. **Design Elements and Façade Treatments Should Reinforce and Complement One Another.** Changes in vertical height, horizontal depth, materials, trim, glazing, and color should correspond with one another to reinforce and complement one another.
6. **Colors and Materials.**
 - a. The site design shall include one or more color and material palettes for the buildings. Colors and materials shall be consistent with the overall thematic and stylistic design principles. Color and materials selections shall be consistent with the character of the Three Mile Lane area and influences. The intention isn't monotony. Variety rather than a single design treatment is encouraged to contribute to the feeling of organic development of the area occurring over time.
 - b. The 3MLAP Design Booklet and Preferred Alternative attached as **Attachments 1 and 2** encourage vibrant colors. This shall be achieved consistent with the provisions of this section. Colors of principle facades should avoid pure saturated primary and secondary colors. These may be used for accent colors, typically with some variability of hue, saturation, and brightness. In addition, neon or day-glo colors are not permitted as wall surface colors. Pure black or white are generally not permitted as predominant wall surface colors, but may be reviewed as a color for a portion of an exterior wall as part of a cohesive color palette.
 - c. The 3MLAP Design Booklet and Preferred Alternative attached as **Attachments 1 and 2** encourage certain material treatments, especially noted in the "Design Features" section of **Attachment 2**. Exterior material treatments shall be consistent with those allowed in the Large Format Commercial standards in Chapter 17.56 of the Zoning Ordinance, except as otherwise specified in the 3MLAP Design Goals and principles, but some materials authorized in Chapter 17.56 may be further limited in certain amounts or applications to achieve consistency with the design principles and cohesive color and material palette for the site.
7. **Design for Microclimate.** The architectural design shall include features designed for the microclimate as articulated in the "Design Features" Section of the March 23, 2021 Three Mile Lane Area Plan "Preferred Alternative: Land Use and Design Analysis" attached as **Attachment 2**.

V.4. Site Design

1. The site design shall provide for a relationship between buildings, streets, and drive-aisles that provides for multi-tenant structures to be aligned along pedestrian streets or pedestrian street-like drive aisles. These are typically 2-lane and may include on-street parking, typically angled or parallel. Building entrances are oriented to sidewalks and other pedestrian areas such as plazas

and outdoor dining areas. These are lined with buildings and/or outdoor pedestrian areas along the majority of their length, providing both pedestrian-oriented connectivity and continuity. Site design that is predominantly isolated pads for smaller tenant spaces dispersed throughout the parking area without pedestrian-oriented connectivity and continuity of buildings in close proximity along a pedestrian street will generally not meet this requirement.

Larger multi-aisle parking lots shall be located to reduce their visual prominence, and may be located near larger anchor stores, to the side or rear of buildings along a pedestrian street or street-like drive aisle.

An example of a site design meeting this standard is a “barbell” configuration, where a pedestrian street lined with smaller buildings connects anchors at either end, with the larger parking areas located near the anchors, as well as behind buildings, maintaining a pedestrian experience on a portion of the property and meeting the parking needs of larger anchors and other users at locations that encourage a “park once and stroll” experience.

2. Site design shall avoid “through-building” designs in which a building faces a parking lot and street, but is designed with the main entrance facing the parking lot, while the predominant side facing the street is treated as the back of the building with a predominance of service entrances with security doors, meter panels, etc. Those shall be designed to face to the side away from the street, or where impractical, may to a limited extent be minimized and screened with additional landscaping.

V.5. Building Orientation

1. Site design and building orientation shall locate service areas (truck docks, trash and recycling facilities, box crushers, etc.) toward service areas rather than facing the street and screened. Service areas include public and private alleys, service drives, service courtyards, and location at the rear of a site which isn’t visible from and doesn’t face a street, parking area, or amenity intended for use by the public. These locations shall require screening walls and/or landscape screening if the end area at the point of access may be visible. These locations are required rather than site locations which face streets or other areas used by the public and rely entirely on screening walls and landscaping.

V.6. Transportation Connectivity and Facilities

1. The site design shall provide for good transportation connectivity between buildings on the site, and shall provide for good transportation connectivity between the site and adjacent streets and properties.
2. The site shall provide for street connections, and any separated bike and/or pedestrian connections to and/or through the site as specified in the draft 3MLAP preferred alternative, or subsequently adopted 3MLAP if adopted prior to submittal of the PD development plan. When consistent with the intent of the plan, the connectivity through and across the site may be private with access easements designed to a similar public standard, rather than a public facility in a public right-of-way.
3. Bike and pedestrian connectivity shall be designed to be comfortable for all ages, separated from vehicular traffic and parking for safety, and provide relatively direct routes to make connections to connecting facilities or nearby amenities -such as trail systems, Airport Park, riverfront, innovation campus, neighborhoods, etc.

4. Adequate provisions shall be made for shared access, circulation, and parking among properties to allow for circulation between properties while minimizing out of direction travel requiring the need to access the abutting public street system to get from one part of the site to another that could be achieved with a more direct connection.
5. The site design shall accommodate all transportation modes. The site shall provide a location for a covered transit stop with the location coordinated with the transit provider. It shall be located to provide convenient access to on-site uses and pedestrian facilities on-site.
6. Covered bicycle parking shall be provided at a location within 50 feet of a building entrance of anchor stores, and bike parking shall be provided near entrances of other buildings, preferably covered.

V.7. Views

1. Site design, landscape design, architectural design, building orientation, and sign placement/design shall preserve and enhance iconic views of natural and cultural landmarks and landscape features, and should consider views from on-site buildings as an amenity.
2. View features include Mt Hood, and the mountains and hills visible from Three Mile Lane, etc.

V.8. Signs

1. The size and number of building-mounted signs shall be limited to one per exterior public entrance per façade. “Through buildings” may have an additional sign on the opposite façade.
2. Signage should be integral to the varied architectural design and façade treatments of the buildings. Signage should not be predominantly provided through a series of taller “sign parapets” at building entrances. If a limited number of taller parapets are provided, the height of entry parapets and signage at building entrances should be proportional to the height of the principal façade and underlying entryway, so that the parapet and signage are secondary and subordinate to the main façade and underlying entry.

Example. Complies. (Above). The architecture is varied, and signage is integrated into the architectural design - façade-mounted without a separate taller entry parapet, and sized and located to be subordinate to the façade.

Below. Parapet heights and signage in limited instances are not the predominant feature relative to principal adjacent façade height and underlying entry. Parapets are about less than one-fourth in height taller than the principal façade, a ratio of about 1:3 or 1.5 to 2 relative to the underlying entryway, and signage is accordingly subordinate rather than the predominant feature.





Example. Doesn't Comply: Each building entrance has a predominant over-height entry parapet for signage. Parapet heights are more than twice the height of the ground floor entry and/or the height of the principal adjacent façade. Signage is the predominant feature with underlying entryway and main building façade subordinate to parapets and signage.



V.9. Landscaping

1. Landscaping shall be consistent with the 3MLAP Design Goals (Draft) attached as ***Attachment 1***.
2. Landscaping provisions of these principles and standards are in addition to the provisions of the Zoning Ordinance.
3. To provide an enhanced gateway treatment, larger landscape areas shall be provided near the front of the site by Three Mile Lane and the frontage road, to provide space for clusters of mature canopy trees and landscape treatments. These areas shall include a combination of landscape features which include a natural appearance of native trees and landscape materials, and intentionally-designed working landscape features related to the agricultural and viticultural characteristics of the area.

Grocery Store on SW Century Drive, Bend, OR with Tree Preservation



V.10. Parking and Parking Lot Landscaping

1. Portions of the site which have larger multi-aisle parking lots shall be divided into smaller modules, approximately 250 feet x 250 feet, containing approximately three aisles in width, which have more continuous perimeter landscaping and larger landscape areas for larger canopy trees and groupings than would be provided in typical end-island planters. Landscaping at the edges of these modules also provides opportunities for greater landscape buffering and separation for pedestrian circulation through parking areas. Continuous landscaping and pedestrian connectors may also be placed on alternating rows, provided the design is consistent with the pedestrian connectivity requirements of the Large Format Commercial standards of the Zoning Ordinance.



2. Parking aisles shall have end islands which provide space to support of the health of larger shade trees that provide shading and canopy structure that extends over paved areas.
3. Parking lot landscaping areas shall be planted predominantly with living groundcover that will achieve full coverage at maturity.
4. Site grading shall maintain the appearance of natural and gradual contours rather than stark cut and fill forms.
5. If surface stormwater detention facilities are provided on site, they shall be designed to similarly appear as natural landforms, with natural plantings, and a design that appears as an amenity rather than a utility. They shall be predominantly vegetated. If fencing is required, treatments other than chain link fencing shall be used. Chain link fencing with slats is not permitted.
6. If retaining walls over two feet tall are used, they shall have the appearance of natural materials and may include landscaped terracing and/or climbing vines or other vegetation to provide landscape screening. Plain concrete, plain CMU, prefabricated highway panels, etc. shall be avoided unless they can be adequately designed with veneers and/or landscape screening.
7. **Recommendation:** Low-impact stormwater practices are encouraged. If the parking area is graded to drain to stormwater swales or detention features, breaks in the continuous curb will be allowed, subject to adequate provisions for proper runoff treatment.

V.11. Screening

1. Utility vaults shall be located away from prominent public locations and screened or placed underground.
2. Areas adjacent to walls on large format commercial buildings that predominantly lack public entrances and/or windows shall incorporate landscaping areas adjacent to these areas, with enough depth to allow for a more naturalistic planting with a combination of trees and shrubs to de-emphasize the blank walls, rather than strictly a narrow uniform row of evergreen screening materials, which may emphasize and reinforce the presence of the blank wall.
3. Where the Zoning Ordinance specifies that screening walls shall be designed with materials and colors similar in appearance to the main façade, this PD overlay shall also allow for more natural treatments with the appearance of stone and landscape screening with materials and colors intended to de-emphasize and camouflage the visibility of the screening wall consistent with the appearance of landscape treatments rather than building materials.

V.12. Special Features/Spaces for Special Events

1. The site shall incorporate special features such as:
 - a. Preservation and incorporation of the existing agricultural building into a design element such as a gateway feature, entry element to the site, and/or functional use element.
 - b. Public art
 - c. Interpretive information about natural and cultural aspects of the location
 - d. Larger pedestrian and people gathering areas with spaces such as plazas, pedestrian boulevards, green space, outdoor dining patios, linkages between site amenities and nearby amenities.
2. See examples in Section IV for amenities such as:
 - a. Old Mill District, Bend: plazas, public art, landscape features, plazas, waterfront dining areas, fly-casting pond, lawn areas by the river for events etc., pedestrian connections across river to amphitheater.
 - b. Fred Meyer development area in Wilsonville: McMenamin's Old Church and Pub: Outdoor grass terraced amphitheater for outdoor live music

- c. Bridgeport Village: pedestrian area with covered gazebo, play structure with seating, fountains, public art, seating walls, kiosks, hosting of outdoor music and other events.

V.13. Lighting

1. To further the Dark Skies Lighting provisions in Chapter 17.56 of the Zoning Ordinance, any use of LED lighting for parking lot lighting shall consider recommendations in the guidelines from the International Dark Sky Association (IDA), including the following:
 - Use fully shielded fixtures that don't emit light upward.
 - Use “warm white” or filtered LEDs with a color temperature of 3000K or less to minimize blue light emission (and at or below 2700K for ambiance).
 - Use products that enable use of dimmers, timers, motion sensors, and networking.
 - Consider dimming or turning off lights during overnight hours.
 - Avoid over-lighting.
2. If ground-level parking lot illumination can be achieved with lower illumination levels by spacing light poles more closely, with lower heights and lower illumination levels from the source, that shall be provided rather than higher light poles with higher illumination levels from the source with greater spacing between poles.
3. Building-mounted “wall packs” that shine outward into parking areas without downward shielding shall not be employed, except as allowed into service areas not visible from other portions of the site, public right-of-way, or other properties.

V.14. Economic Benefit/Local Multiplier Effect

- **Recommendation:** The applicant is encouraged to give preference to tenants that maximize the positive economic impact to McMinnville and the region, including through the “Local Multiplier Effect”

For example:

- Businesses that offer comparatively higher wages and benefits to employees
- Locally and/or regionally-owned businesses
- Businesses that use locally-based services, such as banking, accounting, marketing, printing, etc.
- Businesses that source local raw materials or products and/or sell local products
- Businesses that support community causes



VI. Examples of Developments, Including Some Experiential Places and Mix of Uses:

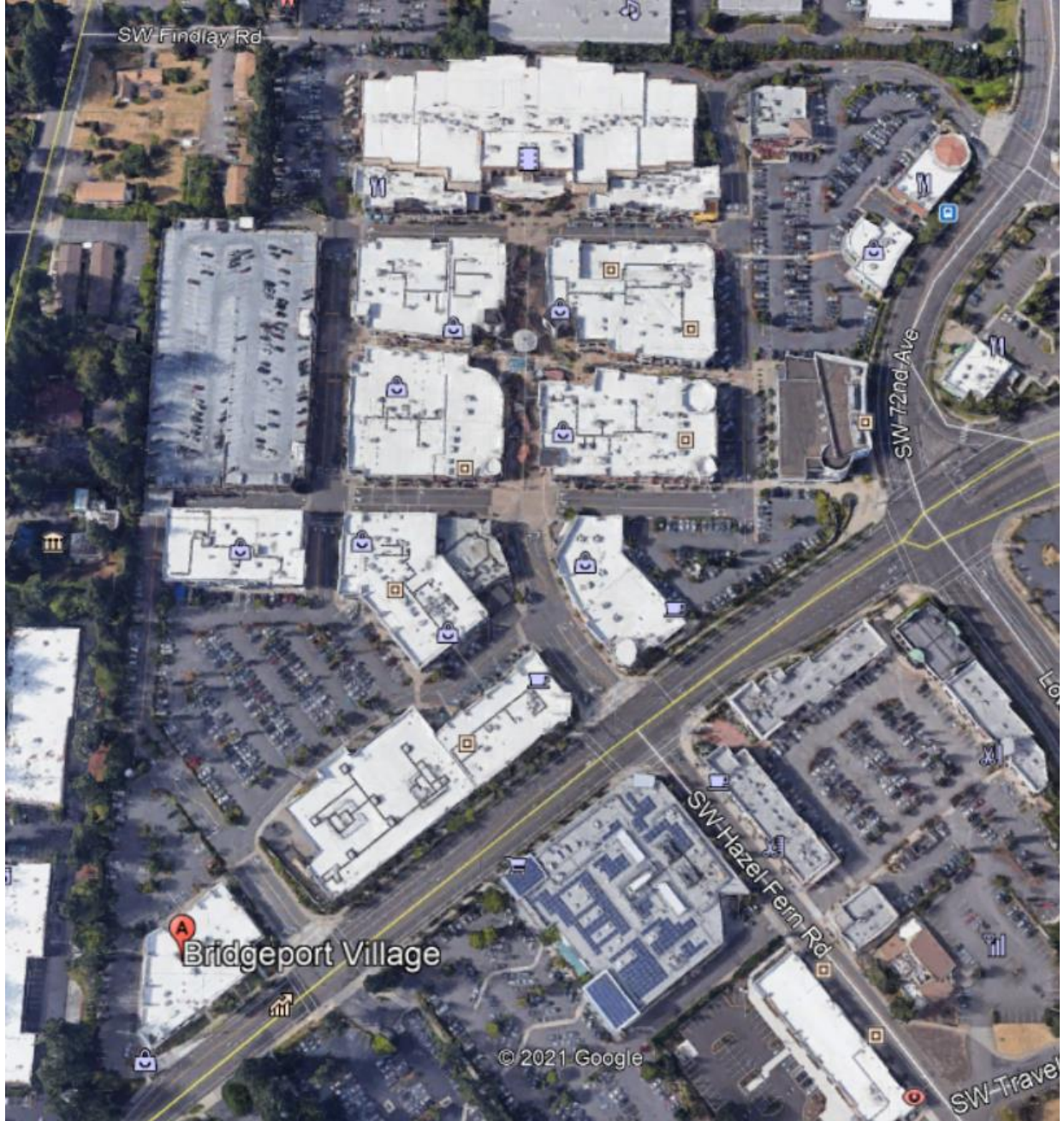
VI.1. Old Mill District, Bend, Oregon

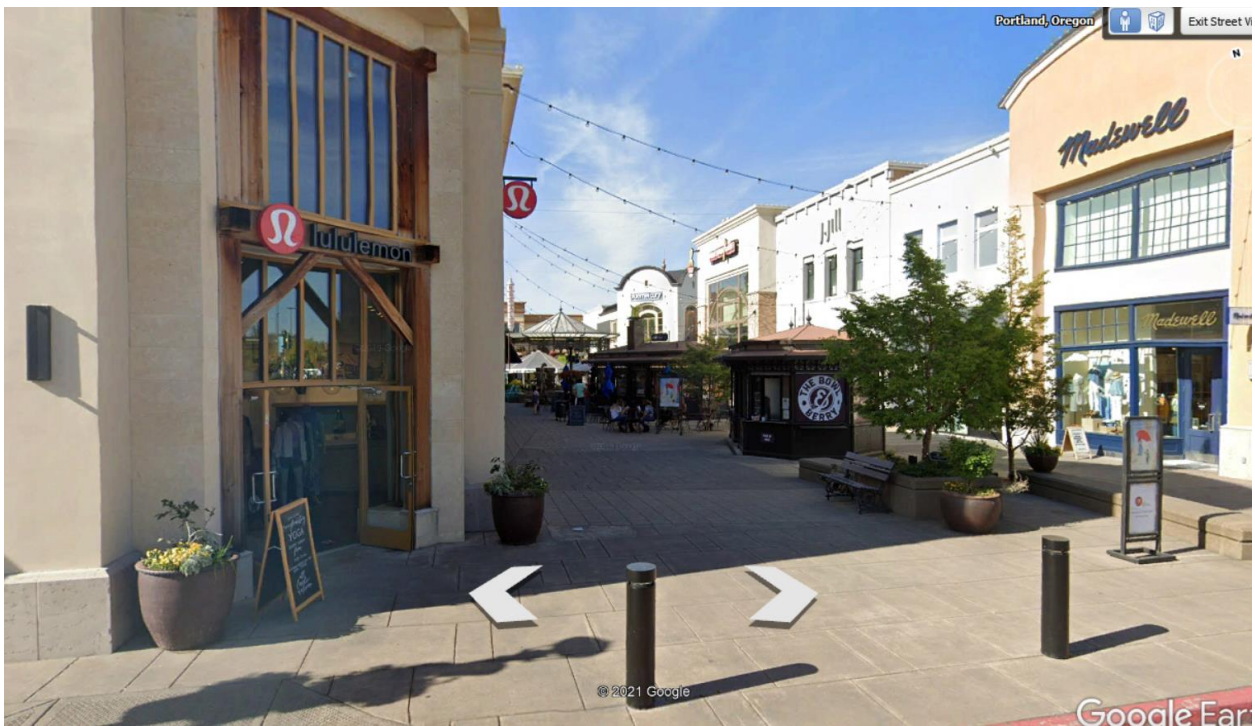
Contains Multiple Attributes Consistent with These Principles and Standards



- Mix of entertainment and retail uses
- Maximizes relationship to site context
 - Linkages to riverfront bike/ped trail system
 - Outdoor dining areas oriented to riverfront and pedestrian street
 - Bike/pedestrian linkages to nearby entertainment venues (amphitheater, brewery, etc.)
 - Connectivity to nearby neighborhoods
- “Barbell” vehicular circulation and parking configuration: Buildings oriented to pedestrian street through site: two lane double-loaded street with angled parking, with wider sidewalks, plazas, etc. adjacent to the street at key locations. Larger multi-aisle parking lot areas are located at convenient but less prominent locations at the ends of the pedestrian street (near the theater, etc.) and behind buildings predominantly out of view of the pedestrian street.
- Pedestrian emphasis of street design includes numerous pedestrian crossings, well-marked with crosswalks, different paving treatments at intersections, and other pedestrian treatments to slow vehicles.
- Experiential destination, encourages lingering and “park once and stroll”
- Unique features, public art, sculptural elements, seating and gathering areas, and interpretive elements on-site. (fly-casting pond and artwork, interpretive/historic information and signage)
- Adaptive reuse of historic elements and structures on-site
- Larger areas for landscape plantings within the pedestrian areas and plazas
- Generous green spaces at prominent locations on the site for aesthetics and use.
- Compatible architecture scaled to pedestrian experience with façades that encourage strolling
- Signage scaled and placed consistent with pedestrian experience and subordinate to facade

VI.2. Bridgeport Village, Tigard, OR
Contains Several Attributes Consistent with These Principles and Standards





- Mix of entertainment and retail uses
- (Somewhat self-contained, not well connected to surrounding properties)

- “Barbell” vehicular circulation and parking configuration: Buildings oriented to pedestrian-oriented streets and exclusive pedestrian areas through site. Larger multi-aisle parking lot areas are separated and located at convenient but outer areas of the site, but near larger anchors like the theater and former grocery store, predominantly out of view of the pedestrian streets and pedestrian ways.
- Experiential destination, encourages lingering and “park once and stroll”
- Unique features, public art, sculptural elements, seating and gathering areas on-site.
- Continuity of pedestrian-oriented areas

VI.3. Old Town Square/Fred Meyer, Wilsonville

Does Not Contain Majority of Attributes Consistent with Standards, but Provides Examples of Certain Attributes Consistent with Standards







- Outlying pads generally provide for good continuous pedestrian continuity.
- The designs provide varied architectural forms, rooflines, etc. which avoid the appearance of a retail strip complex.
- There are some pedestrian pass-throughs
- There are pedestrian visual cues and seating, streetlights, etc.
- There are some entertainment uses incorporated onto the site, with adaptive reuse of an architecturally significant building.
- True pedestrian orientation is limited by 4-5 lane and 7-8 lane adjacent streets (even with landscaped medians), and lack of pedestrian orientation of buildings across the street. Some buildings lack true pedestrian entrances on that side, and/or windows are used for auto-scaled promotional decal signage only

VI.4. Keizer Station

- Example of “Drive and Park Multiple Times” Type of Retail Complex
- Example of a Different Type of Retail Complex with Attributes Which Are Different Than Envisioned and Outlined in These Principles and Standards.



- Large multi-aisle parking lot areas and distance between buildings without connecting pedestrian streets lined with pedestrian-oriented buildings (lack of areas of interest between buildings, dominated by vehicular accommodation, increases perceived distance of walking).
- Separated building pads that discourages pedestrian activity between buildings (lack of continuity of pedestrian-oriented spaces).

- Buildings designed to accommodate drive-through areas that fully wrap around the building pad, or are designed with a high concentration of drive-through uses that dominate the design and discourage pedestrian activity or outdoor dining and gathering spaces.
- “Power Centers” that include a continuous row of large format retail stores where even continuous sidewalks, if present along front of buildings, are dominated by blank walls between building entrances with no pedestrian interest. Decorative Building façade treatments along face of building to break up large blank, unarticulated walls may improve aesthetics, but don’t offer any pedestrian interest.
- Smaller retail buildings meet letter of the law but not intent:
 - Buildings are abutting the street, but are not really accessible from the street, instead back up to the street but are only accessible from parking lot, with no easy pedestrian pass-through areas.
 - Buildings are principally oriented to the parking lot, and where they abut a street, it is a busy, high speed/high volume street or highway with significant road noise lacking buffering or desirable pedestrian experience. Outdoor dining areas are incidental and oriented to a large parking lot without elements present to make the outdoor spaces more appealing, such as narrow sidewalks without low walls or landscaping to enhance and/or separate the pedestrian areas from parking lot area.
- Lack of recreational uses
- Food and beverage options are on isolated pad sites without strong pedestrian connectivity or continuity – facing onto and surrounded by large multi-aisle vehicular parking lots and circulation areas.
- While there are with landscape-buffered sidewalks, only a few buildings are oriented to these streets, and where these is pedestrian connectivity at those locations, they are individual pads isolated from one another and lacking pedestrian/building continuity.

VI.5. The Village at Sunriver
Another Example of Pedestrian-Only Area with Parking at Perimeter
Includes Recreational Uses, Linkages



ATTACHMENT 1

TO DEVELOPMENT AND DESIGN PRINCIPLES AND STANDARDS

DRAFT



THREE MILE LANE AREA PLAN DESIGN BOOKLET



DRAFT

HOW TO REVIEW THE LAND USE CONCEPTS:

GOALS AND OBJECTIVES

GOAL 1: SUPPORT AND ENHANCE THE DISTRICT'S ECONOMIC VITALITY AND MARKETABILITY

This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism.

GOAL 2: PROVIDE OPPORTUNITIES FOR A COMPLEMENTARY MIX OF LAND USES, CONSISTENT WITH THE VISION OF A DIVERSE & VIBRANT DISTRICT.

This plan aims to provide a mix of land uses that support one another to create a unique part of the city. McMinnville is in the process of adopting a set of "Great Neighborhood Principles" to evaluate land use concepts for the Three Mile Lane area. A draft of these is included below!

GOAL 3: ENHANCE MULTI-MODAL CONNECTIONS THROUGHOUT THE DISTRICT

This plan aims to create a complete, multimodal transportation network that serves the north and south sides of Three Mile Lane within the district, and that connects the business community, the hospital, residential neighborhoods and tourism amenities to each other and to the city center.

GOAL 4: CREATE AN AESTHETICALLY PLEASING GATEWAY TO MCMINNVILLE

The study area is a primary gateway to the City of McMinnville. Because the land use concepts are fairly high-level, urban design considerations explore aesthetic elements that could be applied in the area.

GREAT NEIGHBORHOOD PRINCIPLES (draft)

- Natural Feature Preservation
- Scenic Views
- Parks and Open Spaces
- Pedestrian Friendly
- Bike Friendly
- Connected Streets
- Accessibility
- Human Scale Design
- Mix of Activities
- Urban Rural Interface
- Housing for Diverse Incomes
- Housing Variety
- Unique and Integrated Design

COMMON ELEMENTS

Overall

- Boundaries remain the same: UGB is in the same location, developable land is always approx. 400 acres
- Airport remains the same
- Roadway designs can be selected independently and combined with any land use concept



Transportation

- Cumulus Avenue is connected to SW Norton Lane through or adjacent to the Chemeketa Community College campus.
- New public 'complete' streets are added to new developments south of Three Mile Lane.
- Three Mile Lane bridge is improved for bicycle and pedestrian safety.
- There are new and improved bicycle and pedestrian connections throughout the area.



Urban Design

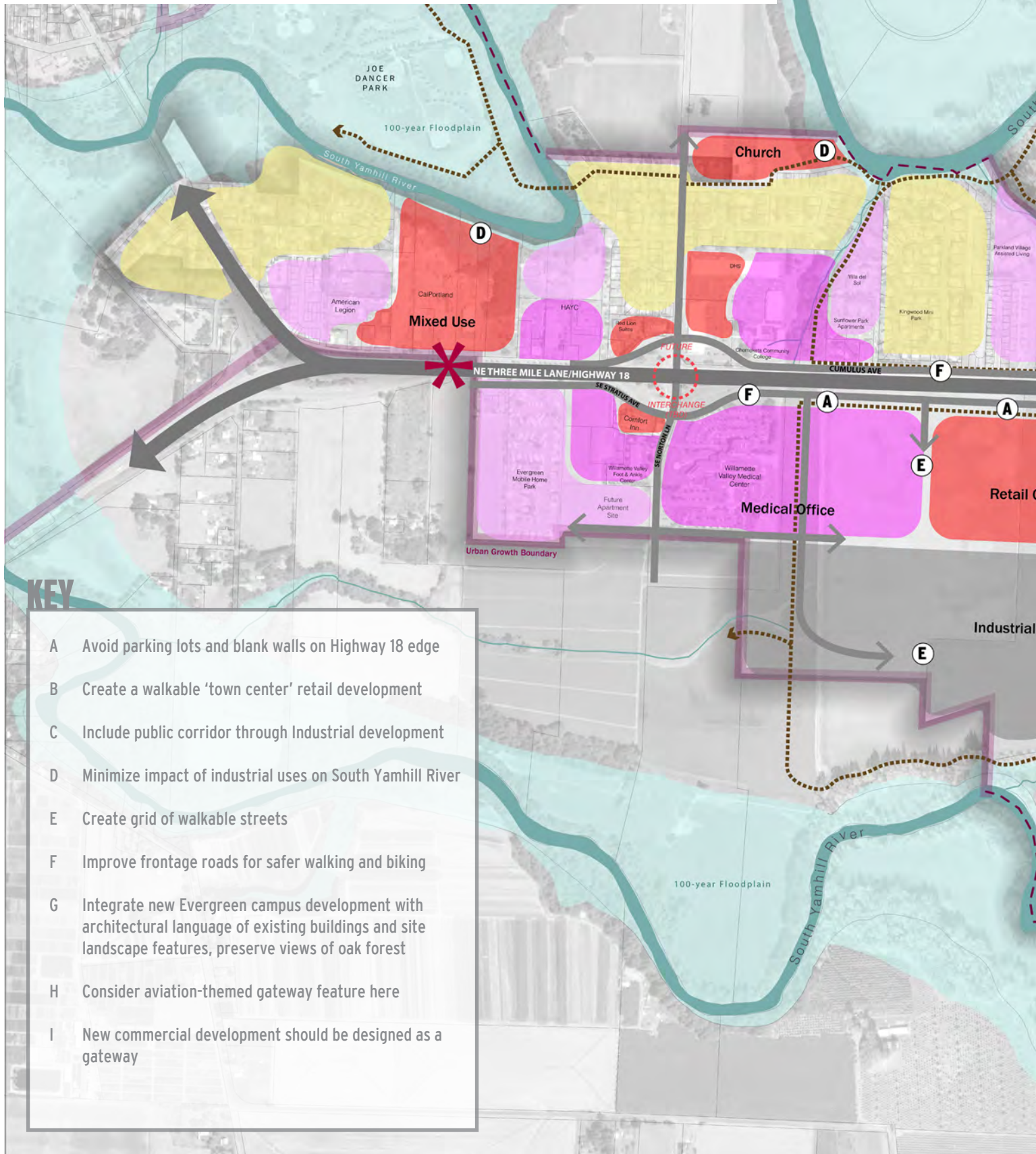
- Landscape and architectural design standards are recommended to ensure new development is designed to reflect regional agricultural and historic forms and support this area's function as a gateway to McMinnville.
- Preserve views to natural features like mountains and the river
- Gateway elements are included to mark the entrance to McMinnville



Parks and Trails

- A trail system connects the South Yamhill River, Galen McBee Airport Park, Evergreen Campus, and Joe Dancer Park along riparian corridors and through new development. The location of these trails changes slightly per concept, but they are always present.
- Recreational access is added to the Yamhill River and riparian corridors and oak stands are protected

INDUSTRIAL CAMPUS





INDUSTRIAL CAMPUS

This concept is most similar to existing zoning south of Three Mile Lane. With a large industrial user, this concept is likely to result in the largest building square footage. There are many contemporary examples of light industrial development that integrate well with other land uses. Agricultural building forms could relate well with the existing character of the area. An old grain elevator building is a prominent feature at the west end of this area and inspired the design for the nearby Jackson Family Winery and processing center.

A cluster of new medical office space near Norton Lane on both sides of Three Mile Lane, builds off the central attractor of the Medical Center. This could include space for expansion of the Medical Center.

The Cal Portland site is changed to a mixed-use designation, allowing for a mix of commercial and residential development. On the north side of this parcel, protection of the South Yamhill river edge, potentially with public access, is a key urban design goal.

A significant retail center south of Three Mile Lane at Cumulus Avenue could serve as a regional retail attractor and local amenity.

Another commercial node and additional housing are proposed in the East Neighborhood with gateway signage and context appropriate buildings. At CCC, infill commercial uses support an active street presence.

Gateway markers in this concept are located at mixed-use / commercial areas to draw attention to those uses and support their role in creating a gateway to McMinnville.

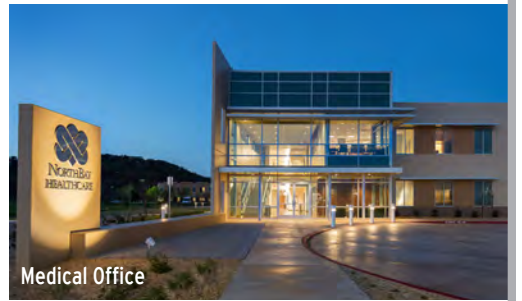




Mixed-use



Wine industry buildings

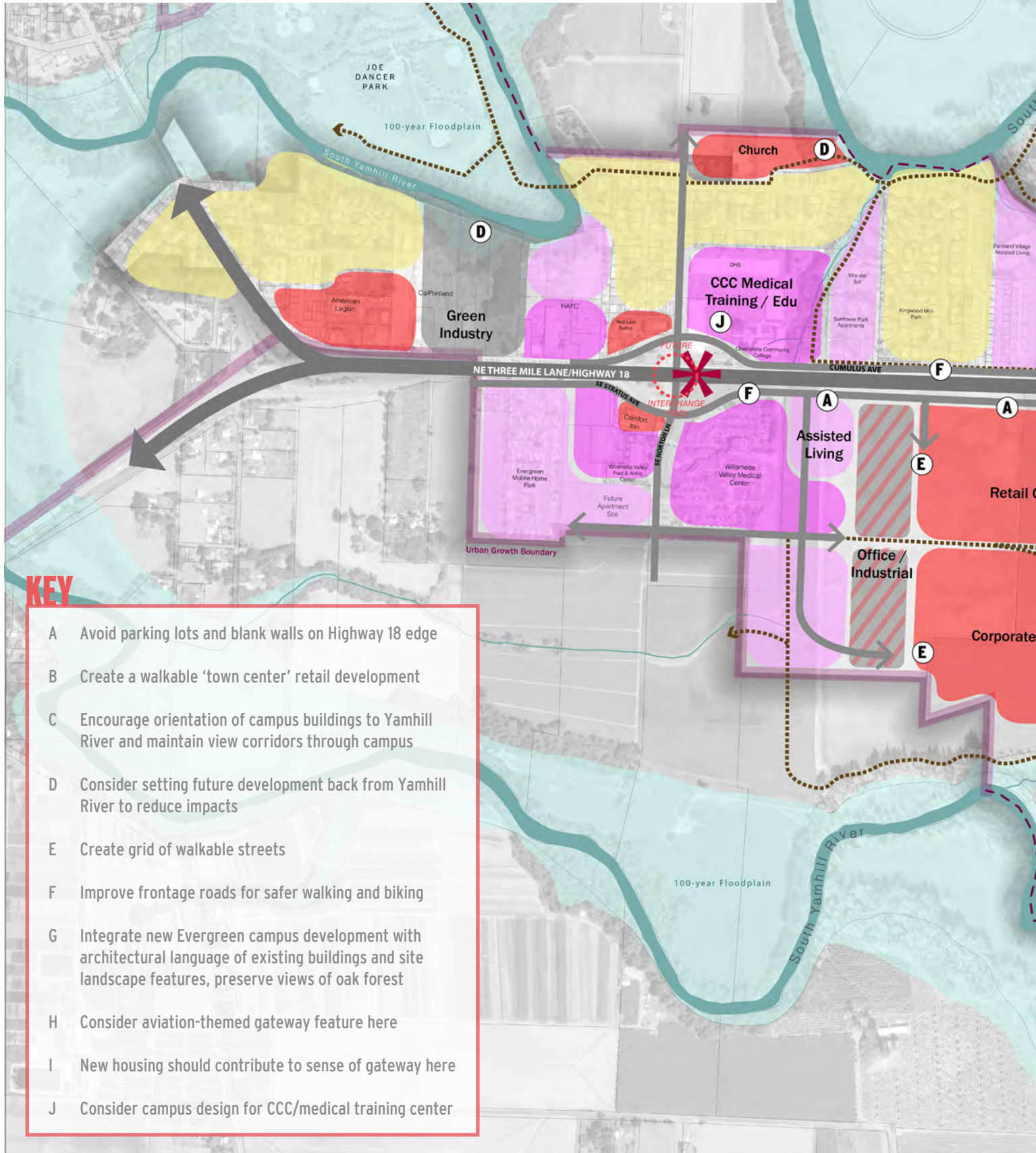


Medical Office



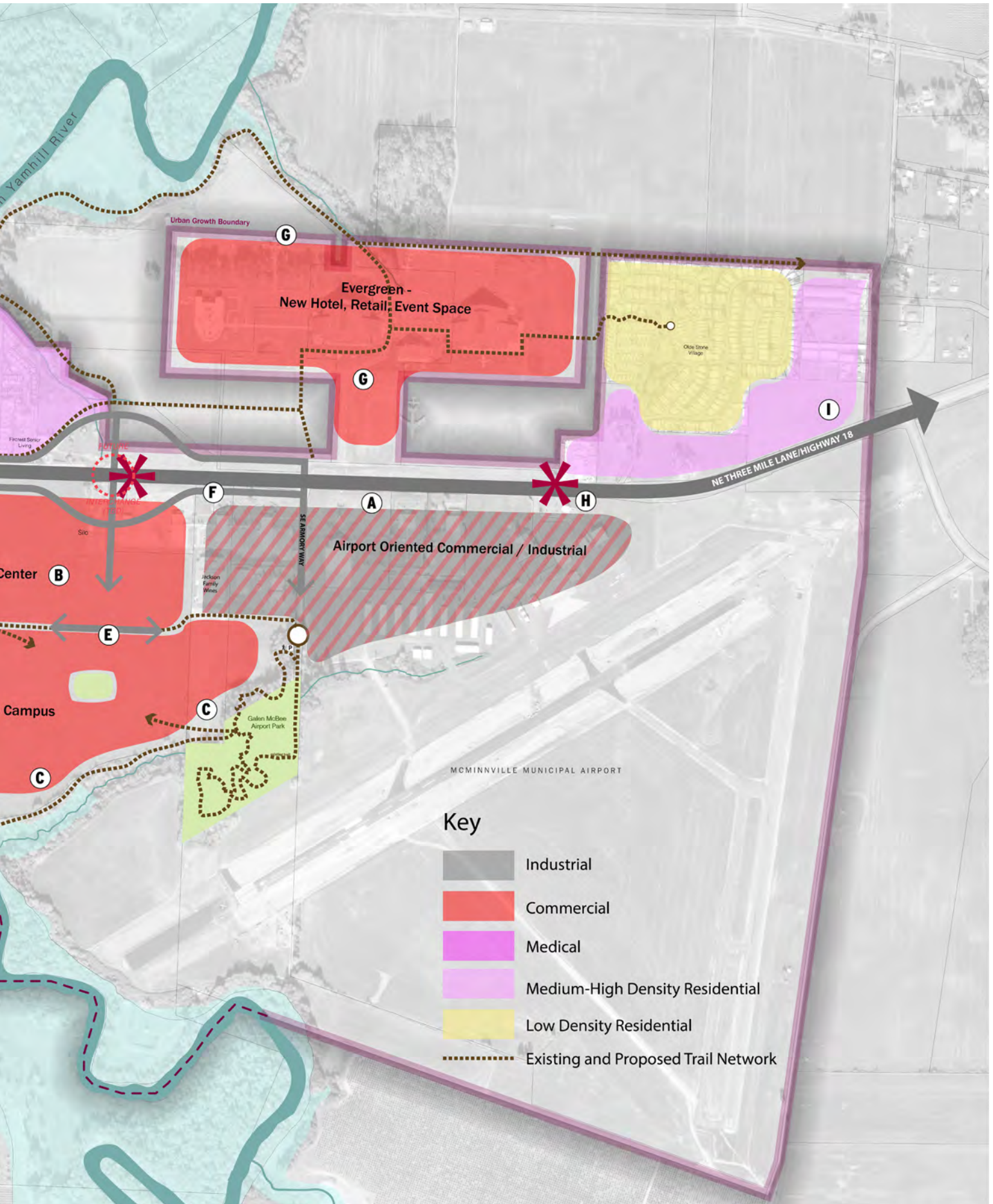
Retail Center

CORPORATE CAMPUS



KEY

- A Avoid parking lots and blank walls on Highway 18 edge
- B Create a walkable 'town center' retail development
- C Encourage orientation of campus buildings to Yamhill River and maintain view corridors through campus
- D Consider setting future development back from Yamhill River to reduce impacts
- E Create grid of walkable streets
- F Improve frontage roads for safer walking and biking
- G Integrate new Evergreen campus development with architectural language of existing buildings and site landscape features, preserve views of oak forest
- H Consider aviation-themed gateway feature here
- I New housing should contribute to sense of gateway here
- J Consider campus design for CCC/medical training center



CORPORATE CAMPUS

A corporate campus and mix of office/industrial south of Three Mile Lane add significant new office space. The large corporate campus could be attractive to a tech company looking for an affordable community with natural amenities and an airport with corporate jet capacity. This area would be a walkable hub of activity and could drive demand for additional local business services. A new park is proposed with trail connections to the Galen McBee Airport Park and the campus could be oriented south to the river, mountain views and the scenic backdrop of agricultural lands.

Evergreen is envisioned to add a new hotel, retail, and event space on undeveloped land in its campus.

New medical office space near Norton Lane and additional assisted living near the Willamette Valley Medical Center are complementary uses which benefit from co-location. Chemeketa Community College's focus on health and medical-related education is also strengthened with complementary uses, including potential out-patient clinics with training for students.

A significant retail center south of Three Mile Lane at Cumulus Avenue could serve as a regional retail attractor and local amenity.

Cal Portland remains industrial, but transitions to a greener industry that is a better neighbor to residential uses with a green edge to the South Yamhill River.

A mix of new housing is added to the Eastern Neighborhood.

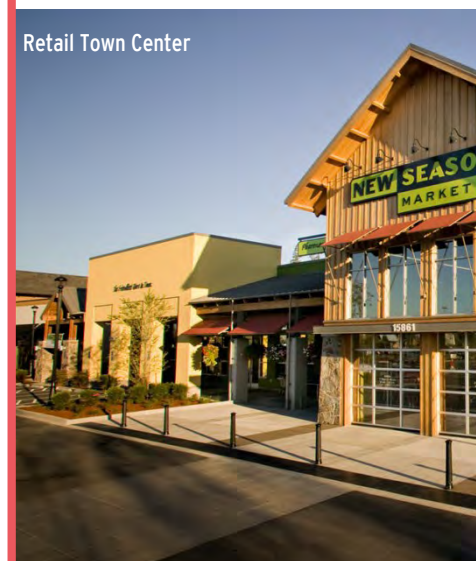
Gateway markers are located at commercial and residential areas to draw attention to those uses and support their role in creating a gateway to McMinnville.



Corporate Campus



Medical Office Building



Retail Town Center



Corporate Campus

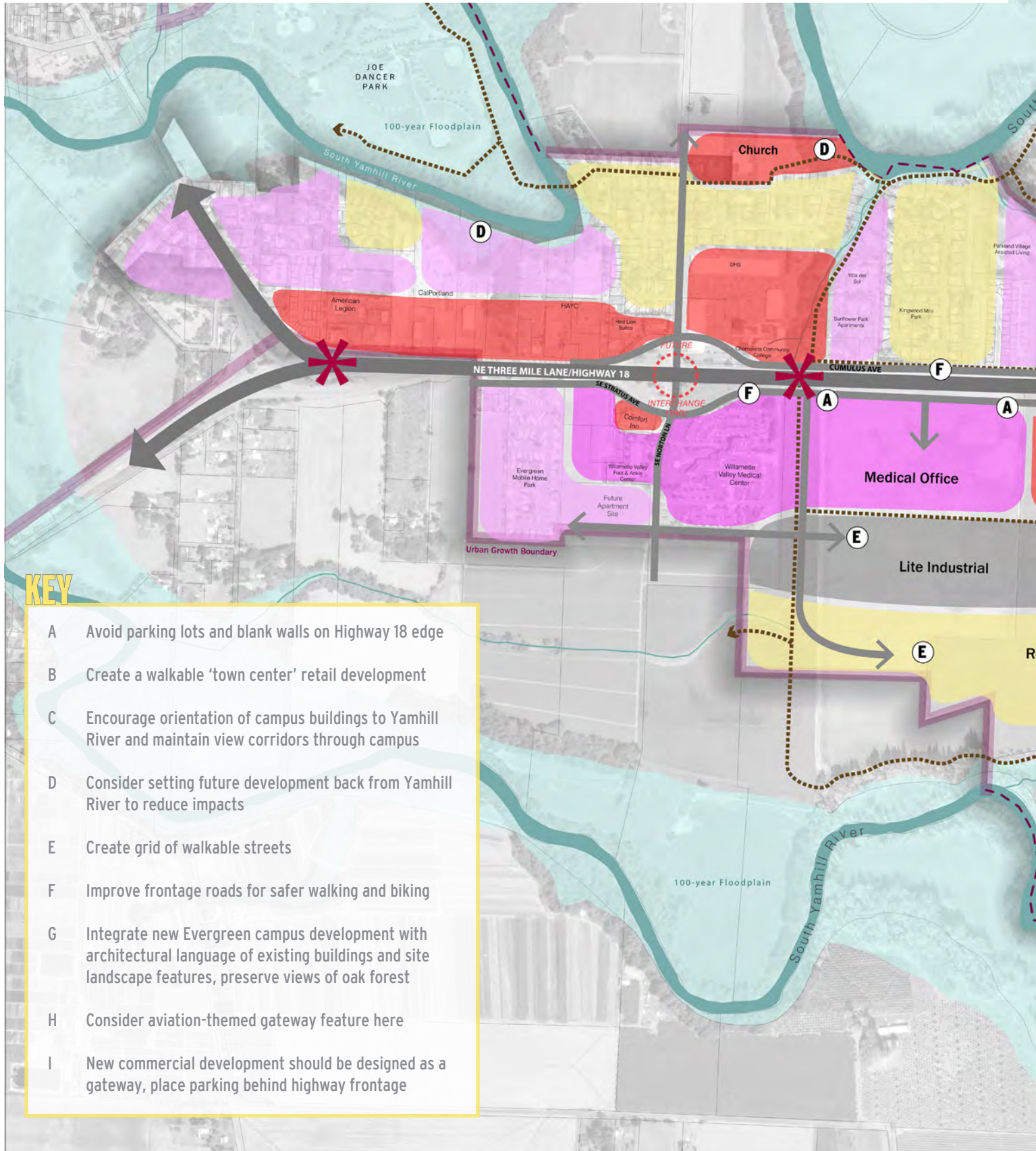


Corporate Campus



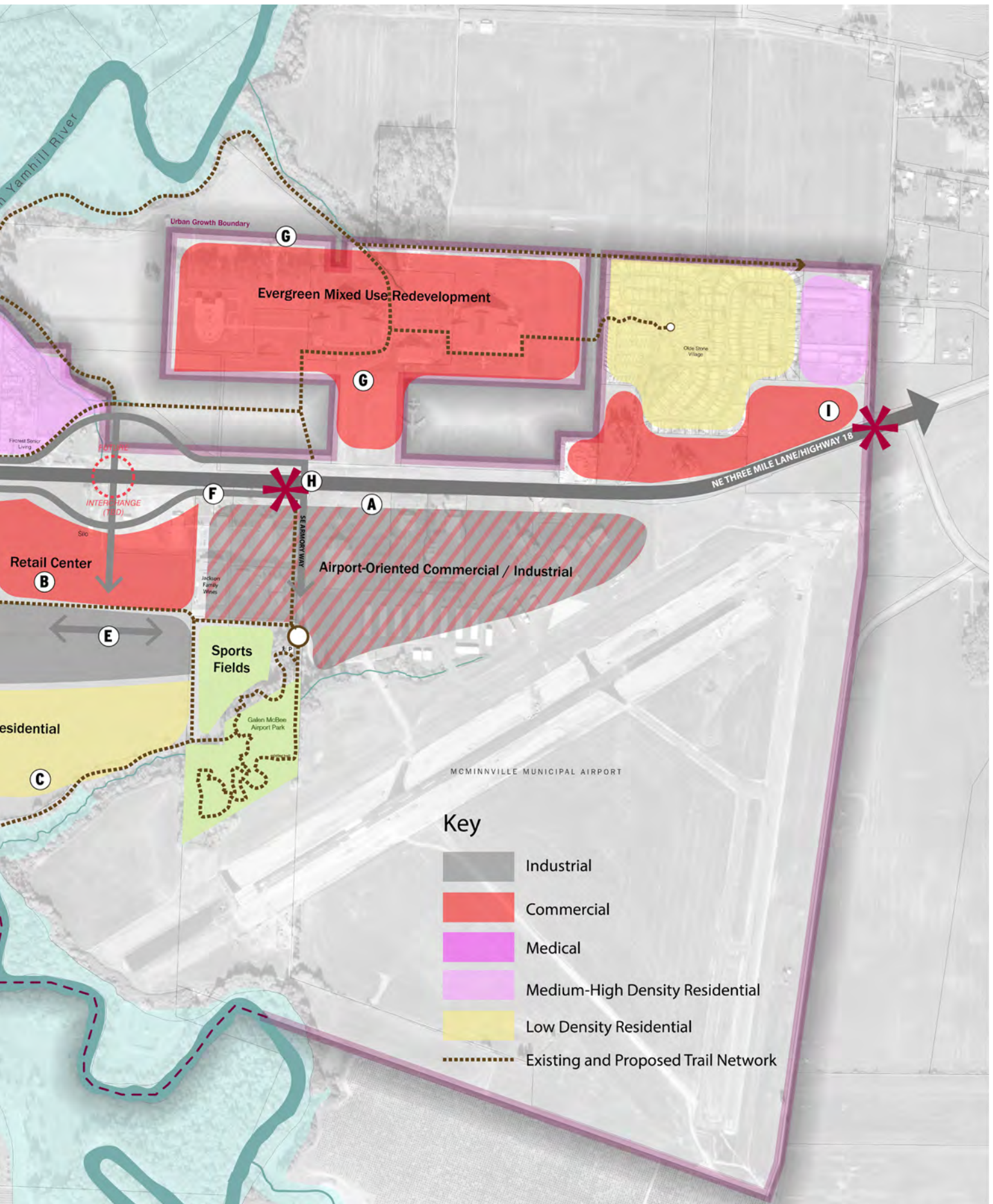
Retail Town Center

S. YAMHILL NEIGHBORHOOD



KEY

- A Avoid parking lots and blank walls on Highway 18 edge
- B Create a walkable 'town center' retail development
- C Encourage orientation of campus buildings to Yamhill River and maintain view corridors through campus
- D Consider setting future development back from Yamhill River to reduce impacts
- E Create grid of walkable streets
- F Improve frontage roads for safer walking and biking
- G Integrate new Evergreen campus development with architectural language of existing buildings and site landscape features, preserve views of oak forest
- H Consider aviation-themed gateway feature here
- I New commercial development should be designed as a gateway, place parking behind highway frontage



S. YAMHILL NEIGHBORHOOD

Providing a range of housing types and densities can help address the City's housing needs. New residences are paired with a greater array of amenities such as parks, trails, and services. This concept includes an expanded Airport Park to serve new residents in the study area, with new trail connections west to new residential development. Design standards could promote site-specific landscape and building forms, including potential 'agrihoods' with integrated community gardens.

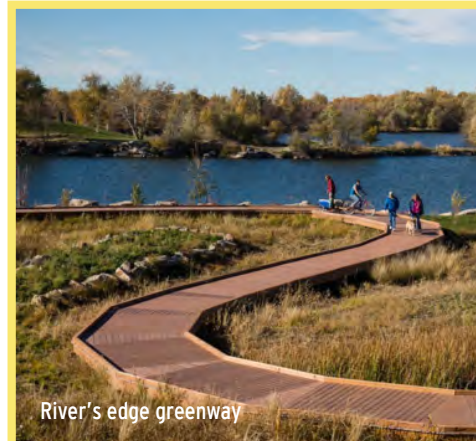
This concept roughly doubles the area for medical office space and potentially new hospital facilities near the Willamette Valley Medical Center south of Three Mile Lane.

A mixed-use redevelopment of the Evergreen Tourism Site includes a mix of residential uses like multifamily buildings or townhomes, office uses, and retail.

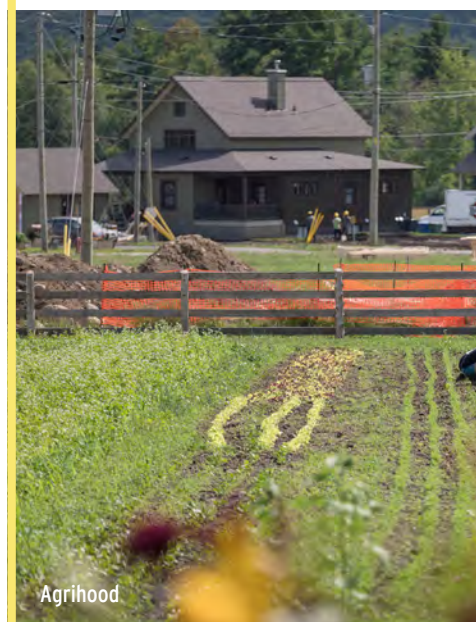
The Cal Portland site is redeveloped with commercial frontage on Cumulus Ave and residential uses to the north along the Yamhill River, matching the overall pattern of the rest of the neighborhood north of Three Mile Lane.

A light industrial area south of Three Mile Lane could include uses that minimize noise, traffic and night-time activity like warehousing, food and beverage, or light manufacturing. The southern edge should include a landscape buffer and link to the residential areas.

Gateway markers in this concept are located at the entrances to new recreation trails and serve as signals of entry to vehicles and to mark the pedestrian trail network.



River's edge greenway



Agrihood



Cottages



Commercial Town Center



Small-scale light industrial



Agrifood



Townhouses



Affordable multi-family

GATEWAYS

Three Mile Lane will serve as a figurative gateway to McMinnville, and future design of Highway 18 improvements should consider opportunities for corridor design that respects the area's agricultural heritage and landscape character. There will also be opportunities for specific gateway features that physically mark this entrance to McMinnville. The images below present some design considerations for these features.



Large landscape design gestures, visible from fast-moving vehicles (and the air)



A modest-height, scrolling sculpture, perhaps with backlighting at night



A large-scale public art piece, perhaps dramatically lit at night

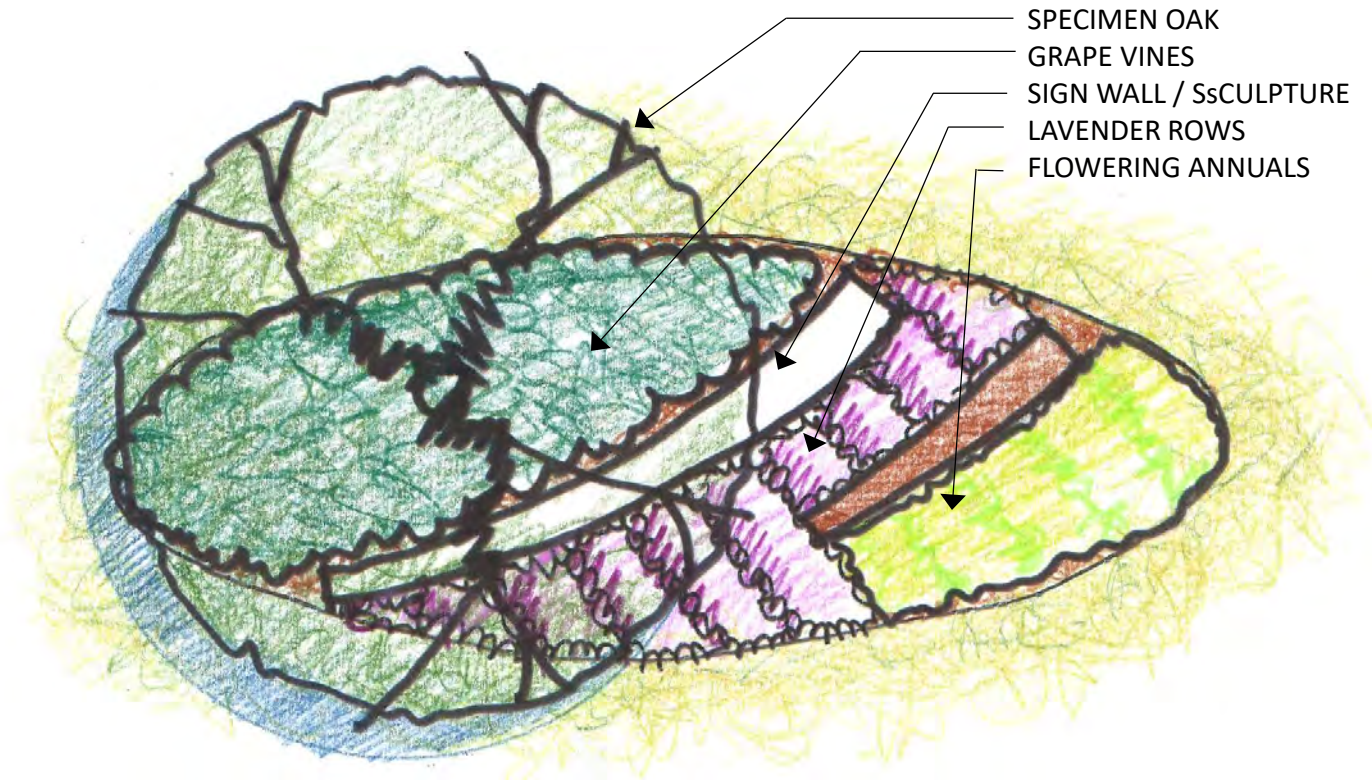


'Super-graphic' lettering on overpasses

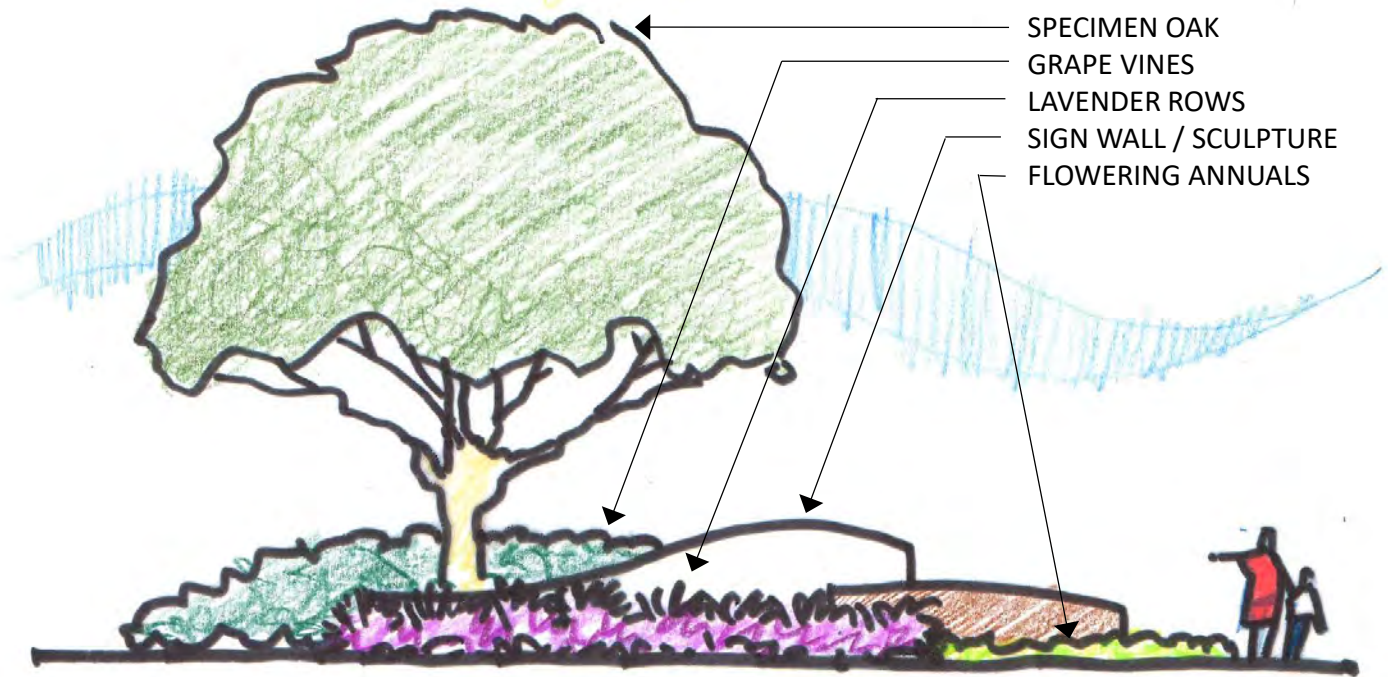


Vertical markers can be effective gateways and wayfinding features

DRAFT



PLAN VIEW



ELEVATION VIEW

CONCEPTUAL GATEWAY FEATURE SKETCH

COMPLETE STREETS DESIGN

The following table summarizes the street standards proposed in McMinnville's 2010 TSP, with potential adjustments noted to enhance cyclist and pedestrian comfort.

	Major Collector Existing Standards	Notes	Local Residential Existing Standards	Notes
Right-of-Way	74'	<i>Increase to 80'</i>	50'	<i>Increase to 58'</i>
Speed	25-30 mph		15-25 mph	
Maximum Average Daily Traffic (ADT)	16,000		1,200	
Adjacent Land Use Intensity	Medium		Low	
Sidewalks	5' residential 10-12' commercial	6'	5'	<i>Increase to 6'</i>
Planter Strips	6' residential N/A commercial	8'	5'	<i>Increase to 6'</i>
Curb-to-Curb Street Width	44'	<i>Suggest 50'</i>	28'	
On-Street Parking Two Sides	N/A	<i>Possible in urban/ town center area</i>	yes	<i>Switch to one side parking if travelway too narrow...see below</i>
Bike Facility	2 lanes (5')	<i>Change to 8' buffered bike lanes (or cycle tracks)</i>	Shared Lane	<i>OK, with sharrow markings</i>
Median / Center Turn Lane	12'	<i>Ensure canopy trees planted</i>	None	
Travel Lane Width	2 Lanes (11')		See street width	<i>With on-street parking on both sides, the resulting travelway will be 14', two-way, which is narrow.</i>



Buffered Bike Lane



Cycle Track



PROPOSED 3ML MAJOR COLLECTOR STREET CROSS-SECTION



PROPOSED 3ML LOCAL RESIDENTIAL STREET CROSS-SECTION





Preferred Alternative: Land Use and Design Analysis

McMinnville Three Mile Lane Area Plan

DATE March 23, 2021

TO Heather Richards and Jamie Fleckenstein, City of McMinnville

FROM Darci Rudzinski and Andrew Parish, Angelo Planning Group
Ken Pirie, Walker Macy
Sam Brookham and Chris Zahas Leland Consulting Group

CC Michael Duncan, ODOT

INTRODUCTION

Background and Purpose

The goal of the McMinnville Three Mile Lane Area Plan planning project is to create a long-range, 20-year+ plan guiding future growth in the eastern-most area of the City. The purpose of this memorandum is to describe and evaluate the Preferred Alternative for the McMinnville Three Mile Lane Area Plan. The alternative is an outcome of a visioning and refinement process conducted with stakeholders, two advisory committees, and members of the public as described in the Process section.

This memorandum is organized as follows:

1. A brief overview of the process and context of the Three Mile Lane Area Plan project.
2. A detailed description of the Preferred Alternative along with illustrative graphics and precedent photographs.
3. An evaluation of the preferred alternative – how it meets the project’s goals and objectives and how the key features of the preferred alternative can be implemented.
4. A description of the next steps in developing the Three Mile Lane Area Plan.

Members of the project’s Technical Advisory Committee (TAC) and Citizens Advisory Committee (CAC) will be asked to review this memorandum, provide suggested modifications to the Preferred Alternative, and provide direction for implementation. The material contained herein will be adapted for a public event, tentatively scheduled for April 2021.

Process

The Preferred Alternative reflects community comments, the work of the project's advisory committees, and collaborative efforts between City staff and the consultant team. It is informed by a series of technical memoranda that are available on the project website, www.threemilelane.com.

Goals, Objectives, and Scoring Criteria.

An aspirational vision statement, community goals and objectives, and potential criteria to evaluate land use and transportation options for the Three Mile Lane area were developed early in the project. They were created to articulate the Three Mile Lane Area Plan's desired outcomes and help in the evaluation of options for the area. These materials were discussed in project advisory committee meetings and the subject of an online survey and a public open house.

Three Mile Lane Area Plan: Vision Statement and Project Goals

Project Vision Statement: The Three Mile Lane District is a vibrant community that serves as the gateway to Downtown McMinnville and Oregon Wine Country. Employment opportunities, attractive housing options, and tourist destinations characterize the area. Residents and workers enjoy safe and efficient options to travel to Downtown McMinnville and benefit from close proximity to a variety of goods and services, all easily reached by motorist, bicyclist, pedestrian, and transit rider alike. The connection to McMinnville's rich history and the surrounding landscape is reflected in urban design elements throughout the area, highlighting the uniqueness of this special place.

Goal 1: Support and enhance the district's economic vitality and marketability

Goal 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.

Goal 3: Enhance multi-modal connections throughout the district.

Goal 4: Create an aesthetically pleasing gateway to the City of McMinnville.

Based on this vision statement and project goals, the project team developed qualitative and quantitative criteria to evaluate land use and transportation alternatives. These will be discussed in the Evaluation section of this memorandum.

Alternatives Evaluation

Three alternative concepts were created to provide three distinct approaches for the buildout of new land uses, local street networks, and open space amenities. These land use concepts were

developed with input from the community and the project advisory committees, and through in-depth discussions between City staff and the consultant team. The purpose of this evaluation was to identify benefits and drawbacks, rather than to simply pick the highest-scoring concept, and incorporate the best-performing elements into the Preferred Land Use Alternative.

The three land use concepts are described generally below.

Concept 1: Industrial Campus. This concept is most similar to existing zoning south of Three Mile Lane. It allows for a large industrial user, potentially engaged in manufacturing or warehousing, in close proximity to retail services, Three Mile Lane, and other supportive or ancillary uses to the primary industrial employment use.

Concept 2: Corporate Campus. The most significant feature of this concept is a sizable commercially-zoned “corporate campus” and a mix of office/industrial uses south of Three Mile Lane, which would add a significant amount of new office space.

Concept 3: South Yamhill Neighborhood. Concept 3 includes residential land in the southern portion of the study area. Along with a greater number of housing units comes a greater need for amenities such as parks, trails, and services to serve the population.

These land use alternatives were complemented by two alternative designs for Three Mile Lane/Highway 18. The preferred facility option will be informed by additional transportation analysis and modeling and will be the focus of a separate memorandum.

Refinement of the Preferred Alternative

These three concepts were discussed and critiqued by City staff, the project’s TAC and CAC, and the broader public at a July 11, 2019 Town Hall meeting. Feedback received from these groups, particularly the CAC, led to the creation of the Preferred Alternative, described in detail in the next section. This feedback included:

- Support for a Retail Center and Corporate Campus for land south of Highway 18 (elements of Concept 2).
- Support for a mixed-use designation including residential uses at the CalPortland site (elements of Concept 1).
- Concern about the appropriateness of community-scale park uses and new residential uses in the eastern part of the study area due to their proximity to the McMinnville Municipal Airport.
- The need for road connections and public open space as part of the Corporate Campus concept.
- Concern with changing land use designations for developed residential areas.

Great Neighborhood Principles

In April 2019, the City of McMinnville adopted the Great Neighborhood Principles into the City's Comprehensive Plan. Their purpose is to guide the land use patterns, design, and development of the places that McMinnville citizens live, work, and play. These 13 principles are listed in Figure 1, with additional details that suggest how these principles can be expressed in a site and context-specific way for the unique setting of the Three Mile Lane area.

Figure 1. Great Neighborhood Principles: Design Elements that express "McMinnville-ness"

1. Natural Feature Preservation

- Strive to protect tree groves
- Strive to protect individual trees
- Protect riparian corridors and adjacent native landscape



2. Scenic Views

- Provide and protect views to rolling hills and volcanoes
- Provide visual and physical access to North Yamhill River
- Orient streets and open spaces to views



3. Parks and Open Spaces

- Connect to Galen McBee Airport Park
- Create new gathering spaces that incorporate natural areas and views
- Plant landscapes that incorporate natives and exhibit seasonal variation



4. Pedestrian Friendly

- Provide a network of sidewalks and trails to connect people to key locations
- Incorporate shade streets with mature tree canopy

5. Bike Friendly

- Plan safe routes for residents and touring cyclists

6. Connected Streets

- Connect to existing street grid in the Three Mile Lane area



7. Accessibility

- Design new development for ease of use by all ages and abilities

8. *Human Scale Design*

- Respect typical scale of commercial uses in McMinnville
- Design to reflect the micro-climate—outdoor life, porches, balconies
- Promote inclusion and interaction within the right-of-way



9. *Mix of Activities*

- Encourage mixed-use development where feasible



10. *Urban-Rural Interface*

- Reflect patterns of wine industry—eg, rows of vines, southern orientation, shelter belts of trees
- Consider adjacency to agricultural fields and respect this heritage through careful transitions
- Design simple roof forms (industrial and agricultural). Height and distinctive forms of silos can be inspiration
- Consider functional site planning of vineyard and farm complexes as conceptual model for new development



11. *Housing for Diverse Incomes and Generations*

- Allow for a mix of future housing forms and types, respecting the current character of Three Mile Lane



12. *Housing Variety*

- Respect existing variety of housing types in Three Mile Lane and ensure diversity of design for future housing



13. *Unique and Integrated Design Elements*

- Ensure visibility from highway; Welcome to McMinnville
- Make functions of sites visible (airplanes, wine-making); continue expression of industry/making where applicable
- Aviation legacy: display large planes; consider sensation of low-flying planes, potential visual impact of sites from the air
- Consider local materials for cladding and building structure (timber, corrugated steel cladding, red brick)
- Use vibrant color

The Preferred Land Use Alternative

Key Features

The Preferred Land Use Alternative is shown in Figure 2. The defining characteristics south of the highway include a large (90-acre) area envisioned as a future retail center, and a large site for a potential corporate “Innovation Campus” to the south of this retail center. To the west, in areas near SE Norton Lane and the Willamette Valley Medical Center, opportunities for office and medical uses are envisioned. North of the highway is a new mixed-use designation is proposed on the current Cal-Portland site.

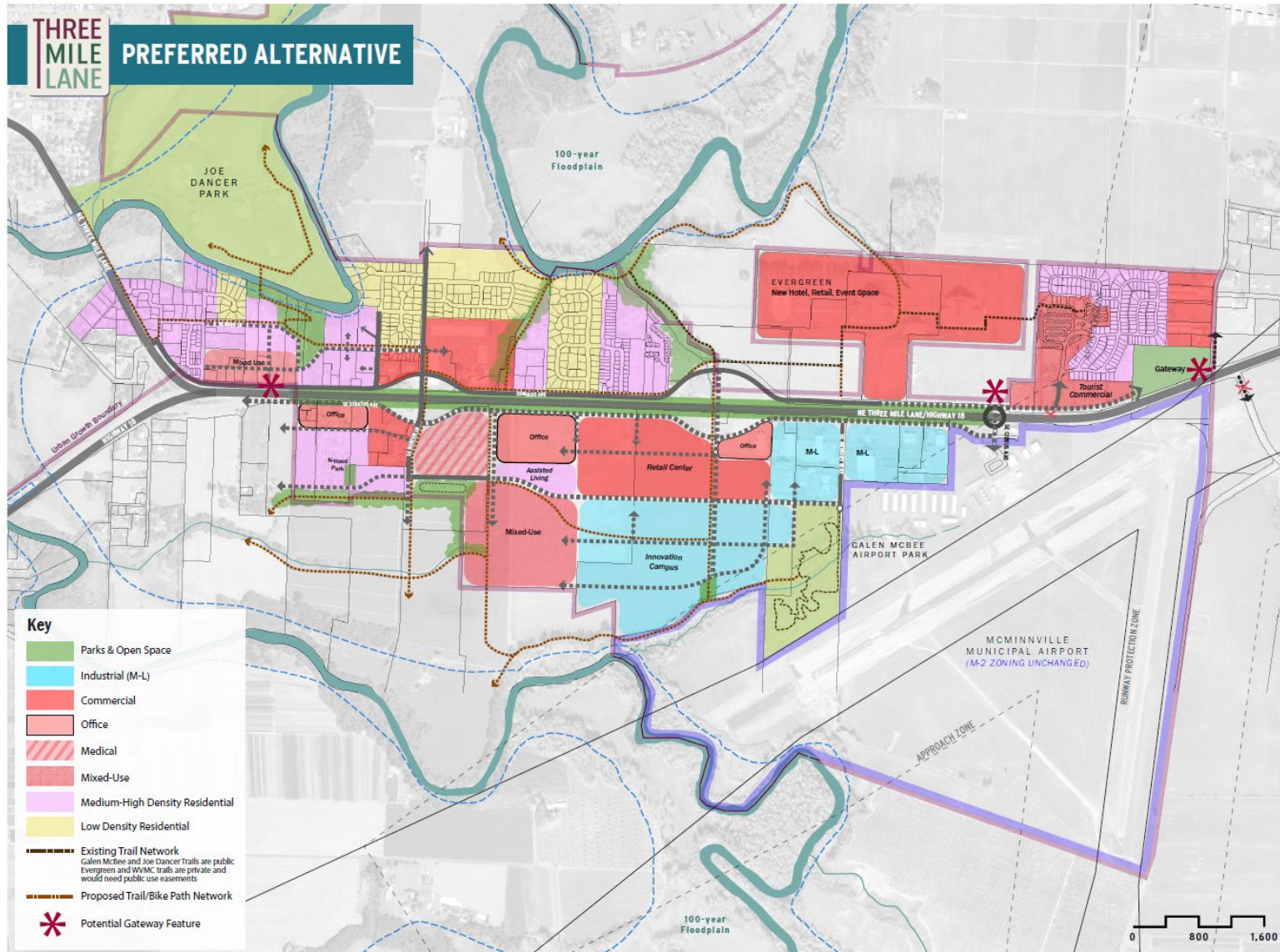
The Preferred Alternative is accompanied by context-sensitive urban design considerations that build on the Great Neighborhood Principles. These include:

- Avoid parking lots and blank walls on Highway 18 edge
- Create a walkable retail development with a “town center” feel (as described in following pages)
- Encourage orientation of industrial campus buildings to Yamhill River and maintain view corridors through campus
- Consider setting future development back from Yamhill River to reduce impacts
- Create grid of walkable streets
- Improve frontage roads for safer walking and biking
- Integrate new Evergreen campus development with architectural language of existing buildings and site landscape features, preserve views of oak forest
- Consider aviation-themed gateway features

Other land uses and features embodied in Figure 2 were discussed by project participants and viewed to be beneficial. Key features include the following:

- **Walkable Retail Development.** A central feature of the Preferred Alternative is a sizable, (over 30-acre) retail center south of Three Mile Lane at Cumulus. The quality of this development’s architecture and streetscape, the connectivity it provides to the street system south of Highway 18, and generally, how well it responds and contributes to McMinnville’s Great Neighborhood Principles will be key to the success of this plan in gaining public approval.
- South of this retail development is a prime location for a mix of corporate office and industrial users in an **Innovation Campus**. Due to its proximity to the Yamhill River, the campus has the potential for “Trail-Oriented Development,” an increasingly popular amenity-driven development trend which offers future users and tenants an appealing orientation to views of natural features.
- West of the retail center and industrial campus site, a **flexible zone of mixed office or industrial** uses is offered, providing potential sites for users drawn by the synergy of being close to larger corporate users, with subcontractors or suppliers in office or light industrial spaces.

Figure 2. Preferred Alternative Map



- **New mixed-use and health care-related uses** have been identified near the existing hospital. Housing, especially senior housing, is a very strong market opportunity. Building forms are expected to be horizontal mixed-use, rather than vertical mixed-use.
- The **Evergreen Tourism Area** is identified as a good location for new hotel, retail, and event space. The site is highly visible and suitable for a clustering of mutually beneficial uses. Travel-related commercial development is envisioned in the northeastern portion of the study area. This area is advantageously situated near the Evergreen complex, making it a good site for additional services and attractions for the traveling public.
- **New residential neighborhoods and continued development of existing neighborhoods** in locations in the western parts of the study area.
- **A cohesive trails system** that ties together major amenities and neighborhoods, with safe crossings of Highway 18 and a potential connection to Joe Dancer Park.

Opportunity Sites

The Preferred Alternative features some distinct areas where change is expected to occur over time. North of Three Mile Lane, the most notable change is the mixed-use designation in the northwest. South of the highway, land use designations that are distinctly different than what exists today include Medical commercial, office, and residential designations near the Willamette Valley Medical Center and the area of Commercial between the hospital and the McMinnville Municipal Airport. Specific features and design considerations for the Three Mile Lane's diverse areas are discussed in this section.

Mixed-use Area (CalPortland Site)

The Three Mile Lane Area Plan envisions continued growth and development in the northwest of the study area between Cumulus Ave and the Yamhill River. Additional households in the Three Mile Lane area will require and support local services, as well as the improved transportation connectivity envisioned with the Three Mile Lane Area Plan that will provide alternatives to Highway-18 for local trips. Existing residential neighborhoods are anticipated to see gradual infill and redevelopment in this area.

Locally serving retail and services have been a major discussion item during this planning process. As the area continues to evolve, providing more opportunities for a mix of uses, employment, and tourism, the existing industrial site on NE Cumulus Avenue may prove to be a more a lucrative site for something other than a ready-mix concrete plant. Allowing for a variety of commercial and residential uses in this area can provide additional housing, locally serving retail and other amenities, and enhanced multi-modal transportation connectivity. This area is well-suited for mixed-use development because it is large enough to accommodate and separate several uses in a way that responds to different context conditions. The site is also mostly flat with potential for good connections to the east and west.

This opportunity site extends between Highway 18 and a steep bluff overlooking the North Yamhill River, two adjacencies which will shape its eventual development. Most of McMinnville's Great Neighborhood Principles can be honored through future site master planning. This infill development can protect natural areas and views, connect to parks and open spaces, provide a

connected, bike and pedestrian-friendly neighborhood, and encourage mixed-use development with diverse housing types and unique, high-quality design. Retail or office uses are better suited to the more visible and accessible southern half of the site. Residential uses are best suited to the northern half, further away from the freeway, with views to the river and Joe Dancer Park.

KEY URBAN DESIGN ELEMENTS:

- Local street grid. Local streets can be logically extended through the site from the west (NE Atlantic) and the east (NE Dunn Place), creating access to the commercial and residential halves of the site, while a new central 'Main Street' can be extended north from NE Cumulus Avenue, bisecting the site and creating two crossroads intersections. The proposed street extending east-west across the northern half of the site follows the top of the bluff and should be designed as a well-landscaped parkway, with an adjacent multi-use trail which will eventually extend throughout the Three Mile Lane study area as a safe parallel route to Hwy 18.
- Building orientation. New buildings should be located to form an urban frontage, with no setbacks, at the intersections of local streets.
- Building and site design. Pedestrian-scaled ground floors, prominent entries, and canopies over sidewalks with street trees, on-street parking, and safe crossings. Surface parking will be located behind these frontages, separated from adjacent uses by well-landscaped green buffers.
- Natural features. Where the Main Street meets the bluff-top street, a public overlook can provide views to Joe Dancer Park and perhaps even a trailhead for a nature trail switch-backing down the bluff to a riverside trail system and a potential footbridge over the river connecting to the park and beyond to downtown.

Tourist Commercial

The Evergreen complex continues to draw visitors to McMinnville who support other local businesses in the Three Mile Lane area and beyond. The Preferred Alternative foresees the continuation and intensification of tourism-related uses as allowed by existing zoning designations. East of Evergreen, land is currently zoned for commercial uses along the highway and has the possibility of hosting more tourism- and travel-related commercial uses in the vicinity of the Aviation & Space Museum and waterpark. The Preferred Alternative envisions activities and uses related to visitors and the traveling public that could boost tourism and be mutually beneficial to existing attractions. A cluster of these uses in the northeast part of the study area could have a synergistic effect, strengthening McMinnville's and the region's reputation as a destination

KEY URBAN DESIGN ELEMENTS:

- Connectivity to the Evergreen complex. Perhaps the most important design element of this visitor-oriented area is connectivity to exiting Evergreen tourist uses. Providing a safe walking and biking connection parallel to Highway 18 would help integrate future development with the Evergreen attractions, which will continue to attract significant amounts of visitors.
- "Gateway" location. In addition, with a prominent location on the east entrance to McMinnville, this development opportunity area should be required to meet the City's Great Neighborhood Principles with high-quality design.

Health Care Area

Vacant parcels surrounding the Willamette Valley Medical Center are a significant opportunity for medical offices, housing for people reliant on medical services, and other uses that benefit from a health care cluster. As envisioned in the Preferred Alternative, existing industrial and high-density residential land and uses fronting the highway and in close proximity to the Medical Center could, over time, develop with housing – including assisted living and long-term care facilities - office uses, and services related to the hospital.

KEY URBAN DESIGN ELEMENTS

- Transitions between health care facilities and surrounding residential areas. Health care facilities are often active around the clock with bright lighting and they generate significant vehicle traffic. They also require a lot of delivery traffic and, in the case of a major medical center, helicopter use. Buffering between uses should be considered, particularly senior housing or market-rate apartments. Assisted living or nursing care facilities, however, would benefit from close proximity to the hospital.
- Transitions between health care facilities and other commercial uses. The scale and orientation of existing uses, as related to future uses should be considered. For example, while Senior Housing might benefit from a location within walking distance of a retail center, there should be careful site planning to ensure the housing isn't directly adjacent to loading or parking facilities. It may be most feasible to place health-care related housing with an orientation south towards views and the river.
- Walkability between uses. Convenient, safe connections between a variety of uses in this area will be important to current and future users.
- Visual quality of buildings facing Highway 18. New development should avoid placing loading docks or creating blank walls visible from passing vehicles.

Retail Center/Innovation Campus

A large area of currently vacant or farmed land stretching from the highway south to the Yamhill River provides a unique opportunity for future development. The design envisioned in the Preferred Alternative is the latest iteration in a process that began with a Property Owners' Workshop. This half-day workshop held at City offices included a presentation of existing site conditions, with confirmation from property owners of natural features, parcel ownership, access, and previous uses. A summary of market conditions was presented, with some suggested adjustments from the owners to reflect their individual research. The workshop concluded with a roundtable discussion of opportunities and constraints, including an exercise where prototypical program 'chips' scaled to the sites, were placed in a variety of potential arrangements to inform initial sketches of concept alternatives.

In addition to the focused property owner workshop, the City of McMinnville held a design charrette for the entire corridor study area with the Citizen Advisory Committee on April 8, 2019. Project participants have identified a number of key strengths, including high visibility from Highway 18, many large and/or underutilized parcels, proximity to the airport, concentration of

tourist amenities and medical uses, strong connections to regional assets, and an abundance of natural features. Specific opportunities the participants identified included: pedestrian bridges over the highway could provide needed connections at key points, the creation of special complete street standards to encourage biking and walking, requiring stormwater treatment and extensive street tree plantings on all study area streets, considering shared parking standards and ‘shadow platting’ to encourage future infill on surface lots, and opportunities for new residential at the south edge of the case study site and west of the hospital.

The retail market continues to evolve rapidly in response to the challenges of competing with online retail and market consolidation. One tactic that the retail industry has successfully used to attract and retain shoppers to brick and mortar establishments is the creation of mixed-use “town centers” that offer gathering spaces, walkable streets and more dining options than typical strip suburban developments or enclosed shopping centers. Mixed-use town centers offer a greater diversity of uses that typical retail developments, particularly as it pertains to entertainment and some office uses, with the latter providing critical daytime population for retailers.

Figure 3. Retail Center Precedent: Old Mill District, Bend, Oregon



Regionally-inspired architecture



Walkable Streetscape with Active Ground Floors

A retail center at Cumulus Ave. is a central feature of the Preferred Alternative. The design of this development, the connectivity it provides to the street system south of Highway 18, and how well it contributes to McMinnville’s Great Neighborhood Principles will be key in the success of this plan.

This almost 60-acre parcel is one of the largest regional sites with easy highway access. The site is flat and developable—a unique characteristic for a site of this size, and has a locational advantage being both near to the highway and the McMinnville Municipal Airport. Attachment A provides an example of how this site could develop, implementing design features desired in the Three Mile Lane Area, as well as provides photographic examples of many of the design elements discussed for this area.

Flexibility is key to attracting a corporate Innovation Campus. The City and/or developer would have to be opportunistic and actively market the property and McMinnville as a corporate destination. Early infrastructure investments and construction of housing and commercial amenities within walking distance of the property would help attract a corporate user, as would a clear but flexible vision and development plan for the property.

Figure 4. Retail Center Precedent: Northwest Crossing, Bend, Oregon



The overall goal is for new developments in the Three Mile Lane Area is to echo the features of traditional, older retail districts like downtown McMinnville. Figures 3, 4, and 5 show examples from other Oregon communities, with similar common features that include:

- Walkable, narrow main streets connecting through the center, with parallel or angled on-street parking in front of retail storefronts.
- Public gathering spaces, bordered by dining and entertainment attractions, featuring play areas and flexible space for programmed public events.
- Parking lots, generally located behind buildings, featuring wide pedestrian walkways, integrated stormwater treatment and ample landscaping including shade trees.

- High-quality architecture, sometimes themed in a regionally appropriate way, with buildings placed in prominent locations that contribute to the quality of the pedestrian experience, versus behind large surface parking lots.
- Building edges that create ‘frontage’ on walkable streets or pedestrian walks, with higher-quality materials, generous windows and pedestrian-scale signage in the first 20-30’ of elevation.
- Proximity and connection to a mix of other uses, to encourage walking from residential or office areas to the retail center.
- Generous landscape buffers between the retail center and roadways or parking lots while maintaining maximum visibility for retailers.
- A prominent entry to the site, with signage or a gateway feature.

Figure 5. Retail Center Precedent: Orenco Station, Hillsboro, Oregon



KEY URBAN DESIGN ELEMENTS

- Local identity. Maintaining the local identity through gateway design elements and development opportunities; establishing formal view protection corridors for Mt Hood, Mt Jefferson, and Amity Hills encouraging mixed uses whenever feasible; and mitigating the visual impact of development on the Highway 18 edge.
- Connectivity. Transportation and connectivity have been major themes during the planning process. Connectivity—in terms of internal circulation to parks and recreational features and surrounding neighborhoods—is essential.
- Parks and open space. The community has provided input on parks and open space opportunities, identifying the following: prioritizing connections to existing trails and open space (such as connections into Joe Dancer Park), creating a public greenway along South

Yamhill River with trail and connections to the study area and McBee Park, and increasing open space opportunities in the study area adjacent to residential uses.

EVALUATION

The Preferred Alternative provides a framework for potential future land use, transportation, and design elements in the Three Mile Lane area. This section evaluates the merits of the alternative and highlights the changes it represents, as compared to existing land use and development requirements. The next sections examine how the alternative meets the expressed goals and objectives for the area, the changes in land use it suggests, and how desired design elements may be achieved. Answers to questions embedded under these topic areas will lead to recommended actions that will help the City realize the vision of the Preferred Alternative over time.

Meeting Project Goals

The land use concept is intended to meet the goals for the area, included earlier in this memorandum, and help the City realize specific objectives associated with each of these goals. Earlier in the planning process evaluation criteria were suggested to help assess how well alternatives meet community goals and objectives.¹ The evaluation table included in this section employs these criteria once again to show how the Preferred Alternative can help achieve the City’s goals. The table includes specific objectives related to individual project goals and indicates how elements of the land use concept perform.

Table 1. Project Goals and the Preferred Land Use Alternative

Evaluation Criteria	Preferred Land Use Alternative Findings
<i>Goal 1: Support and enhance the district’s economic vitality and marketability</i>	
Amount and Type of Employment Land	A significant amount of commercial land is envisioned south of Three Mile Lane, refined to suit desired characteristics of a retail “town center.” A corporate industrial campus is envisioned between the commercial area and the river. There is also an area identified for health-care related uses near the medical center and continued industrial/office opportunities near the McMinnville Municipal Airport.
Opportunities for Additional Goods and Services in the Area	The retail center, a mixed-use site, and the Evergreen complex and nearby Tourist Commercial area provide the opportunity for goods and services to serve locals and visitors alike.
Relationship with and Impacts	Land designated for employment uses within close proximity to

¹ See Evaluation of Land Use Concepts Section in the *Land Use and Transportation Facility Options and Evaluation* memorandum, June 5, 2019.

Evaluation Criteria	Preferred Land Use Alternative Findings
To the McMinnville Municipal Airport	the airport will not change; new opportunities for a neighborhood-serving commercial center and industrial campus with good connection to the airport.
Compatibility of uses adjacent to airport	The proposed commercial designation in the northeastern part of the study area and connections to the park and river have been refined from previous alternatives to better support the airport and its planned expansion.
Support for existing and new tourism opportunities	Significant commercial opportunities are identified throughout the district. Tourism-focused development of the Evergreen site and the “Tourist Commercial” area in the northeastern part of the study area will cater specifically to the travelling community.
<i>Goal 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.</i>	
McMinnville Great Neighborhood Principles	New residential areas are located in the western portion of the study area to create a greater concentration of activity, support new mixed-use development, and increase the likelihood of success for neighborhood-serving commercial. New roadway and trail connections will better connect the neighborhoods of Three Mile Lane to surrounding amenities and services. <i>Also, see Figure 1 and Table 7.</i>
Residential uses, mix, and location	Residential uses are located in the western portion of the study area. The CalPortland site has the opportunity for mixed residential and employment uses, and areas south of Highway 18 may be suitable for senior housing due to the proximity to the medical center.
Transit-supportive land uses	Major new retail, corporate industrial campus, and tourism areas, as well as higher-density housing, can help support transit in the area. The reconnection of Cumulus through the Chemeketa Community College site will be important for improving transit access.
<i>Goal 3: Enhance multi-modal connections throughout the district</i>	
Impacts to OR 18 as a key intercity/freight route.	Key trail and local roadway connections are shown in Figure 2. <i>Specific impacts to OR 18 will be evaluated as part of more detailed analysis for the preferred land use alternative.</i>
Vehicular connectivity through land use types (street density)	
Bicycle/pedestrian connections to key locations outside of the study area	
<i>Goal 4: Create an aesthetically pleasing gateway to the City of McMinnville</i>	

Evaluation Criteria	Preferred Land Use Alternative Findings
<p>Gateway features</p>	<p>The Preferred Alternative has three locations identified for gateway features to signal entry into the City of McMinnville and to help define the Three Mile Lane Area’s identity. Future design of Highway 18 improvements should consider opportunities for corridor design that respects the area’s agricultural heritage and landscape character. There will also be opportunities for specific gateway features that physically mark this entrance to McMinnville.</p>
<p>Building Design</p>	<p>Creating clear requirements for building and site design for the retail center, corporate industrial campus, and other opportunity areas is a priority for this process and will be expanded upon later in this memorandum.</p>
<p>Landscaping and Street Trees</p>	<p>The corporate industrial campus, retail center, and other uses can be compatible with high-quality landscaping. Implementation of these features will be the responsibility of private development and will be required as part of development review. Specific requirements for this area can be included in the City’s development requirements.</p>

Economic Findings

Mixed-use

There is strong demand for additional housing development of all types in McMinnville, and the area shown in the Figure 2 for Mixed-use is an attractive location for significant new construction. Mid-rise development will not only help diversify the housing stock but also improve prospects for neighborhood-scale retail by adding rooftops. The dominant use should be residential, with small opportunities for retail to support the needs of the neighborhood, for reasons detailed below.

The CalPortland site is positioned between downtown and large development sites along Highway 18, both of which are either currently or are planned for significant retail development. Retail on this site, therefore, should focus on serving the needs of the local neighborhood rather than looking to compete with either of these locations. Retail should be limited to the south of the site along Cumulus Ave, which provide around 700 feet of frontage and therefore plenty of development flexibility. The combination of existing market conditions and more competitive retail projects may result in horizontal, rather than vertical mixed-use projects, with housing behind frontage retail. At 11 acres, the site is large enough to accommodate high-quality, horizontal mixed-use product.

While Cumulus, the frontage road, provides good access and connectivity to the surrounding neighborhoods, other nearby locations, such as Chemeketa Community College and uses on college-owned property, have more direct access and better visibility to and from the highway for retail. Existing retail vacancies are therefore more likely to fill before there is demand for new development on the CalPortland site.

Parking will drive the scale and type of development on the CalPortland site. High minimum parking requirements for both residential and retail uses are likely to drive a low-density development type not necessarily in keeping with the City's vision for the area. While the market is unlikely to support the high costs of structured parking, alternative plans for parking should be explored to reduce the burden on the developer but still maintain an adequate parking supply, such as encouraging and codifying shared and on-street parking.

Developing a mixed-use project at greater density may require the City to explore incentives or partnerships that would bridge the feasibility gap. With that said, there are opportunities for additional development on adjacent land parcels, so this site could serve as a catalyst project and build market momentum, thereby improving prospects for a denser mixed-use project at a later date. Facilitating coordination efforts between property owners in the area can help.

For residential development, the existing frontage road (Cumulus) currently provides good access and connectivity to the surrounding area, but improving multimodal connectivity to adjacent land is critical to fostering a high-quality, pedestrian-friendly place. The site benefits from proximity to the river, so improving access to this amenity should be prioritized.

For retail, visibility, access, parking, and signage are critical. Enhancing Cumulus as a multimodal throughway to downtown and the center to the east would improve retail prospects for the CalPortland site, as well as for retail in general.

Travel Commercial

While the existing aviation-oriented uses in the Evergreen Tourism Area are already a regional attraction, there is a significant opportunity to build a substantial tourism hub which integrates additional compatible uses that leverage the region's strong wine industry and build and refine McMinnville's brand.

Specifically, the development of additional lodging and hospitality-related uses would help this area become a premium destination that continues to attract tourists of many different backgrounds and brings additional revenue into the City. Lodging would also likely add to the area's event space inventory, improving McMinnville's marketability for conferences and other events.

The Three Mile Lane Area plan provides a platform to develop a clear vision and brand for the Evergreen Tourism Area. A vision can provide the development community with the confidence to pursue a particular type of development that is consistent with what the City wants for the area. A land use program for the area could include a phasing plan that is consistent with current and future market conditions and trends.

Health Care

The economic analysis shows that medical uses is a growing retail type nationally. There is a forecasted demand for approximately 529,000 square feet of additional retail development within the market area over the next decade and part of that demand is for medical and professional offices that typically occupy retail spaces such as dentists and small medical clinics. Housing

demand, too, is strong in the area, especially the demand for senior housing given the forecasted growth in senior age groups. Areas in close proximity to Willamette Valley Medical Center provides opportunities for medical related goods, services, office, and housing.

Retail Center

The property owner workshop provided an opportunity to discuss ideas and information about future land uses and development with key property owners. This discussion was founded on information in the market analysis and a broader discussion of visions, criteria, and principles. The market analysis, for example, provides high-level trends and analysis to indicate development opportunity. Meeting with property owners revealed specific details about the sites, project phasing, and realistic goals and visions for development.

With information from the workshop, the project team develop three alternatives (i.e., case study concepts). Each concept included a description of its primary theme or differentiator as well as key aspects related to its interface with existing adjacent uses and potential phasing implications. A high-level economic impact assessment for each alternative provided an estimated summary of the number of jobs created, the increase in the tax base, and other economic impacts that would result due to the area's development.

The property owner workshop and resulting Case Study Report helped identify opportunities for large-scale retail and employment, as well as continuing housing development. The area's existing industrial designation limits the number of uses allowed in the area; changing to a commercial designation provides for a greater degree of flexibility to respond to fluctuations in market dynamics.

McMinnville is poised to capitalize on strong retail demand and its location in the region. The McMinnville retail trade area extend all the way to the Oregon Coast due to the lack of prominent commercial centers between the Willamette Valley and the coast. However, much of this retail market remains untapped, and the Three Mile Lane study area is poised to capture a significant portion of demand with a diverse array of commercial development. Such development would help foster a sense of place, provide amenities for residents and visitors, and have a significantly greater economic impact than a development build-out comprising simply of traditional industrial.

Corporate Industrial Campus

A large, flat, developable site of this scale is unique in the region and should attract interest from regional and national employers. The campus may be a prime location for light or craft industrial that could align with the City's vision for the area and provide secondary tourism benefits if new development includes experiential or retail components.

With that said, the development of a large campus is likely to be a market-driven initiative. Employment growth in the industries of healthcare and education can be expected to drive most of the demand for new office development. Demand for campus-style industrial is likely tied to food product manufacturing or aviation. However, the emergence of a large corporate user is difficult to forecast, and successful recruitment and the timing of development will require coordinated

marketing efforts between the property owner, the City, and local and regional economic development partners.

In fact, development of such a site requires the City to actively market to the development community. Marketing a prospective campus should also involve a compelling story for why McMinnville is an attractive for a corporation to locate. McMinnville's high quality of life, cultural amenities, business incentives, and proximity to the Portland metro region may indeed be sufficient in attracting a larger company. Additionally, target users could include existing companies looking to expand.

This should also be tied to economic development efforts that consider the broader city-wide needs that would come with the addition of a large employer. These needs would include workforce, housing, transit and transportation, and others. For example, a large corporate user would require additional housing to meet growth from employment. Infrastructure investment will also be critical. The City should not necessarily make early investments without knowing the needs of a prospective corporate user, as these infrastructure needs will greatly vary. They should, however, develop a plan that outlines their intent and be prepared to act quickly in order to attract a user.

Existing Regulatory Framework

The following is an overview of existing requirements that govern how land can be used within the Three Mile Lane area and an evaluation of the changes envisioned with the Preferred Alternative. The most pronounced differences between what is allowed today and the Preferred Alternative lie within the opportunity areas; these are the focus of the evaluation.

Existing Requirements

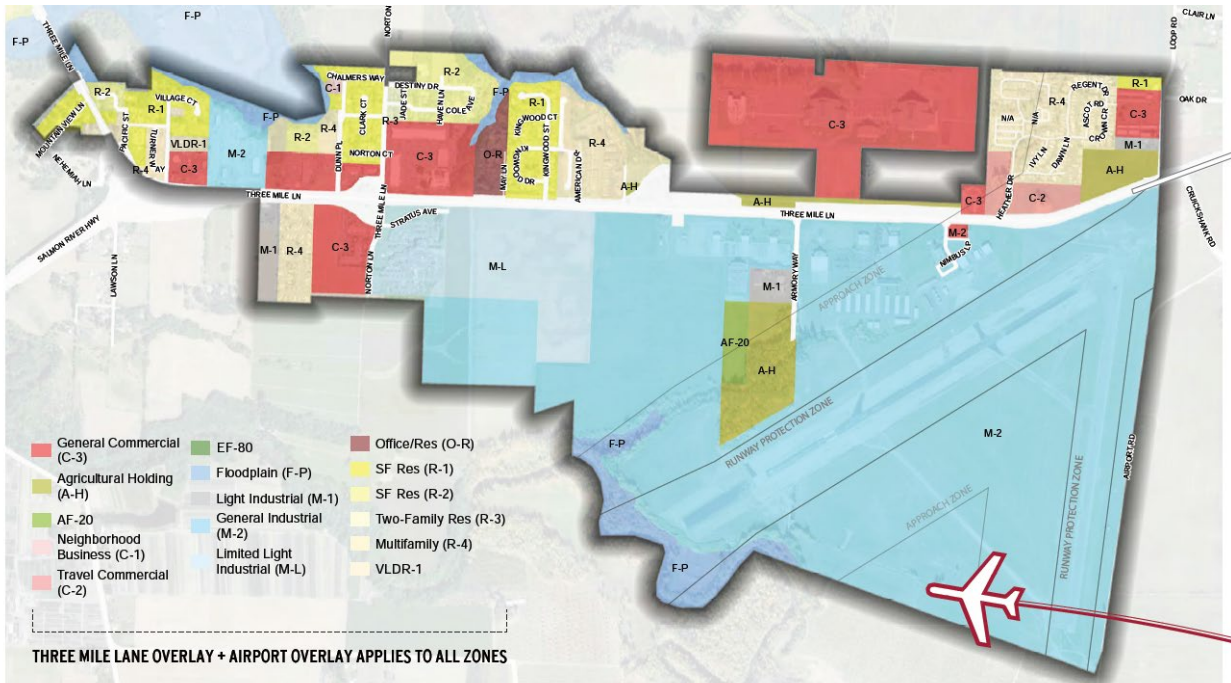
Land use and development in the Three Mile Lane area are currently regulated by the City's Zoning Ordinance and the Three Mile Lane Planned Development Overlay. The Zoning Ordinance governs uses, density, and dimensional requirements for zoning districts in the area, as well as site design and permitting requirements. The Planned Development Overlay contains requirements specific to the Three Mile Lane area that either modify or are in addition to underlying zoning standards.

Zoning

Zoning Ordinance Chapters 17.12 – 17.48 specify the allowed uses and associated regulations for each zoning district in the City. The predominant zoning designation (by acreage) within the study area is Industrial. Most of the land in the study area south of Three Mile Lane is designated General Industrial (M-2) or Limited Light Industrial (M-L). Much of this industrial land is occupied by the McMinnville Municipal Airport. On the north side of Three Mile Lane, there are large areas zoned General Commercial (C-3), including the area that includes the Evergreen Aviation & Space Museum and water park; a small area zoned Travel Commercial (C-2); and a mix of residential zoning. Most of the area zoned for Single-Family Residential (R-1 and R-2) is found in the northwest portion of

the study area. Multiple-Family Residential (R-4) zoning is found in separate areas in the northwest, northeast, and southwest portions of the study area.²

Figure 6. Existing Zoning Designations



Development Standards

In the industrial districts, the M-L zone is largely limited to manufacturing and related uses with limited external impacts, while the M-2 zone allows most industrial uses. In the M-L zone, properties are subject to maximum building heights of 60 feet and minimum setbacks from Three Mile Lane of 120 feet from the centerline. Development in the M-2 zone is not subject to these review requirements. Maximum building height in the M-2 zone is 80 feet and no minimum yard setbacks are required, except adjacent to residential zones.

A wide variety of commercial uses are permitted in the C-3 zone, including commercial recreation facilities, large format retailers, gas stations, and hotels. The maximum height in the C-3 zone is 80 feet and no minimum yard setbacks are required, except adjacent to residential zones. The C-2 zone only covers a small area near the eastern edge of the study area. Permitted uses are largely limited to travel-related uses such as lodging, restaurants, and gas stations. Building height is limited to 45 feet, and the minimum front setback is 30 feet.

² The Airport Overlay Zone (Zoning Ordinance Chapter 17.52) also regulates uses in the Three Mile Lane area. Its intent is to prevent structures or uses that obstruct the safe flight of aircraft in the vicinity of the McMinnville Municipal Airport. Requirements of this overlay are not detailed here, as the Preferred Land Use Alternative assumption is that Airport-related uses will continue to be permitted according to existing City code requirements. The area adjacent to the airport is expected to continue to develop as an airport-oriented commercial and industrial center, reflecting the economic value and potential of this infrastructure.

In the residential zones, density is controlled by minimum lot area per family (or per unit). Within the study area, minimum lot areas are as follows:

- R-1 – 9,000 sf (9,000 sf for two-family corner lots)
- R-2 – 7,000 sf (8,000 sf for two-family corner lots)
- R-3 – 6,000 sf (8,000 sf for two-family corner lots)
- R-4 – 1,500 sf per unit with 2 bedrooms or fewer; 1,750 sf per unit with three bedrooms

The maximum height in the R-4 zone is 60 feet, while the remaining residential zones are limited to 35 feet.

Development within the study area is also subject to floodplain (Chapter 17.48), landscaping (Chapter 17.57), tree (Chapter 17.58), off-street parking (Chapter 17.60), and sign regulations (Chapter 17.62, Planned Development Overlay) requirements.

Three Mile Lane Planned Development Overlay

The 1981 Three Mile Lane Planned Development Overlay outlines several provisions related to the development of properties in the Three Mile Lane area. A 1994 ordinance amending the overlay added a set of detailed provisions related to commercial signage. Provisions include:

- Required 120-foot setback from the centerline of Three Mile Lane
- Access requirements:
 - Minimize access onto Three Mile Lane
 - Provide on-site circulation systems connecting to adjoining properties
 - Provide acceleration-deceleration lanes and left-turn refuges when necessary
 - Provide bikeway connections
- Landscaping and buffering along the highway frontage may be required
- Mixed housing-type residential developments encouraged
- Temporary signage allowed

Development Approval

Development subject to a land use review process within the Three Mile Lane area include the following:

- Plans for proposed uses in the M-L zone. Industrial uses in the M-L zone must be approved by the Planning Commission, after evaluating impacts such as noise, traffic generation, air and water pollution, and appearance.
- Zone changes within the Three Mile Lane Planned Development Overlay. Zone changes in this area are evaluated using Planned Development Overlay standards and procedures and approved by Planning Commission.
- New commercial structures larger than 25,000 square feet of gross floor area. Director approval is required through Large Format Commercial Design Review.

- Signage in areas designated commercial and industrial. Approval by the Three Mile Lane Design Review Committee, after evaluating compatibility and design elements such as color, material, size, form, and relationship to site and building design.

All development within the Three Mile Lane Planned Development Overlay must be approved by the Three Mile Lane Design Review Committee (Ordinance 4572, Section 6(A)).

Preferred Alternative

As described previously, there are particular areas within the Three Mile Lane area that present the greatest opportunities for change. This section compares proposed designations and current zoning for each opportunity area in a series of tables. For each area, there are a series of questions, the answers to which will guide implementation of the Three Mile Lane Area Plan.

As part of plan adoption, the City has an opportunity to modify land uses and requirements either through rezoning or as part of an overlay.

Mixed-use Area (CalPortland)

Table 2. Land Use: Mixed-use Area

Mixed-use Area	
Proposed Designation	Current Zoning
Mixed-use	R-1
Medium-High Density	R-2
	M-2
	C-3

NOTES

- Uses permitted in the City’s Multiple Family Residential (R-4) and General Commercial (C-3) zones generally meet the purpose statement of the Mixed-Use designation.
- The R-4 zone allows single family dwellings (including attached), duplexes, and accessory dwelling units. Building height is limited to sixty feet.
- Uses permitted in the C-3 zone include commercial recreation facilities, large format retailers, gas stations, and hotels. The maximum height in the C-3 zone is 80 feet and there are no minimum yard setbacks required for commercial uses.

QUESTIONS

- Should all residential use types be allowed outright in the Mixed-Use designation?
- Are there commercial use types that are should be restricted in the Mixed-Use designation?
- Should a mix of uses be *required*? If so, should this requirement apply to development proposals over a certain size? Would the requirement apply to only multi-story development?

Tourist Commercial

Table 3. Land Use: Tourist Commercial

Tourist Commercial	
Proposed Designation	Current Zoning
Tourist Commercial	R-4
	C-2
	C-3

NOTES

- The R-4 zone allows single family dwellings (including attached), duplexes, and accessory dwelling units. Building height is limited to sixty feet.
- Uses permitted in the C-3 zone include commercial recreation facilities, large format retailers, gas stations, and hotels. The maximum height in the C-3 zone is 80 feet and there are no minimum yard setbacks required for commercial uses.
- Uses in C-2 Travel Commercial Zone are limited:
 - **Permitted Uses:**
 - Automobile Service Station
 - Gift Shop
 - Lodging
 - RV Park
 - Restaurant
 - Bed and Breakfast
 - Short term rentals
 - **Conditional Uses:**
 - Commercial recreation
 - Repair garage
 - School

QUESTIONS

- Considering the existing uses on the Evergreen site and the land available for development, should the existing C-3 zoning be retained? Are there any use additions or exemptions that should be captured in the plan?
- Given that one of the Preferred Alternative’s focus is to provide more opportunities for tourism-related uses, are C-2 uses appropriate for areas east of the Evergreen complex?

Health Care

Table 4. Land Use: Health Care

Health Care	
Proposed Designation	Current Zoning
Office	R-4
Medium-High Density Residential	C-3
Medical	M-1
Mixed-use	M-L

NOTES

- The R-4 zone allows single family dwellings (including attached), duplexes, and accessory dwelling units. Building height is limited to sixty feet.
- Uses permitted in the C-3 zone include high-density residential and office. Allowed conditional uses include adult day care, or similar use called by a different name or that is a State licensed facility.
- The M-L (Limited Light Industrial) zone is intended to create, preserve, and enhance areas containing manufacturing and related establishments with limited external impact and with an open and attractive setting. Hospitals and medical offices are permitted uses, as is light manufacturing, aerospace industries, warehousing, wholesale distribution, and tasting rooms.
- M-1 (Light Industrial) zone allows all the uses permitted in the M-L zone, plus a wider range of manufacturing, assembly, packaging, or treatment of products from previously prepared or processed materials. Additional permitted uses include warehousing, wholesaling, and limited commercial uses.

QUESTIONS

- Should the overlay restrict commercial uses to those related to medical office and medical services?
- For areas currently zoned for industrial or high-density residential and could not develop/redevelop with all the use types envisions, should the areas be allowed to rezone to C-3, with overlay restrictions?

Retail Center

Table 5. Land Use: Retail Center

Retail Center	
Proposed Designation	Current Zoning
Commercial	M-2

NOTES

- The M-2 General Industrial Zone allows for large and impactful industrial development, including all uses allowed in the M-L and M-1 zones.

- A commercial designation of C-3 would allow a broad range of commercial development. The specific uses, site design, and architectural features envisioned by this planning effort are not required in the code today, and are therefore recommended for inclusion in the Three Mile Lane Overlay Zone.

QUESTIONS

- What level of regulatory control should the City use to implement requirements for the Retail Center? What site design standards should be required? What design elements related to future structures should be included in guidelines or codified as requirements?
- Highway visibility and the style/quality of signage will be important for retail users and for the community as a whole. Are there specific sign requirements/restrictions desired?

Innovation Campus

Table 6. Land Use: Corporate Campus

Corporate Campus	
Proposed Designation	Current Zoning
Industrial (<i>no proposed change</i>)	M-2
	AF-20
	A-H

NOTES

- No change in land use designation is recommended
- Portions of the area are zoned AF-20 and A-H (Agricultural Holding). These are generally associated with Galen McBee Airport Park and not expected to change.

QUESTIONS

- Should the overlay zone require a minimum lot size or other measure to ensure that this space is available specifically for a corporate campus or similar user?
- Design of such a campus will ultimately depend on the needs of the end user. What are the most important elements (e.g., a publicly-accessible park, a connected street grid) that the plan should address or the City should require?

Design Features

Community expectations for the future of the Three Mile Lane Area Plan include ensuring that future development will reflect and respect the unique features of the area and will enhance a neighborhood feel. This section evaluates how the City currently addresses the design features explored in the Preferred Land Use Alternative section through development requirements. Table 7

lists the features, existing requirements, and recommendations on how they might be achieved in the Three Mile Lane area.

Through the development and implementation of the Three Mile Lane Area Plan the City has the opportunity to set land use and transportation policy and create and implement standards and guidelines that will help the community realize the vision for this area.

Table 7. Design Requirement Evaluation

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
1. Natural Feature Preservation		
<ul style="list-style-type: none"> • <i>Strive to protect tree groves</i> • <i>Strive to protect individual trees</i> 	<p>Proposed multi-family, commercial, office and industrial development must be landscaped (§17.57.030). Landscaping plans must show the existing locations of trees over six inches in diameter, their variety, and if they are to remain or be removed (§17.57.060).</p> <p>The removal of individual significant or historic trees or the removal of trees as part of a proposed development subject to site plan, tentative subdivision, or partition review is subject to City approval (§17.58.040).</p>	<p>New policy, adopted as part of 3MLAP. Consider identifying tree groves and tree types to be protected and develop requirements for preservation.</p>
<ul style="list-style-type: none"> • <i>Protect riparian corridors and adjacent native landscape</i> 	<p>Flood Area Zone (§17.48) restrictions.</p> <p>Landscaping required for all development except single-family and two-family residential (§17.57.030).</p>	<p>Confirm riparian corridors are mapped and subject to Chapter 17.48.</p> <p>Require mapping and protection of stream corridors and re-vegetation with native plantings.</p>
2. Scenic Views		
<ul style="list-style-type: none"> • <i>Provide and protect views to rolling hills and volcanoes</i> • <i>Provide visual and physical access to North Yamhill River</i> • <i>Orient streets and open spaces to views</i> 	<p>None.</p>	<p>New policy, adopted as part of 3MLAP.</p> <p>Require viewshed protection as part of Design Review.</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
3. Parks and Open Spaces		
<ul style="list-style-type: none"> • <i>Connect to Galen McBee Airport Park</i> 	None.	<p>Proposed trail connecting to Galen McBee Airport Park loop trails and extending access to the South Yamhill River shown in the preferred alternative; plan adoption will modify transportation system plan.</p> <p>Require connection to proposed trail, trail right-of-way dedication, and trail construction as part of Design Review/development approval.</p>
<ul style="list-style-type: none"> • <i>Create new gathering spaces that incorporate natural areas and views</i> 	None.	New policy, adopted as part of 3MLAP; require as part of Design Review.
<ul style="list-style-type: none"> • <i>Plant native landscapes with seasonal variation</i> 	Proposed multi-family, commercial, office and industrial development must be landscaped (§17.57.030). For industrial, commercial, and parking lot uses landscaping must be 7% of gross area; for multi-family the requirement is 25% of gross area. The Landscape Review Committee approves proposed landscaping; an approval criterion is compatibility with the proposed project and the surrounding and abutting properties.	New policy, adopted as part of 3MLAP. Define approved planting list in plan or in overlay zone.
4. Pedestrian Friendly		
<ul style="list-style-type: none"> • <i>Provide a network of sidewalks and trails to connect people to key locations</i> 	Complete Streets standards require sidewalks (§17.53.101 Streets). Sidewalks must be 10'-12' feet wide in commercial areas to accommodate the Pedestrian zone. Street trees must be placed in tree wells; street trees, furniture and business accesses must meet ADA	<p>Proposed trail system shown in the preferred alternative; plan adoption will modify transportation system plan.</p> <p>Proposed Complete Streets Design increases sidewalk width.</p> <p>Expand pedestrian walkway/connectivity standards to</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
	<p>requirements.</p> <p>Pedestrian ways, 10' or greater in width, may be required to "connect to recreation or public areas such as schools, or to connect to existing or proposed pedestrian ways (§17.53.103 Blocks)."</p> <p>Pedestrian walkway standards apply to Large Format Retail; site design requires connections between buildings and from building entrances to streets (§17.56.050.C.2).</p>	<p>apply to all commercial and office development.</p>
<ul style="list-style-type: none"> • <i>Shade streets with mature tree canopy</i> 	<p>Street Tree Planting (§17.58.080) and Planting Plan (§17.58.100) required for new multi-family development, commercial or industrial development, subdivisions, partitions, or parking lots.</p>	<p>New policy, adopted as part of 3MLAP. Define approved tree list in plan or in overlay zone. Require as part of Design Review.</p>
5. Bike-Friendly		
<ul style="list-style-type: none"> • <i>Plan safe routes for residents and touring cyclists</i> 	<p>Complete Streets standards require bike facilities (§17.53.101 Streets). Minimum bike lane width is 5' on arterial and 4' on collector streets.</p>	<p>Modified Complete Street standards require buffered bike lanes (or cycle tracks) on collector streets and sharrow markings for shared lanes on local residential streets.</p>
6. Connected Streets		
<ul style="list-style-type: none"> • <i>Connect to existing street grid in 3ML</i> 	<p>Street locations must be consistent with adopted comprehensive plan and subdivision standards (§17.53.101 Streets).</p>	<p>Proposed local street connections shown in the preferred alternative; plan adoption will modify transportation system plan.</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
7. Accessibility		
<ul style="list-style-type: none"> • <i>Design new development for ease of use by all ages and abilities</i> 	<p>Complete Streets standards require sidewalks and bike lanes (§17.53.101 Streets). Sidewalks must be 10'-12' feet wide in commercial areas to accommodate the Pedestrian zone. Street trees must be placed in tree wells; street trees, furniture and business accesses must meet ADA requirements.</p>	<p>New policy, adopted as part of 3MLAP. Modified Complete Street standards increase sidewalk and planter strip widths and require buffered bike lanes (or cycle tracks) on collector streets and sharrow markings for shared lanes on local residential streets.</p>
8. Human Scale Design		
<ul style="list-style-type: none"> • <i>Respect typical scale of commercial uses in McMinnville</i> 	<p>Building heights in C-3 zone limited to eighty feet (§17.33.040). No size limits; new commercial structures over 25,000 square feet gross floor area subject to Director's Review/notification. Large Format Retail (Chapter 17.56) requirements address building façade, roof features, and site design (buffering, pedestrian walkways, parking, landscaping), and innovative energy efficient design and construction technologies. Parking spaces shall be provided at no more than 120 percent of the minimum required Large Format Retail site design requirements (§17.56.050) set an off-street parking maximum (no more than 120 percent of the minimum required by Chapter 17.60, Off-Street Parking and Loading).</p>	<p>Requirements for commercial building size and massing. Additional guidelines or standards related to façade treatments. Standards for parking maximums for all uses. Parking lot location requirements for commercial uses.</p>
<ul style="list-style-type: none"> • <i>Design to reflect the micro-climate—outdoor life, porches, balconies</i> 	<p>Large Format Retail pedestrian walkway standards include awning requirements (§17.56.050.C.2.b). Awning are included in Downtown</p>	<p>New policy for development within the overlay. Develop clear and objective design standards for multi-family and</p>

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
	Design Standards and Guidelines (§17.59.070). No residential standards.	mixed-use residential.
<ul style="list-style-type: none"> • <i>Promote inclusion and interaction within the right-of-way</i> 	None.	Requirements for building orientation (set-to, building orientation). Additional guidelines or standards related to façade treatments, including transparency. Provision of on-street parking for ground-floor commercial uses (new requirements allowing on-street spaces to be counted toward parking minimums, new cross-section standards for streets with ground-floor retail).
9. Mix of Activities		
<ul style="list-style-type: none"> • <i>Encourage mixed-use development where feasible</i> 	None.	New policy, adopted as part of 3MLAP.
10. Urban-Rural Interface		
<ul style="list-style-type: none"> • <i>Reflect patterns of wine industry—eg, rows of vines, southern orientation, shelter belts of trees</i> 	None.	New policy, adopted as part of 3MLAP. Examples in Design Booklet.
<ul style="list-style-type: none"> • <i>Consider adjacency to agricultural fields and respect this heritage through careful transitions</i> 	None.	New policy articulating transitions; buffer/perimeter requirements.
<ul style="list-style-type: none"> • <i>Design simple roof forms (industrial and agricultural). Height and distinctive forms of silos can be inspiration</i> 	Large Format Retail development standards require architectural variability in the roof design (§17.56.050.B). Proposed buildings must incorporate two out of three standards: parapets with cornices; overhanging eaves or cornices, and; prominent portions of the roof	Require roof features consistent with Large Format Retail standards for all future development in the 3ML area. Design examples in Design Booklet.

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
	design exhibiting slopes with a plane of between 4/12 (33 degrees) and 6/12 (45 degrees).	
<ul style="list-style-type: none"> • <i>Consider functional site planning of vineyard and farm complexes as conceptual model for new development</i> 	None.	Examples in Design Booklet.
11. Housing for Diverse Incomes and Generations		
<ul style="list-style-type: none"> • <i>Allow for a mix of future housing forms and types, respecting the current character of 3ML</i> 	Existing residential and commercial zoning allows for a variety of housing types.	3MLAP increases the areas available for housing with the change in designation from industrial to Mixed-use use north of Three Mile Lane, and from industrial to residential in the vicinity of the hospital.
12. Housing Variety		
<ul style="list-style-type: none"> • <i>Respect existing variety of housing types in 3ML and ensure diversity of design for future housing</i> 	Housing variety and design not addressed. Site design requirements for Large Format Retail require buffering, (§17.56) Light industrial uses (M-1) must include perimeter treatments to buffer adjacent residential uses.	Guidelines in Design Booklet Buffer/perimeter requirements for Mixed-use, Medical, and Commercial.
13. Unique and Integrated Design Elements		
<ul style="list-style-type: none"> • <i>Ensure visibility from highway; Welcome to McMinnville</i> 	None.	Guidelines in Design Booklet. Requirements for landscape buffering fronting Three Mile Lane. Requirements for façades facing Highway 18, including addressing blank walls and requiring articulation and materials or color variation; design guidelines to encourage a more cohesive visual character along the corridor.

Design Feature	Existing Requirements <i>(Zoning Ordinance, Three Mile Lane Planned Development Overlay)</i>	Possible Three Mile Lane Area Plan (3MLAP) Recommendations and Overlay Requirements
<ul style="list-style-type: none"> • <i>Make functions of sites visible (airplanes, wine-making); continue expression of industry/making where applicable</i> 	None.	Examples in Design Booklet.
<ul style="list-style-type: none"> • <i>Aviation legacy: display large planes; consider sensation of low-flying planes, potential visual impact of sites from the air</i> 	None.	Examples in Design Booklet.
<ul style="list-style-type: none"> • <i>Consider local materials for cladding and building structure (timber, corrugated steel cladding, red brick)</i> 	Large Format Retail (Chapter 17.56) requirements address building façade, roof features, and site design (buffering, pedestrian walkways, parking, landscaping), and innovative energy efficient design and construction technologies.	Additional guidelines or standards related to façade treatments. Expand requirements to uses other than commercial, including office, mixed-use, and multi-family.
<ul style="list-style-type: none"> • <i>Use vibrant color</i> 	None.	Additional guidelines or standards related to façade treatments; define acceptable color palate. Require for all new commercial, office, mixed-use, and multi-family.

NEXT STEPS

This memorandum and associated materials will be presented to the Three Mile Lane TAC and CAC at their next meetings. The committees are expected to evaluate elements of the Preferred Alternative and provide additional direction and suggestions for refinement, including:

- Refinement of the attributes that define the Three Mile Lane Area.
- Refinement of the specific attributes desired in the opportunity areas.

- Desired policy, design elements, and code concepts to implement the plan and effectively guide and regulate development within the Three Mile Lane Area.

Following the advisory committee meetings, the project team will bring a revised set of materials to the broader public at Public Event #3, tentatively scheduled for early 2021. The plan concepts of the Preferred Alternative and land use implementation measures will be the focus of this event.

A companion memorandum to this piece (TM 8b) evaluates the transportation impacts of proposed land uses and provides recommendations for the design of Highway 18 through this area. This work is based on a detailed transportation analysis, performed in partnership with the City and Oregon Department of Transportation.

Reflecting revisions informed by public involvement and City review, a final plan document will be created and prepared for adoption. The adoption process will include a public Planning Commission/City Council work session, a Planning Commission hearing, and a City Council hearing. Each of these points provide an opportunity for public participation to review and provide comments on the Three Mile Lane Area Plan.



Walkable Streetscape with Active Ground Floors



Regionally-influenced architecture

PRECEDENT STUDY:
Old Mill District, Bend



- Landscape Buffer
- Parking behind buildings
- Central 'Main Street':
 - Wide sidewalks
 - Street Trees
 - On-street parking
 - Active ground floors
- Public gateway plaza
- Gathering and event space
- Access and orientation to natural features



Regionally-influenced architecture

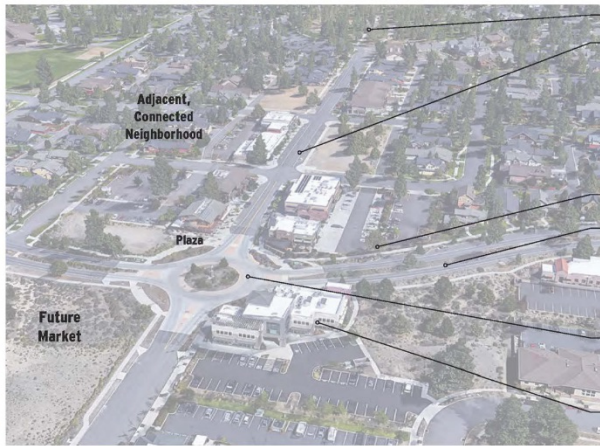


Distinctive entry to Commercial Center



Protected mountain views

PRECEDENT STUDY:
NorthWest Crossing, Bend

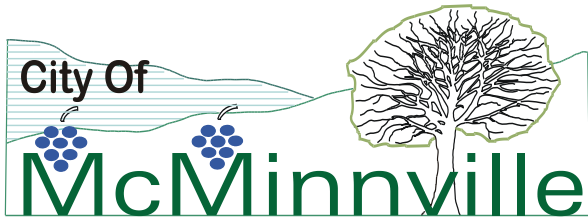


- Integrated park space
- Central 'Main Street':
 - Wide sidewalks
 - Street Trees
 - On-street parking
 - Active ground floors
 - Mixed-use
 - Two blocks closed for Farmer's Market weekly
- Parking behind buildings
- Neighborhood Collector
- Gateway 'marker'
- Adjacent to 'clean' light industrial/office uses



PRECEDENT STUDY:
Orenco Station, Hillsboro, OR

COMMERCIAL DESIGN OPPORTUNITIES
Three Mile Lane Area Plan
March 2021



Planning Department
 231 NE Fifth Street ◦ McMinnville, OR 97128
 (503) 434-7311 Office ◦ (503) 474-4955 Fax
www.mcminnvilleoregon.gov

Office Use Only:	
File No.	_____
Date Received	_____
Fee	_____
Receipt No.	_____
Received by	_____

Comprehensive Plan Map Amendment/ Zone Change Application

Applicant Information

Applicant is: Property Owner Contract Buyer Option Holder Agent Other _____

Applicant Name Kimco McMinnville LLC Phone 650.746.7501

Contact Name Michael Strahs Phone Same as above
(If different than above)

Address 15 Southgate Ave, Suite 201

City, State, Zip Daly City, CA 94015

Contact Email mstrahs@kimcorealty.com

Property Owner Information

Property Owner Name Same as above Phone _____
(If different than above)

Contact Name _____ Phone _____

Address _____

City, State, Zip _____

Contact Email _____

Site Location and Description

(If metes and bounds description, indicate on separate sheet)

Property Address 3310 SE Three Mile Lane

Assessor Map No. R4 4 - 426 - 00700 Total Site Area 90.45-acres

Subdivision 4W Block 26 Lot 00700

Comprehensive Plan Designation Industrial Zoning Designation M-3

This request is for a:

Comprehensive Plan Amendment

Zone Change

1. What, in detail, are you asking for? State the reason(s) for the request and the intended use(s) of the property. _____

See attached narrative.

2. Show in detail, by citing specific goals and policies, how your request is consistent with applicable goals and policies of the McMinnville Comprehensive Plan (Vol. 2). _____

See attached narrative and Attachment 2.

3. If your request is subject to the provisions of a planned development overlay, show, in detail, how the request conforms to the requirements of the overlay. _____

See attached narrative and Attachment 2.

7. Document how the site can be efficiently provided with public utilities, including water, sewer, electricity, and natural gas, if needed, and that there is sufficient capacity to serve the proposed use.

No development is proposed with this application. This documentation is not required for this application.

This study will be completed once approval of this application is completed and a formal PD overlay development application can be submitted.

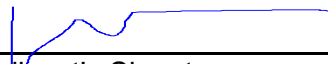
8. Describe, in detail, how the proposed use will affect traffic in the area. What is the expected trip generation?

See attached narrative Attachment 2, and Attachment 3 (completed TIA).

In addition to this completed application, the applicant must provide the following:

- A site plan (drawn to scale, with a north arrow, legible, and of a reproducible size), indicating existing and proposed features within and adjacent to the subject site, such as: access; lot and street lines with dimensions; distances from property lines to structures; improvements; and significant features (slope, vegetation, adjacent development, drainage, etc.). If of a larger size, provide five (5) copies in addition to **an electronic copy** with the submittal.
- A legal description of the parcel(s), preferably taken from the deed.
- Compliance of Neighborhood Meeting Requirements.
- Payment of the applicable review fee, which can be found on the Planning Department web page.

I certify the statements contained herein, along with the evidence submitted, are in all respects true and are correct to the best of my knowledge and belief.


Applicant's Signature

12/17/2020
Date

Same as Applicant
Property Owner's Signature

Date

City of McMinnville, OR

Three Mile Lane Comprehensive Plan and Zoning Map Amendment

Applicant: Kimco McMinnville, LLC

Contact: Michael Strahs (mstrahs@kimcorealty.com)
Alan Roodhouse (amr@rpsdevco.com)
15 Southgate Ave, Suite 201
Daly City, CA
(650) 746-7501

Property Address: 3310 SE Three Mile Ln
McMinnville, Oregon 97128

Tax Lot ID Number: 172164

Property Size: 90.45 Acres (3,940,002 SF)

**Comprehensive Plan:
Designation** Industrial

Zoning Designation: M-2 (General Industrial)

1. Application Request:

Kimco McMinnville, LLC (“Kimco”) proposes a quasi-judicial comprehensive plan map and zoning map amendment for an approximately 33.5-acre area (the “Property”)¹ fronting Three Mile Lane (Oregon State Highway 18 or SH 18). This proposal is to amend the Property’s comprehensive plan map designation from Industrial to Commercial, and to change the zoning map designation from General Industrial (M-2) to General Commercial (C-3) with a Planned Development (PD) overlay, as depicted on **Attachment 1**. No development is proposed at this time.

Following the map amendments, when a development is proposed, the applicant will pursue the land use approvals required to develop the Property with commercial mixed-uses (the “Project”) through the process prescribed through the PD overlay ordinance. The Project is intended to accommodate the community’s growing demand for retail and to capture some of the area’s retail sales leakage, which are goods that residents travel outside the greater McMinnville area to purchase. Due to the scale of the site, the Project’s development process

¹ Kimco owns a 90.45 acre parcel, of which the 33.5 acre area that is the subject of this application is a part. The remaining 56.95 acres of Kimco’s ownership is not a part of this application and will retain its Industrial comp plan and M-2 zoning designations.

will include imposing a site-specific Planned Development (including design and development standards), a partition or land division, and site plan review.

2. Property Description:

The 33.5-acre Property is a portion of the vacant 90.45-acre parcel located in the Three Mile Lane area within the city limits of McMinnville. The Property is located on the southside of Oregon State Highway 18 in the southeastern portion of the city in proximity to the community hospital and satellite development, the McMinnville Municipal Airport adjacent to the east, and the Evergreen Aviation & Space Museum to the north. The Property's topography is flat in elevation and covered by annual crops with few trees.

As depicted on **Attachment 1**, the Property is generally comprised of two parts. The westerly "Parcel 1" is approximately 25.3 acres and the easterly "Parcel 2" is approximately 5.25 acres. The internal local street connections within the Property are expected to require approximately 2.95 acres.

3. Project Background:

The requested amendments will facilitate a future economic development opportunity that will benefit the City of McMinnville and surrounding communities by converting excess industrial land into needed commercial land. Kimco has owned the vacant Property since 2006 and over the years there has high interest from retailers, both local and national, to open shop and serve the local community. No particular retail use has been identified for the Property, but it's location, access to Highway 18, size, and topography make it attractive to General Merchandise retailers such as Target, Home Depot, and Costco because the goods and services offered by those stores are currently unavailable to McMinnville residents and require a 25-mile drive to Salem or even further to the outskirts of Portland. This existing phenomenon, when demand for certain products and services are not met within a trade area and consumers go elsewhere to shop, is "retail leakage."

The Property is suitable to include a mix of larger retailers and smaller store spaces, which could include both locally owned business and nationally known companies. The Property can accommodate adequate on-site parking and be designed to offer great pedestrian circulation on site and programmed community spaces for visitors to linger and enjoy while shopping.

Located three miles southeast of the downtown core of McMinnville, the Property lends itself to prime commercial retail development. The retail space eventually created through this Project would be suited to businesses that do not fit within the format of existing retail in McMinnville. Downtown businesses are not expected to be negatively affected by retail that will eventually be developed on the Property because the future retailers will provide goods and services that will capture the community's existing retail leakage.

4. Project Rationale:

A. Industrial Land Surplus, Commercial Land Deficit, and Existing Retail Sales Leakage

(1) Adopted Economic Opportunities Analysis

On February 5, 2014, the McMinnville City Council adopted Ordinance No. 4976, which is the Economic Opportunities Analysis completed in November 2013 (2013 EOA), which has been acknowledged. The 2013 EOA concludes that the City has a deficit of 35.8 acres of commercial land and surplus of 235.9 acres of industrial land. (2013 EOA, pg 56, Table 26) The 2013 EOA's data and policies support the need to re-designate and rezone the 33.5-acre Property to C-3. The proposed amendment is consistent with the 2013 EOA because following the proposed zone change, the City will be closer to accommodating the commercial land need, and the supply of industrial land will remain adequate because it will continue to be in excess of (but closer to) the adopted industrial land need.

McMinnville's commercial land deficit is a combination of the land needed to accommodate projected population growth and the pent-up demand for specific retail needs that are not being met within the trade area. This means consumers go elsewhere to shop resulting in retail leakage to areas outside the City. Factors that contribute to the City's retail leakage are that there are no available vacant or re-developable commercial sites that are adequately sized and have the necessary locational factors and site characteristics to support the leaking retail categories. The available commercial land or vacancies in existing buildings are not suitable in format or scale to attract tenants that fulfill these unmet retail leakage needs.

The City's deficit of commercial land generally, and specifically the lack of commercial land suitable for major comparison retail was determined in the 2013 EOA to be a disadvantageous factor that affects the community's economic development potential. The result is retail sales leakage, which is created when demand for a specific product is not being met within a trade area, so consumers go elsewhere to shop or do not shop at all. The 2013 EOA concluded that "there is considerable retail sales leakage of an estimated \$192 million annually throughout Yamhill County – as residents travel to other counties for a significant 23% of their shopping needs." (2013 EOA, pg 32) In the seven years since this report was completed, this continued leakage has potentially cost the City over \$1.3 billion in consumer spending that could have benefited the local economy.

(2) Updated Analyses as Additional Evidence

The 2013 EOA is the binding analysis of the City's adequacy of commercial land and provides an adequate factual base for the proposed rezone. Analyses of commercial land needs since the 2013 EOA provide further support for the application because those analyses show that the deficit is growing, including Leland Consulting's January 2020 EOA Land Supply Update (Leland

2020 Update) **Attachment 4**, the 2020 EOA drafted by EcoNorthwest Consulting (2020 EOA)² **Attachment 5**, and Three Mile Lane Area Plan documents **Attachments 6** and **7**.

(a) Leland 2020 Update

The Leland 2020 Update provides current data on the supply of commercial land by analyzing all zone changes since the 2013 EOA was adopted that impacted commercially zoned land. The Leland 2020 Update concluded that the deficit of commercially zoned land has grown to 39 acres and the surplus of industrial land has also increased. The impacts of zone changes since the 2013 EOA is summarized in the following table in the Leland 2020 Update:

Table 4. Comparison of Land Demand to Supply (2013/2019-2033)

Acres by Plan Designation			
	Commercial	Industrial	Total
Vacant Land Demand			
Commercial	164.6	0.0	164.6
Industrial	0.0	145.1	145.1
Institutional	2.2	8.0	10.2
Totals	166.8	153.2	319.9
Available Land Supply			
2013 EOA	130.9	389.7	520.0
2013 Surplus/(Deficit)	(35.9)	235.9	200.1
2019 Revision	127.8	389.7	
2019 Surplus/(Deficit)	(39.0)	236.5	197.5

(b) 2020 EOA

The 2020 EOA has not been adopted, but its data provides further support for the demand for commercially zoned land to accommodate retail leakage and population growth, the lack of supply of suitable commercial land, and the surplus of industrial land.

The updated 2020 EOA demand data indicates that the commercial land deficit is projected to grow to at least 286 acres by 2041 (which includes at least **12-acres** to accommodate retail leakage), at which time there will be a surplus of 159 acres of industrial land. (2020 EOA, pg 106, Exhibit 59)

(c) Three Mile Lane Area Plan (3MLAP)

As part of the City’s long range planning efforts, it has initiated the Three Mile Lane Area Plan (3MLAP) project, which is intended to result in the adoption of an area plan for the

² All citations to the 2020 EOA are to the February 2020 track changes draft.

approximately 1,340 acre area along the Three Mile Lane corridor that will integrate land uses and a multi-modal transportation system, updating the Three Mile Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The 3MLAP is still in the planning phase and is not binding on this application, but the proposed amendments are consistent with the data, policies and goals in the most recent draft of the 3MLAP. Accordingly, the 3MLAP provides additional evidence in support of approving the proposed comprehensive plan and zoning map amendments.

The 3MLAP is intended to support the 2020 EOA by analyzing the forecasts and demand for a variety of land needs, and how they may be accommodated within the Three Mile Lane area. As part of that effort, the 3MLAP Market Analysis (April 16, 2019 Final Draft) (**Attachment 6**) conducted a detailed analysis of the incredible amount of retail leakage within certain categories, which includes:

3MLAP Market Analysis Table 8 Summary

Estimated Retail Leakage			
	Current Sales	Household Demand	Current Leakage (\$)
Underserved Sectors of Retail			
Furniture and Home Furnishings	\$9,815,869	\$25,459,215	(\$15,643,346)
Electronics and Appliance	\$10,205,468	\$25,779,334	(\$15,573,866)
Clothing and Accessories	\$5,785,467	\$39,384,538	(\$33,599,071)
Sporting Goods, Hobby, Books, Music	\$12,792,050	\$27,981,058	(\$15,189,008)
General Merchandise	\$41,383,114	\$138,540,476	(\$97,157,362)
Food Service and Drinking Places	\$53,618,658	\$83,233,240	(\$29,614,582)
Other (Cinema, Banks, Small Office)	\$91,325,675	\$92,535,592	(\$1,209,917)
Total Demand and Leakage	\$224,926,301	\$432,913,453	(\$207,987,152)

3MLAP Market Analysis, *Table 8, pg. 33.*

The above table highlights the difference in current sales in retail sales within McMinnville versus the estimated household demand. The difference in red represents the outflow of spending that is likely going to communities where space for these types of merchants are readily available. Potentially \$207,987,152 of annual consumer spending is leaving McMinnville because there is no land with necessary locational or site characteristics available. This not only deprives residents of McMinnville choices in where to shop, but further burdens many families with the economic hardship of driving great distances to purchase what they need.

The 2020 EOA and 3MLAP Market Analysis conclude that accommodating retail leakage will require 12-acres in addition to the growth-related land needs, and that in the next 10 years the Three Mile Lane area could capture 150,000 square feet of the market area’s demand for

539,000 square feet of leakage retail development. (2020 EOA, pg 47 and 102; 3MLAP Market Analysis, pg 4, Table ES-3)

B. Suitability of the Property for Conversion from Industrial to Commercial

A compact urban form is maintained when the identified commercial land deficit is addressed by converting excess industrial land to commercial. Accordingly, the 2013 EOA recommends re-designating “excess industrial or other lands to commercial uses (focused on those sites with greatest suitability for commercial development.)” (2013 EOA, pg 62) Suitability for commercial development must consider the site characteristics for the proposed use (OAR 660-009-0005(12)), which here the use is retail that can capture retail leakage and can accommodate population-related growth.

The 2013 EOA and comprehensive plan describe a property’s suitability for re-designation to commercial, each of which is responded to in the findings narrative (**Attachment 2**). The 3MLAP also details the site characteristics necessary for prospective underserved leaking retailers. Some of the suitability factors and site characteristics that are relevant include transportation access, compatibility with neighboring uses, infrastructure capacity and site size. (2013 EOA, pgs 57 and 73) Examples of the Property’s suitability for conversion from industrial to retail include:

- Visibility from and access to Highway 18. Traffic patterns are “of particular importance for retail and service businesses” which are “reliant on high traffic counts.” (2013 EOA, pg 33) Trends show increasing traffic counts on Highway 18 and shifting away from Highway 99W. “Recapture [of retail sales leakage] is dependent on the ability to identify sites that attract retailers that could serve much of the county’s population from locations readily accessible to major travel corridors.” (2013 EOA, pg 32)
- Proximity to retail leakage markets. “Sites in the McMinnville UGB offer the potential to serve a local and regional market...Centrally located [within the County] with good highway access and street visibility can be instrumental to attract commercial business that may require market areas of 50,000-100,000+ population.” (2013 EOA, pg 32)

The 3MLAP includes extensive analysis of the that area’s suitability for retail development aptly describes this Property’s suitability for commercial conversation:

“Retail prospects are relatively strong for certain retail sectors, despite relatively weak market conditions (including rent, vacancy, absorption, etc.). The Three Mile Lane study area likely checks off many site selection criteria and market characteristics typically desired by prospective retailers. While there are few retailers currently in the aera, desired physical characteristics, such as visibility, vacant developable land, and ease of

access are all present. Further, McMinnville's central location between the Oregon Coast, the Portland Metro, and Salem provides access to a wide variety of markets. Significant household growth and the burgeoning tourism industry will continue to improve retail prospects." (3MLAP Market Analysis, Pg 2).

"The Three Mile Lane project area is relatively well-positioned for retail development due to high visibility, ease of access, high traffic counts along Highway 18, and there are few alternative urban areas between McMinnville and the coast, providing opportunities to capture spending from those visiting the Oregon coast.

Additionally, as one of the few locations in the market area with large, contiguous, vacant tracts of land within city limits, Three Mile Lane should be able to capture a significant portion of market area demand over the next 10 years." (3MLAP Market Analysis, Pg 51-52)

The Project is envisioned to be a retail "town center" that is compatible with the current draft 3MLAP Land Use concept numbers one and two (**Attachment 7**):

"This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process. Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville's downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development." (3MLAP Memorandum 6, Land Use Concepts 1 and 2 pg 10-13)

The requested map amendments are the first step to fulfill the 2013 EOA deficit of commercial land and developing a project that furthers the objectives of the 3MLAP. The future discretionary PDO land use process that will apply to the Project will further ensure consistency with the 3MLAP.

C. Traffic Impacts and Circulation

Kittelson & Associates, Inc., prepared a transportation impact analysis (TIA) report, which analyzes the transportation impacts associated with the proposed rezone. (**Attachment 3**). The TIA's scope, methodology, findings and recommendations have been coordinated with the City

of McMinnville and the Oregon Department of Transportation (ODOT) and is intended to address City and state review criteria, including compliance with the Transportation Planning Rule (TPR). The TIA analyzed the reasonable worst-case development scenario under the proposed rezone a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. Mitigation measures that will be constructed at the time of development will include construction of the collector streets and a new intersection with SH-18. As part of the design of these roadways, sidewalks and bicycle lanes will be provided. With required improvements to occur at the time of development, the proposed rezone results in no significant impacts, in compliance with the TPR.

For the development of larger scale retail like the Project is expected to include, the Property's location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. For example, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville "feel."

As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would be minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. The Property's location on OR 18 provides easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the retail uses that could be developed in the future may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

5. Conclusion:

The application meets the requirements for a rezone based on the following:

- Complies with the applicable approval criteria in the code, Comprehensive Plan and state law, as detailed in the findings at **(Attachment 2)**.
- The 2013 EOA shows a surplus of over 235 acres of industrial land and deficit of 35.8 acres in commercial land inventory, exhibiting an economic need for retail land use within the City that can be partially met through converting excess industrial land to

commercial. Updated data in the 2020 EOA, 2020 Leland Update and 3MLAP demonstrate that the commercial land deficit is growing.

- Studies from the 3MLAP have revealed that the City loses over \$200 million annually in consumer spending to retail destinations such as Salem and SW Portland, burdening families with the cost of driving quite a distance for essential needs.
- The Property includes site characteristics that make it suitable for conversion to C-3 zoning, which will allow retail development that captures retail leakage and growth-related retail needs. Retail development on this site would be at a scale that is not suitable for downtown McMinnville or existing centers within the City. Based on the traffic analysis completed, the proposed rezone would have minimal impact on the City's existing infrastructure and would not fundamentally alter the urban fabric of the community (**Attachment 3**).
- Inclusion of a Planned Development (PD) overlay will ensure the future development project is compliant with City's long-term policies and goals, supported by municipal services and infrastructure, and subject to community input through discretionary review by the City Council.

Attachments:

- 1. Site Plan**
- 2. Required Findings for Comprehensive Plan Map and Zoning Map Amendment**
- 3. Traffic Impact Analysis, 12/18/2020 by Kittelson & Associates**
- 4. Leland Consulting's January 2020 EOA Land Supply Update**
- 5. 2020 EOA drafted by Eco-Northwest Consulting**
- 6. Three Mile Lane Area Plan Market Analysis**
- 7. Three Mile Lane Area Plan Memo 6 (Land Use Concepts)**
- 8. Proof of 11/19 Neighborhood Meeting (Noticing and Notes from Meeting)**

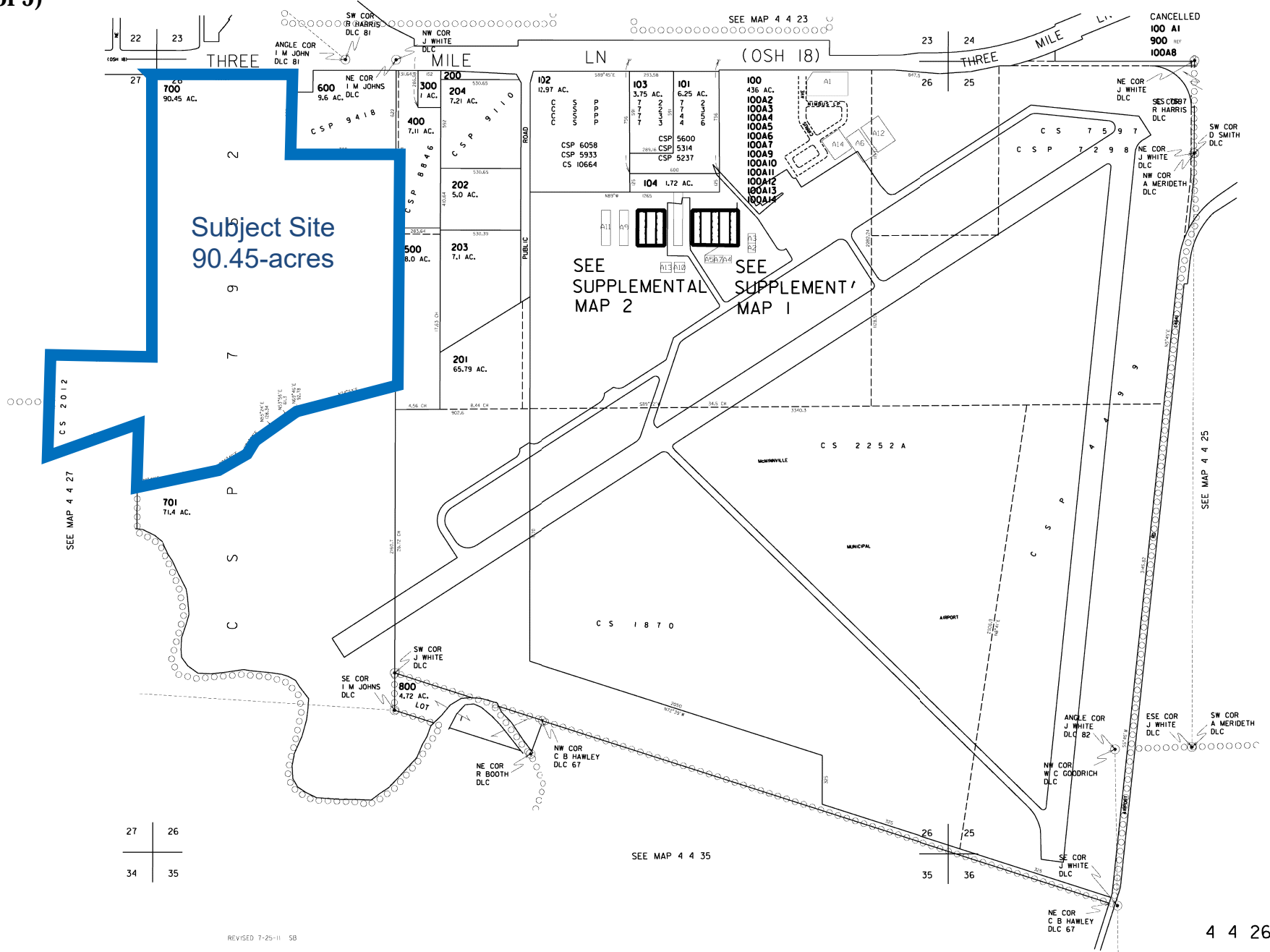
Attachment 1

Site Plan (1 of 5)

THIS MAP WAS PREPARED FOR
ASSESSMENT PURPOSE ONLY

SECTION 26 T4S R4W W.M.
YAMHILL COUNTY
1" = 400'

4 4 26



27	26
34	35

REVISED 7-29-11 58

4 4 26

Attachment 1

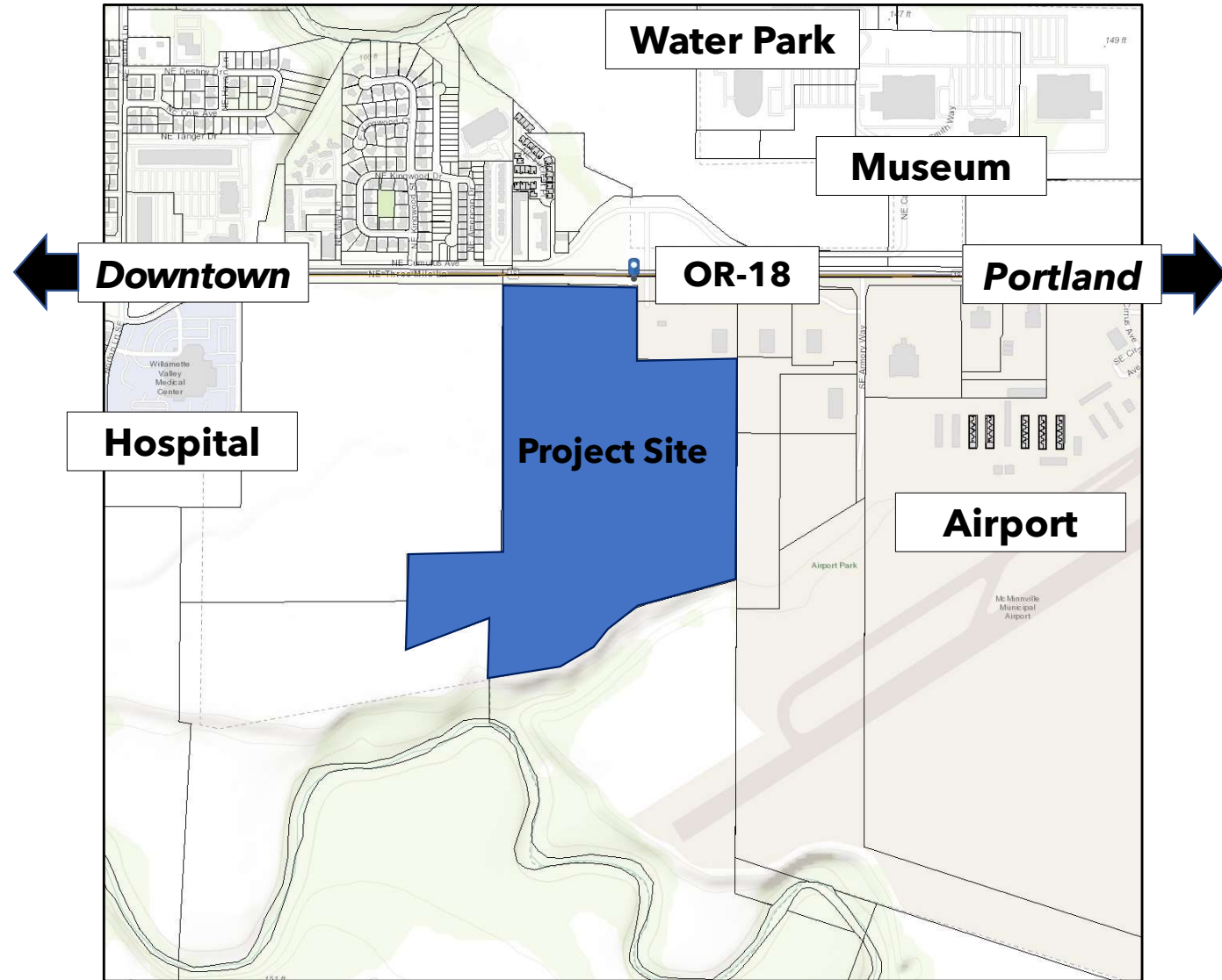
Site Plan (2 of 5)

PROJECT LOCATION

3310 SE Three Mile Lane
McMinnville, OR 97128

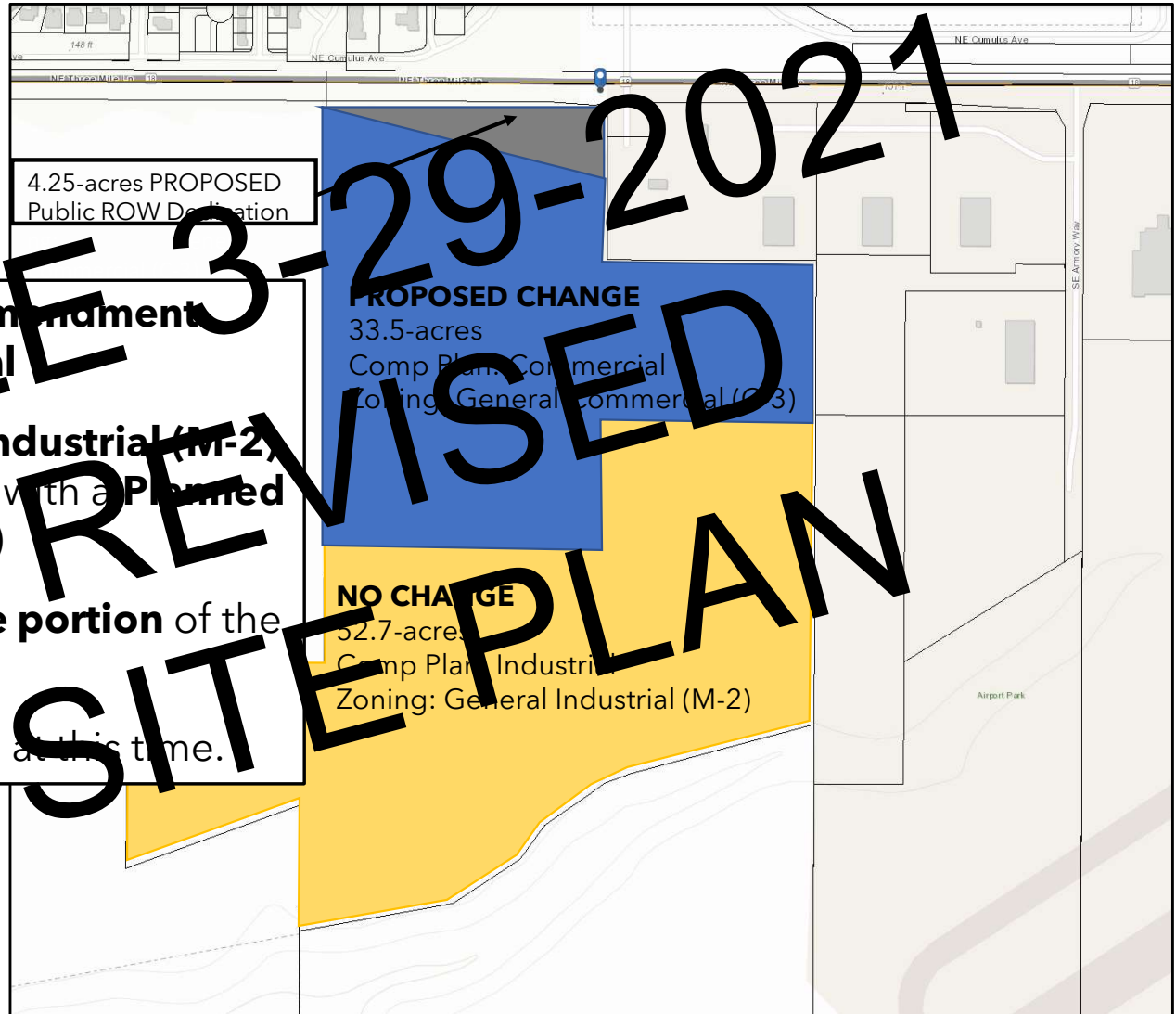
Tax Lot ID: R4426 00700

Lot size: 90.45 acres

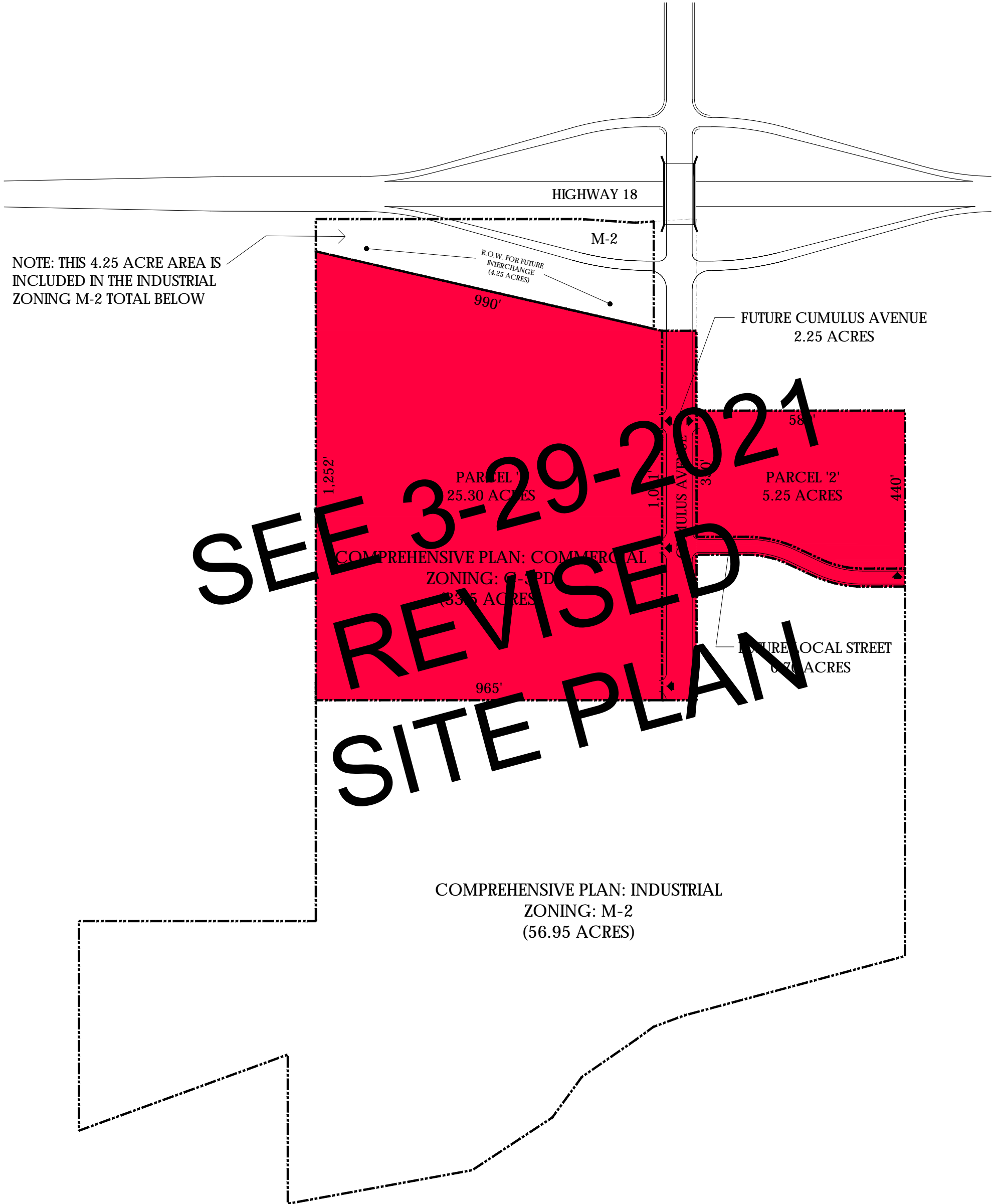


PROJECT PROPOSAL

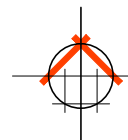
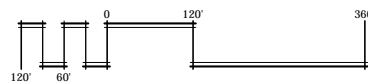
- **Comprehensive Plan Map Amendment** from **Industrial** to **Commercial**
- **Zone Change** from **General Industrial (M-2)** to **General Commercial (C-3)** with a **Planned Development Overlay (PDO)**
- Applies to **northern 33.5-acre portion** of the site along State Highway 18
- **No development** is proposed at this time.



Attachment 1
Site Plan (4 of 5)



COMPREHENSIVE PLAN MAP
 and ZONING MAP AMENDMENT



DIMENSION NOTE:
 DIMENSIONS ARE APPROXIMATE

December 10, 2020



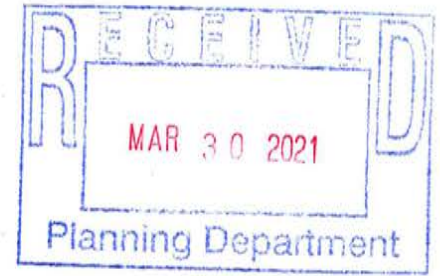
RPS Development Company, Inc.
 Developer

3310 SE THREE MILE LANE
 APN R4426 00700 (90.45 ACRES)
 McMinnville, Oregon

BENNER STANGE ASSOCIATES ARCHITECTS, P.C.
 80 SE MADISON STREET SUITE 430
 PORTLAND, OR 97124
 (503) 670-0234
 FAX (503) 670-0235
 bsa@bsaarch.com



**Kimco McMinnville, LLC
15 Southgate Ave, Suite 201
Daly City, CA 94015**



March 29, 2021

Tom Schauer
Senior Planner
City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97218

**Re: Response to CPA 2-20 and ZC 3-20 Application Completeness Review Letter
3310 SE Three Mile Lane, Map & Tax Lot R4426 00700**

Dear Tom:

Thank you for your January 20, 2021 completeness review of the above referenced application. This packet provides the information identified as completeness items, responds to the discussion of the Planned Development Overlay in the "Background Information" section of your letter, and requests that our application be deemed complete.

Completeness Items

1. Acreage and Right-of-Way Dedication Clarifications

We request that the 4.25-acre right-of-way dedication be included as a part of our request for a Comprehensive Plan Amendment from Industrial to Commercial and a Zone Change from M-2 to C-3 PD, as depicted on the updated Exhibit 1. We also request that a condition of approval be imposed and/or findings be included that explain that this 4.25-acre area is intended to be dedicated as a public right-of-way at the time of development.

With the additional 4.25-acre area, the total land area subject to the Comprehensive Plan Amendment and Zone Change is 37.74 acres. Because the additional 4.25 acres will be used exclusively for right-of-way purposes, it is not necessary to change to the application's assumptions about the future development of approximately 33.49 acres, such as traffic impacts or satisfying the existing commercial land deficiency with surplus industrial land.

2. Conflict Between Pages 3 and 4 of Attachment 1

We have consolidated the diagrams showing our Comprehensive Plan Amendment and Zone Change request into one exhibit to eliminate any inconsistencies in our application. This should add clarity to the precise land areas within our parcel that will be redesignated and rezoned through approval of this application. Please see **Exhibit 1** attached.

3. Dimensions

To further affirm the land areas included on the diagram as shown within **Exhibit 1**, we have attached legal descriptions that lend support to the dimensions intended for each land use designation and zone area. Please see **Exhibits 2, 3, and 4** attached containing these descriptions.

Background Item: Planned Development Overlay Options and Requirements

As noted in your completeness review letter, we have proposed a Planned Development Overlay designation using the provisions in Section 17.51.010(B) of the Zoning Ordinance, which means no development plan must be submitted at this time. Instead, a development plan will be proposed once the redevelopment of the property is more certain.

The letter of incompleteness noted that additional analysis was needed to explain the unique conditions that support deferring submittal of the development plan (Subsection (B)(1)) and items that must be addressed when final plans are submitted (Subsection (B)(2)).

(B)(1) A planned development overlay may be approved under these circumstances for a property which has unique characteristics (e.g., geological, ecological, location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole. A planned development overlay initiated by the Council or the Planning Commission shall address itself to the purposes set forth herein.

The primary rationale for allowing a deferred submittal of the development plan under the proposed PD designation is to ensure that development that is proposed on the property is consistent with and implements the future Three Mile Lane Area Plan (TMLAP).

Your letter provided an excellent summary of this unique condition: "It is reasonable to conclude there are unique conditions to allow deferred submittal of a final plan to ensure consistency and coordination of the design and development standards, circulation plan, and other considerations with a future Three Mile Lane Area Plan (TMLAP) given the sale of that plan as well as the scale of the potential development on the subject property."

(B)(2) The Council and Planning Commission shall set forth the reasons for approval and the areas of concern that must be addressed when final plans are submitted.

We understand that the review process will identify areas of potential concerns and proposed conditions and standards to address those concerns that will need to be included in the development plan that is submitted.

We agree with the categories of items to be included outlined in your January 20, 2021 completeness letter (with the clarifications described below), and that the TMLAP will provide important guidance on the design and development standards that will be expected of future development on the property. However, because no development is under consideration at this time, we request that the conditions and standards identified during this process be flexible so that further refinement can occur once more is known about feasible development.

Clarification: Great Neighborhood Principles in the Comprehensive Plan. We agree that some of these principles should be incorporated into the development plan and project. We request that this process provide clarity about which principles are applicable. For example, the following are not applicable: Principles 11 and 12 are directed at housing, so are irrelevant to commercial development and Principle 10 is not applicable because the property is not located on the on the edge of the UGB.

Clarification: Land Division. We understand and agree that the portions of the property subject to the PD overlay cannot be divided or have portions sold prior to when the master plan is approved. However, the property subject to the to the proposed amendments is only a portion of a larger, undivided approximately 90.43-acre property. We anticipate that prior to when a master plan is approved, the 90.43-acre parcel may be partitioned so that the 37.74-acre commercial portion and remaining industrial areas are divided into separate lots that may be held in separate ownership. It is possible that this partition may require an access drive or street that connects the industrial parcel to SH 18. We request that the findings clarify that the land division limitation does not preclude dividing the parent parcel into a commercial lot and industrial lot(s) or related required access improvements, and that it is intended to limit divisions of the 37.74-acre area into smaller lots prior to when the master plan is approved.

Next Steps

This packet addresses each of the completeness items from the January 20, 2021 letter. We request that you deem our application complete.

We look forward to working with the City and public as our application proceeds through the public process.

Sincerely,



Michael Strahs
Authorized Agent
Kimco McMinnville, LLC

Attachments:

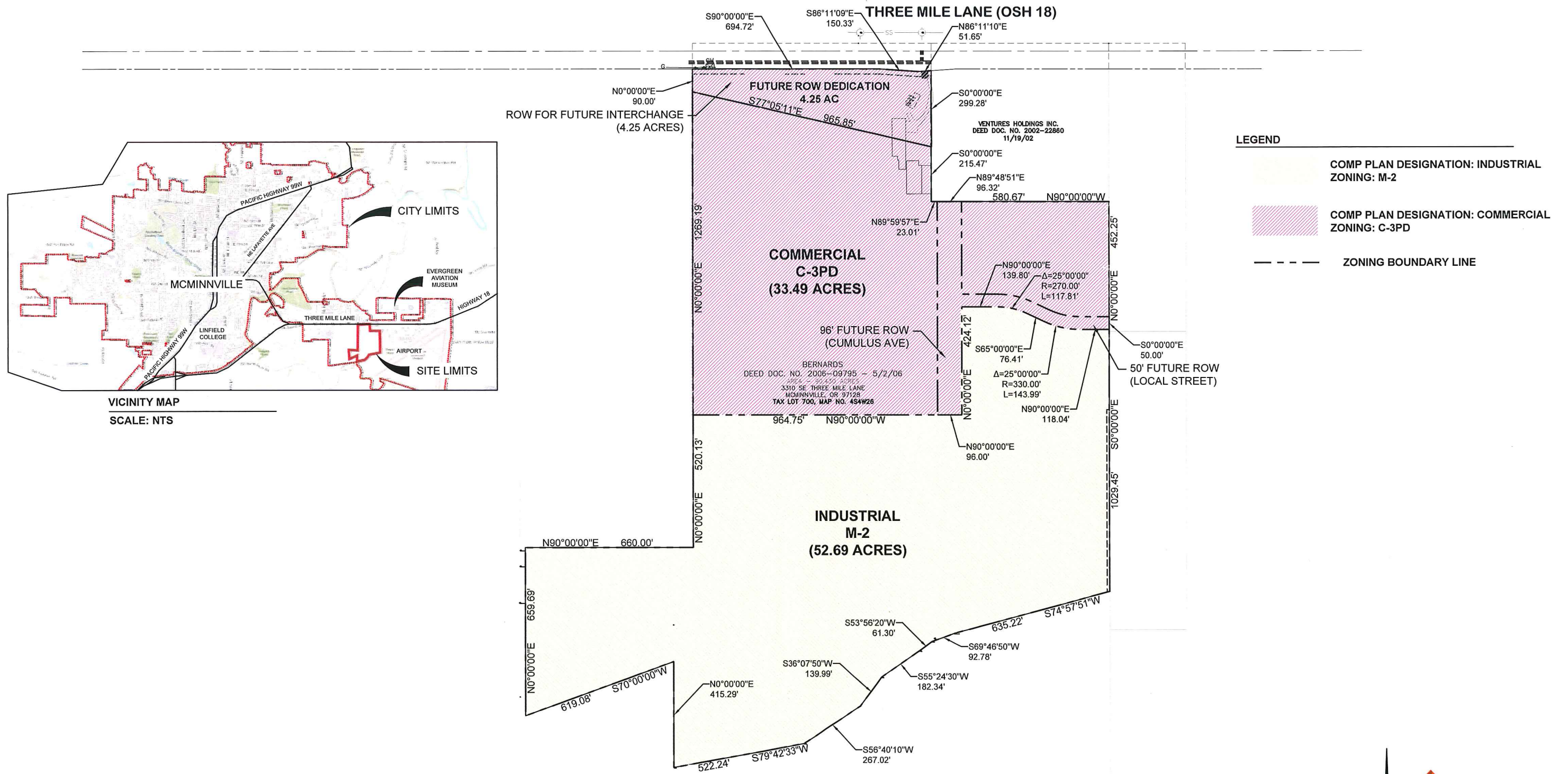
Exhibit 1: Proposed Comprehensive Plan Amendment and Zone Change

Exhibit 2: Legal Description for Commercial/C-3PD Land Area

Exhibit 3: Legal Description for Industrial/M-2 Land Area

Exhibit 4: Legal Description for future Public ROW Land Area

Exhibit 1



PROPOSED COMPREHENSIVE PLAN AMENDMENT AND ZONE CHANGE - THREE MILE LANE

Address: 3310 SE Three Mile Lane (Map & Tax Lot R4426 00700)
 Applicant: Kimco McMinnville, LLC

03/25/2021
 SCALE IN FEET



McMinnville, OR

Exhibit 2

S&F Land Services

4858 SW Scholls Ferry Rd, Ste A Portland, OR 97225
(503) 345-0328 - www.sflands.com

2021-014-63
3/22/21
TLB


LEGAL DESCRIPTION COMMERCIAL ZONE

A TRACT OF LAND SITUATED IN THE NORTHWEST QUARTER OF SECTION 26 AND THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 4 SOUTH, RANGE 4 WEST OF THE WILLAMETTE MERIDIAN, CITY OF MCMINNVILLE, OREGON, BEING A PORTION OF THAT PROPERTY CONVEYED TO KIMCO MCMINNVILLE LLC., PER WARRANTY DEED DOCUMENT NUMBER 2006-67470, YAMHILL COUNTY DEED RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3" BRASS DISK MARKING THE NORTHWEST CORNER OF SAID SECTION 26; THENCE NORTH 90°00'00" WEST 45.16 FEET; THENCE SOUTH 00°00'00" EAST 100.99 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING 70.00 FEET FROM THE CENTERLINE THEREOF, WHEN MEASURED PERPENDICULAR THERETO); THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470, SOUTH 00°00'00" EAST 90.00 FEET TO THE **POINT OF BEGINNING**; THENCE CONTINUING SOUTH 00°00'00" EAST 1269.19 FEET; THENCE LEAVING SAID WESTERLY LINE, NORTH 90°00'00" EAST 1060.75 FEET; THENCE NORTH 00°00'00" EAST 424.12 FEET; THENCE NORTH 90°00'00" EAST 139.80 FEET TO THE BEGINNING OF A 270.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE ALONG SAID CURVE 117.81 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 116.88 FEET); THENCE SOUTH 65°00'00" EAST 76.41 FEET TO THE BEGINNING OF A 330.00 FOOT RADIUS CURVE TO THE LEFT; THENCE ALONG SAID CURVE 143.99 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 142.85 FEET); THENCE NORTH 90°00'00" EAST 118.04 FEET TO THE EASTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID EASTERLY LINE, NORTH 90°00'00" EAST 502.57 FEET; THENCE NORTH 90°00'00" WEST 700.00 FEET; THENCE NORTH 00°00'00" EAST 215.16 FEET; THENCE LEAVING SAID EASTERLY LINE, NORTH 77°05'11" WEST 965.85 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 1,458,887 SQUARE FEET OR 33.491 ACRES, MORE OR LESS.

REGISTERED
PROFESSIONAL
LAND SURVEYOR


Digitally signed by
Jered McGrath
Date: 2021.03.24
19:04:50 -07'00'

OREGON
JUNE 13, 2008
JERED MCGRATH
79419

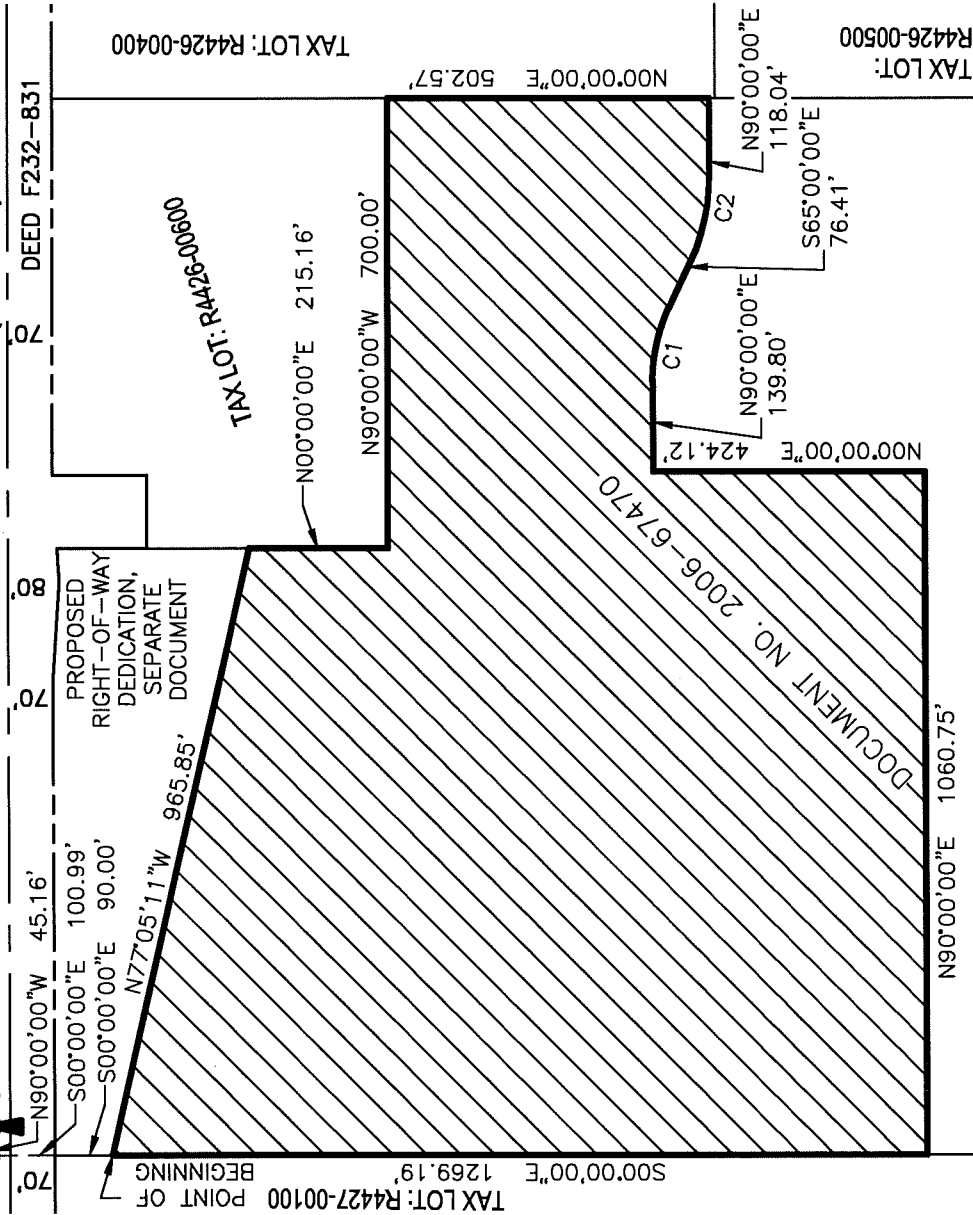
RENEWS: 12/31/2021

POINT OF COMMENCEMENT A FD. 3" BRASS DISK
IN MON. BOX INSCRIBED "YAMHILL CO. SURVEYOR
1986 22/23/27/26 T4S R4W" MARKING THE NW
CORNER OF SECTION 26, T4S, R4W - HELD

E SALMON RIVER HWY (OSH 18)

**EXHIBIT B
COMMERCIAL ZONE**

NW 1/4 SECTION 26 & NE 1/4 SECTION
27, T4S, R4W, W.M., CITY OF
MCMINNVILLE, YAMHILL COUNTY,
OREGON



1 INCH = 300 FEET

LEGEND:



AREA OF COMMERCIAL ZONE
1,458,887 SQUARE FEET OR
33.491 ACRES MORE OR LESS

CURVE TABLE					
CURVE #	DELTA	RADIUS	LENGTH	CHORD	CHORD LEN
C1	25°00'00"	270.00'	117.81'	S77°30'00"E	116.88'
C2	25°00'00"	330.00'	143.99'	S77°30'00"E	142.85'

S&F Land Services

Date: 3/22/21
Proj No: 2021-014-63
4858 SW SCHOLLS FERRY ROAD, SUITE A PORTLAND, OR 97225
www.sflands.com info@sflands.com 503-345-0328

Exhibit 3

S&F Land Services

4858 SW Scholls Ferry Rd, Ste A Portland, OR 97225
(503) 345-0328 - www.sflands.com

2021-014-63

3/22/21

TLB

LEGAL DESCRIPTION INDUSTRIAL ZONE

A TRACT OF LAND SITUATED IN THE WEST HALF OF SECTION 26 AND THE EAST HALF OF SECTION 27, TOWNSHIP 4 SOUTH, RANGE 4 WEST OF THE WILLAMETTE MERIDIAN, CITY OF MCMINNVILLE, OREGON, BEING A PORTION OF THAT PROPERTY CONVEYED TO KIMCO MCMINNVILLE LLC., PER WARRANTY DEED DOCUMENT NUMBER 2006-67470, YAMHILL COUNTY DEED RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3" BRASS DISK MARKING THE NORTHWEST CORNER OF SAID SECTION 26; THENCE NORTH 90°00'00" WEST 45.16 FEET; THENCE SOUTH 00°00'00" EAST 100.99 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING 70.00 FEET FROM THE CENTERLINE THEREOF, WHEN MEASURED PERPENDICULAR THERETO); THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470, SOUTH 00°00'00" EAST 1359.19 FEET TO THE **POINT OF BEGINNING**; THENCE LEAVING SAID WESTERLY LINE, NORTH 90°00'00" EAST 1060.75 FEET; THENCE NORTH 00°00'00" EAST 424.12 FEET; THENCE NORTH 90°00'00" EAST 139.80 FEET TO THE BEGINNING OF A 270.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE ALONG SAID CURVE 117.81 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 116.88 FEET); THENCE SOUTH 65°00'00" EAST 76.41 FEET TO THE BEGINNING OF A 330.00 FOOT RADIUS CURVE TO THE LEFT; THENCE ALONG SAID CURVE 143.99 FEET, THROUGH A CENTRAL ANGLE OF 25°00'00" (THE LONG CHORD BEARING SOUTH 77°30'00" EAST, 142.85 FEET); THENCE NORTH 90°00'00" EAST 118.04 FEET TO THE EASTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID EASTERLY LINE, SOUTH 90°00'00" EAST 1029.45 FEET TO THE SOUTHERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID SOUTHERLY LINE, SOUTH 74°57'51" WEST 635.22 FEET; THENCE SOUTH 69°46'50" WEST 92.78 FEET; THENCE SOUTH 53°56'20" WEST 61.30 FEET; THENCE SOUTH 55°24'30" WEST 182.34 FEET; THENCE SOUTH 36°07'50" WEST 139.99 FEET; THENCE SOUTH 54°57'51" WEST 267.02 FEET; THENCE SOUTH 79°40'40" WEST 384.74 FEET; THENCE SOUTH 79°47'50" WEST 137.50 FEET TO THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID WESTERLY LINE, NORTH 00°00'00" EAST 415.29 FEET; THENCE SOUTH 70°00'00" WEST 619.08 FEET; THENCE NORTH 00°00'00" EAST 660.00 FEET; THENCE NORTH 90°00'00" EAST 660.00 FEET; THENCE NORTH 00°00'00" EAST 519.82 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 2,295,098 SQUARE FEET
OR 52.688 ACRES, MORE OR LESS.

REGISTERED
PROFESSIONAL
LAND SURVEYOR



Digitally signed by
Jered McGrath
Date: 2021.03.24
18:59:00 -07'00'

OREGON
JUNE 13, 2008
JERED MCGRATH
79419

RENEWS: 12/31/2021

POINT OF COMMENCEMENT
 A FD. 3" BRASS DISK IN
 MON. BOX INSCRIBED
 "YAMHILL CO. SURVEYOR
 1986 22/23/27/26 T4S
 R4W" MARKING THE NW
 CORNER OF SECTION 26,
 T4S, R4W - HELD

E SALMON RIVER HWY (OSH 18)

N90°00'00"W 45.16' R
 S00°00'00"E 100.99' PROPOSED
 S00°00'00"E 1359.19' RIGHT-OF-WAY
 DEDICATION

N90°00'00"E 1060.75'

POINT OF BEGINNING
 N00°00'00"E 519.82'

TAX LOT: R4427-00200

N90°00'00"E 660.00'

N00°00'00"E 660.00'

S70°00'00"W 919.00'

TAX LOT: R4427-00200

N00°00'00"E 415.29'

DOCUMENT NO. 2006-67470

TAX LOT: R4426-00500

S00°00'00"E 1029.45'

N90°00'00"E 139.80'
 C1
 S65°00'00"E 76.41'
 N90°00'00"E 118.04'
 C2



1 INCH = 300 FEET

LEGEND:



AREA OF INDUSTRIAL ZONE
 2,295,098 SQUARE FEET OR
 52.688 ACRES MORE OR LESS

EXHIBIT B
INDUSTRIAL ZONE
 W 1/2 SECTION 26 & E 1/2 SECTION 27,
 T4S, R4W, W.M., CITY OF MCMINNVILLE,
 YAMHILL COUNTY, OREGON

TAX LOT: R4426-00701

S69°46'50"W 92.78'

S53°56'20"W 61.30'

S55°24'30"W 182.34'

S36°07'50"W 139.99'

S56°40'10"W 267.02'

S79°40'40"W 384.74'

S79°47'50"W 137.50'

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	CHORD	CHORD LEN
C1	25°00'00"	270.00'	117.81'	S77°30'00"E	116.88'
C2	25°00'00"	330.00'	143.99'	S77°30'00"E	142.85'

Date: 3/22/21
 Proj No: 2021-014-63
 4858 SW SCHOLLS FERRY ROAD, SUITE A
 PORTLAND, OR 97225
 www.sflands.com
 info@sflands.com
 503-345-0328



Exhibit 4

EASEMENT FOR RIGHT-OF-WAY PURPOSES

A TRACT OF LAND SITUATED IN THE NORTHWEST QUARTER OF SECTION 26 AND THE NORTHEAST QUARTER OF SECTION 27, TOWNSHIP 4 SOUTH, RANGE 4 WEST OF THE WILLAMETTE MERIDIAN, CITY OF MCMINNVILLE, OREGON, BEING A PORTION OF THAT PROPERTY CONVEYED TO KIMCO MCMINNVILLE LLC., PER WARRANTY DEED DOCUMENT NUMBER 2006-67470, YAMHILL COUNTY DEED RECORDS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 3" BRASS DISK MARKING THE NORTHWEST CORNER OF SAID SECTION 26; THENCE NORTH 90°00'00" WEST 45.16 FEET; THENCE SOUTH 00°00'00" EAST 100.99 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING 70.00 FEET FROM THE CENTERLINE THEREOF, WHEN MEASURED PERPENDICULAR THERETO), ALSO BEING THE **POINT OF BEGINNING**; THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470, SOUTH 00°00'00" EAST 90.00 FEET; THENCE LEAVING SAID WESTERLY LINE, SOUTH 77°05'11" EAST 965.85 FEET TO THE EASTERLY LINE OF SAID DOCUMENT NUMBER 2006-67470; THENCE ALONG SAID EASTERLY LINE, NORTH 00°00'00" EAST 299.28 FEET TO SAID SOUTHERLY RIGHT-OF-WAY LINE OF E SALMON RIVER HWY (OSH 18) (BEING VARIABLE IN WIDTH); THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, SOUTH 86°11'10" WEST 51.65 FEET; THENCE NORTH 86°11'09" WEST 150.33 FEET; THENCE NORTH 90°00'00" WEST 694.72 FEET; THENCE NORTH 89°59'30" WEST 45.16 FEET TO THE **POINT OF BEGINNING**.

CONTAINING 185,147 SQUARE FEET OR 4.250 ACRES, MORE OR LESS.

REGISTERED
PROFESSIONAL
LAND SURVEYOR



Digitally signed by
Jered McGrath
Date: 2021.03.24
18:50:30 -07'00'

OREGON
JUNE 13, 2008
JERED MCGRATH
79419

RENEWS: 12/31/2022

S&F Land Services

4858 SW Scholls Ferry Rd, Ste A Portland, OR 97225
(503) 345-0328 - www.sflands.com

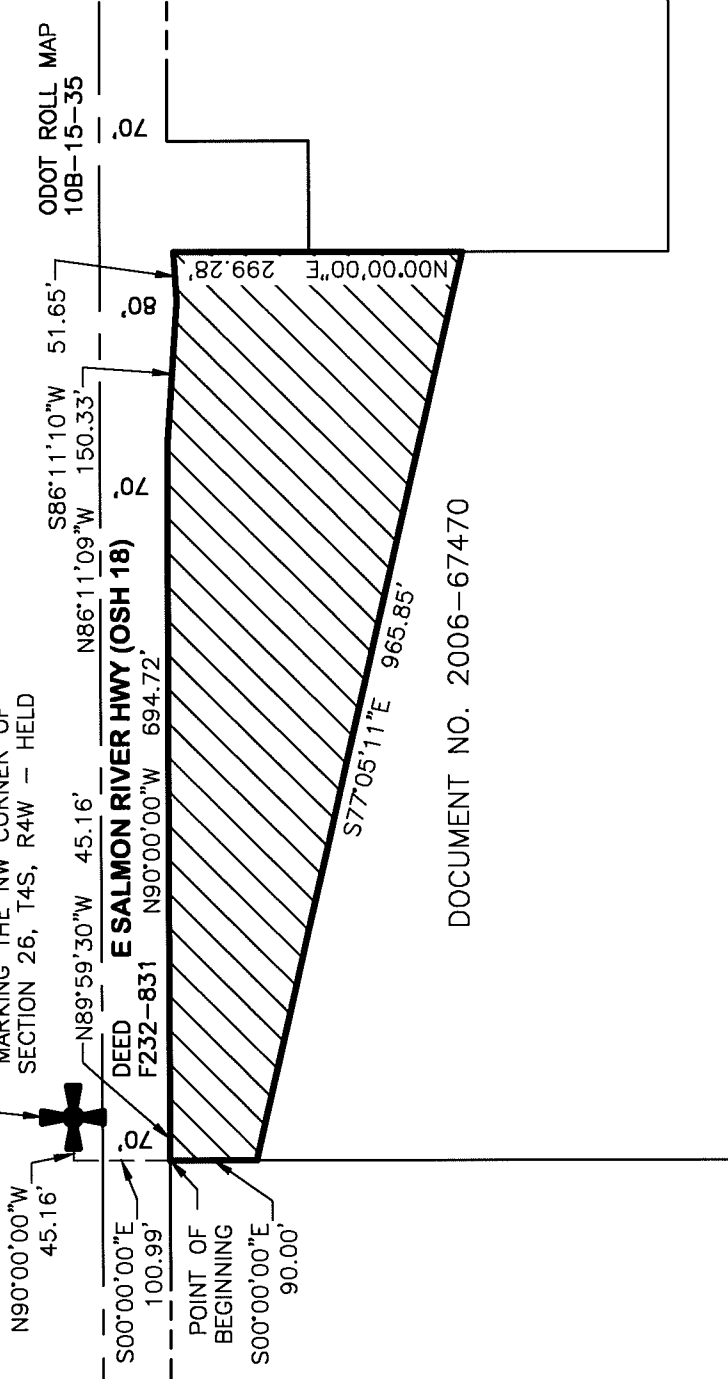
2021-014-63
3/22/21
TLB

P:\2021-014-63 Kimco McMinnville\Survey\Legal Descriptions\Word Documents\2101463_LEGAL-ROW DED.docx

EXHIBIT B

**EASEMENT FOR RIGHT-OF-WAY PURPOSES
NW 1/4 SECTION 26 & NE 1/4 SECTION 27, T4S, R4W,
W.M., CITY OF MC MINNVILLE, YAMHILL COUNTY, OREGON**

POINT OF COMMENCEMENT A FD.
3" BRASS DISK IN MON. BOX
INSCRIBED "YAMHILL CO. SURVEYOR
1986 22/23/27/26 T4S R4W"
MARKING THE NW CORNER OF
SECTION 26, T4S, R4W - HELD



ODOT ROLL MAP
10B-15-35



1 INCH = 200
FEET

DOCUMENT NO. 2006-67470

LEGEND:

- PARCEL - 1
- AREA OF RIGHT-OF-WAY
185,147 SQUARE FEET OR
4.250 ACRES MORE OR LESS.



Date: 3/24/21
Proj No: 2021-014-63
4858 SW SCHOLLS FERRY ROAD, SUITE A
PORTLAND, OR 97225
www.sflands.com
info@sflands.com
503-345-0328

Attachment 3

Applicable Required Findings

This narrative includes Kimco's findings of compliance with the applicable Statewide Planning Goals, McMinnville Comprehensive Plan. The applicable criteria are in **bold** with the relevant applicant response following in *italics*.

These findings incorporate and are intended to supplement the summary provided in the application narrative. Terms capitalized in these findings but not specifically defined, such as Property and Project, are defined in the application summary.

Sections:

- 1. Summary of Applicable Criteria**
- 2. Statewide Planning Goals**
- 3. McMinnville Comprehensive Plan**
- 4. McMinnville Zoning Ordinance**

1. Summary of Applicable Criteria

The City of McMinnville is currently engaging in several long-range planning efforts that are at various stages of adoption, and rely upon different planning documents and assumptions. From the outset of Kimco's quasi-judicial application, it is important to clarify what are the applicable criteria, what may be relevant as supporting evidence, and what is not applicable to this application.

The applicable approval criteria include relevant provisions of the zoning ordinance and comprehensive plan that are in effect and acknowledged, and Statewide Planning Goals (including implementing statutes and administrative rules). These findings list and address only the relevant provisions of these criteria.

The comprehensive plan includes incorporated plans, such as an economic opportunities analysis. As detailed below, Goal 2 and implementing case law, as well as some of the administrative rules, provide that in order to be applicable to a quasi-judicial planning process, an incorporated study must be acknowledged. However, the data and analyses in furtherance of planning processes that are not applicable can be relied upon as evidence, which as explained in these findings, provides further support for this application. As applied here:

- Economic Opportunities Analysis:
 - The adopted and acknowledged **2013 EOA** (Ordinance No. 4976) is binding on and applicable to this application.
 - Superseded EOA's, such as the 2001 EOA (Ord. 4795) and the reversed and remanded 2003 McMinnville Growth Management and Urbanization are not applicable.
 - Draft but unadopted and unacknowledged updated EOA, such as the **draft 2020 EOA** update, is not applicable.
- 2020 UGB Expansion:
 - Amendment to McMinnville Urban Growth Boundary (the "**2020 UGB Expansion**"): Ordinance 5098, adopted December 8, 2020: amends the McMinnville Comprehensive Plan Map, McMinnville Comprehensive Plan and McMinnville Municipal Code (Chapter 17), approving the McMinnville Growth Management and Urbanization Plan (**MGMUP**) and its appendices, and expanding McMinnville's' UGB. This decision is in response to Oregon Court of Appeal's remand of the 2003 UGB

Expansion, which was based in part on the then-applicable 2001 EOA. Ordinance 5098 has not yet been acknowledged and is not applicable.

- Three Mile Lane Area Plan
 - The Three Mile Lane Area Plan (the “**3MLAP**”) is a draft that has not been adopted or acknowledged. It is not binding upon this application.

A. Summary of Goal 2 and Case Law

Oregon Statewide Planning Goal 2, Part I, requires that a local land use authority’s quasi-judicial decision must be based on “an adequate factual base.” A study or assessment constitutes an adequate factual base for purposes of Goal 2 when it is “incorporated” into the jurisdiction’s comprehensive plan or acknowledged planning documents. *1000 Friends v Dundee*, 203 Or App 207, 216 (2005). For an assessment to be “incorporated” into these authorities, it must be both adopted and effective. *1000 Friends v Dundee*, LUBA Nos. 2004-144 and 2004-145, 2006 WL 559077 (Feb. 23, 2006) (on remand, interpreting that “incorporate[ion]” requires “adopt[ion]”); *Craig Realty Group v. City of Woodburn*, 39 Or LUBA 384, 396 (Feb. 2, 2001) (affirming City’s use of then- effective housing inventory, despite that new inventory was being developed, because only the current inventory “describe[d] the . . . provisions of the comprehensive plan”).

Though these Goal 2 requirements apply to all “land use actions,” they are particularly important when an action involves “estimat[ing] the amount of needed land.” See *D. S. Parklane Development, Inc. v. Metro*, 165 Or App 1, 22-23 (2000) (holding Metro could not rely on urban growth report not yet adopted as part of the comprehensive plan because, “[u]nder Goal 2, the computation of need must be based upon the functional plan and/or Metro’s other applicable planning documents”). Nor may a jurisdiction avoid these requirements by attempting to merely “update” an assessment that was previously adopted and incorporated by reference into planning standards. See *Lengkeek v. City of Tangent*, 54 Or LUBA 160, 166 (Apr. 25, 2007) (city could not “rely on [an] updated [buildable lands inventory (“BLI”)] without first amending the [comprehensive plan] to replace the expired BLI with the updated BLI”).

The Court of Appeals has explained the purpose behind these requirements:

The comprehensive plan is the fundamental document that governs land use planning. Citizens must be able to rely on the fact that the acknowledged comprehensive plan and information integrated in that plan will serve as the basis for land use decisions, rather than running the risk of being “sandbagged” by government’s reliance on new data that is inconsistent with the information on which the comprehensive plan was based.

1000 Friends v Dundee, 203 Or App at 216.

Unadopted planning efforts, such as the draft 2020 EOA or 3MLAP, which are not adopted, effective and acknowledged do not constitute an “adequate factual base” on which the City may base its land use findings during this quasi-judicial planning process. Simply put, the draft 2020 EOA is not a valid land use criterion and cannot be the sole basis for consideration of Kimco’s application. To employ it as such would pose the very risk the *1000 Friends v. Dundee* court warned against — that stakeholders in the land use process would be “sandbagged” by having to interpret and apply information inconsistent with the information that informed the operative comprehensive plan. However, these unadopted analyses and the supporting data may be relied upon to confirm or further support approval of Kimco’s application, so long as the primary basis for the approval is the adopted and acknowledged information, such as the 2013 EOA. *McDougal Bros. Investments v. City of Veneta*, 59 Or LUBA 207 (2009); *Shamrock Homes LLC v. City of Springfield*, 68 Or LUBA 1, 12 (2013); *see also Gunderson, LLC v. City of Portland*, 62 Or LUBA 403, rev’d in part on other grounds and remanded, 243 Or App 612, 259 P3d 1007 (2011), other grounds aff’d 352 Or 648, 290 P3d 803 (2012).

In summary, so long as the acknowledged information such as the 2013 EOA provides an adequate primary basis for the City’s approval, the decision can be further supported with new unacknowledged data. The findings below comply with this mandate. The 2013 EOA and acknowledged portions of the adopted comprehensive plan support the conclusion that some of the City’s excess industrial land should be converted to satisfy the deficit of commercial land and describe conversion suitability factors. While Kimco’s analysis could stop there, the application also evaluates the data and analysis in updated but unadopted planning efforts, such as the 3MLAP, which provide further support for the application because those analyses show that the commercial deficit is growing and that the Three Mile Lane area is a suitable location for commercial development.

2. Statewide Planning Goals

A post-acknowledgement comprehensive plan amendment, such as this application, must comply with all applicable Statewide Planning Goals. The Goals that will be most relevant to this application are (A) Goals 9 and (B) 12.

A. Goal 9: Economy of the State

The state’s Goal 9 resource page can be accessed at:
<https://www.oregon.gov/lcd/OP/Pages/Goal-9.aspx>

The requirements of Goal 9 are detailed in the administrative rules in OAR Chapter 660, Division 9:
<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3059>

- **Applicant Response:** *Goal 9 requires the City to “[t]o provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and*

prosperity of Oregon’s citizens.” See www.oregon.gov/LCD/docs/goals/goal9.pdf) and ORS 197.712(1). As relevant to this application, Goal 9 requires the City to provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for industrial and commercial uses consistent the City’s comprehensive plan and the acknowledged 2013 EOA. *Shamrock Homes LLC v. City of Springfield*, 68 Or LUBA 1 (2013) (a proposed amendment must be consistent with the City’s “most recent economic opportunities analysis and the parts of its acknowledged comprehensive plan” which address Goal 9).

The 2013 EOA determined that the City has a deficit of 35.8 acres of commercial land and a surplus of 235.9 acres of industrial land¹ and concludes that excess industrial land should be converted to commercial land to address the unfulfilled need. 2013 EOA, pg 56, Table 26. Goal 9’s requirement for an adequate land supply requires that the land need in the 2013 EOA be met, meaning that the identified deficit of commercial land must be remedied. Goal 9 does not prohibit providing land in excess of the adopted land need. For example, hypothetically, converting 50 acres of industrial land to commercial land is consistent with Goal 9 because post-amendment, there is an adequate supply (meaning no deficit) of industrial and commercial land. Simply stated, conversion from one category of land to another can result in a surplus in one or both categories, so long as a deficit is not created in any category.

Goal 9 does not consider only the total acreage needed in a particular category. The suitability of the land to meet an identified need is also relevant. “Suitable” land is defined as “serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed use.” OAR 660-009-0005(12). “Site characteristics” relate to features that a site needs to accommodate a particular use, and is defined to mean “the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.” OAR 660-009-0005(11).

As applied here, the 2013 EOA recommends to re-designate “at least” 36 acres from industrial to commercial use, which will allow retail development that captures retail leakage and growth related retail needs. The 2013 EOA (see pg. 57, 62, and 73) describes the suitability factors to consider when determining which sites to redesignate,

¹ Although not applicable, as reference, the 2001 EOA concluded that the City has a deficit of 106 acres of commercial land and the draft 2020 EOA estimates that the commercial land deficit ranges from 286 to 295 acres, with a surplus of 159 acres of industrial land.

which these findings refer to as the **“2013 EOA Conversion Suitability Factors,”** as including:

- “sites with the greatest suitability for commercial development” (2013 EOA, pg. 62)
 - The 2013 EOA lays the groundwork for subsequent and more detailed analysis of **“retail leakage”** when it notes:
 - *“Retail sales leakage occurring due to lack of major comparison retail. As described by the 2007 MEDP Strategic Plan, there is considerable retail sales leakage of an estimated \$192 million annually throughout Yamhill County – as residents travel to other counties for a significant 23% of their shopping needs. Full recapture of this sales leakage together with anticipated population growth that was anticipated through 2011 was estimated to support as much as 800,000 square feet of added commercial retail space in Yamhill County. Recapture is dependent on the ability to identify sites and attract retailers that could serve much of the county’s population from locations readily accessible to major travel corridors.”* (2013 EOA, Pg 32)
 - *“...the ability to provide a full range of commercial services in McMinnville may reduce the need for out-shopping from this trade area – with area customers at present often traveling further to more distant destinations as in the Portland Tri-County or Salem area.”* 2013 EOA, pg. 71.
 - Retail leakage, and related suitability considerations are described in detail in the 3MLAP and 2020 EOA. These studies provide evidence in support of the Property’s suitability for commercial development, particularly retail leakage:
 - *“Retail prospects are relatively strong for certain retail sectors, despite relatively weak market conditions (including rent, vacancy, absorption, etc.). The Three Mile Lane study area likely checks off many site selection criteria and market characteristics typically desired by prospective retailers. While there are few retailers currently in the area, desired physical characteristics, such as visibility, vacant developable land, and ease of access are all present. Further, McMinnville’s central location between the Oregon Coast, the Portland Metro, and Salem provides access to a wide variety of markets. Significant household growth and the burgeoning tourism industry will continue to improve retail prospects.”* 3MLAP, pg. 2.

“The Three Mile Lane project area is relatively well-positioned for retail development due to high visibility, ease of access, high traffic counts along Highway 18, and there are few alternative urban areas between McMinnville and the coast, providing opportunities to capture spending from those visiting the Oregon coast.

“Additionally, as one of the few locations in the market area with large, contiguous, vacant tracts of land within city limits, Three Mile Lane should be able to capture a significant portion of market area demand over the next 10 years.” 3MLAP, pg. 51-52.

- “compatibility with neighboring uses” (2013 EOA, pg. 57)
 - *The only existing neighboring uses south of Highway 18 are the Jackson Family Winery and the US Army National Guard Armory and Recruiting Office, which are located on M-2 and M-1 land east of the Property, farming activity on the M-L zoned land to the west, and farming activity on the land zoned M-2 to the south. Given the width of Highway 18, land north of the highway is not “neighboring” the Property. Nevertheless, the uses north and north east of the Property include a senior housing development and single family development (R1 and R-4 zoning) and to the northwest is the Evergreen Aviation & Space Museum (C-3PD zoning).*
 - *The 2013 EOA supports the conclusion that industrial and commercial zoning are compatible with one another, and suggest that a new hybrid industrial-commercial zoning designation could be appropriate for areas transitioning from industrial to commercial. 2013 EOA, pg. 57.*
 - *For the development of larger scale retail like the Project is expected to include, the Property’s location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. The only potential offsite impact is traffic. As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. In comparison, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville “feel.”*

- *The 2020 EOA notes that the deficit of needed site sizes for commercial land is for sites between 0.5 and 5 acres, as well as between 10 and 20 acres. 2020 EOA, pg. 102 and Exhibit 57. The Property's two parcels are approximately 25.3 acres and 5.25 acres.*

Because Kimco's application will convert over two acres of industrial land to a non-industrial use, the application must comply with one of the alternatives in OAR 660-009-0010(4), which provides:

Section 4 - OAR 660-009-0010(4): For a post-acknowledgement plan amendment under OAR chapter 660, division 18, that changes the plan designation of land in excess of two acres within an existing urban growth boundary from an industrial use designation to a non-industrial use designation, or another employment use designation to any other use designation, a city or county must address all applicable planning requirements, and:

(a) Demonstrate that the proposed amendment is consistent with its most recent economic opportunities analysis and the parts of its acknowledged comprehensive plan which address the requirements of this division; or

(b) Amend its comprehensive plan to incorporate the proposed amendment, consistent with the requirements of this division; or

(c) Adopt a combination of the above, consistent with the requirements of this division

- **Applicant Response:** *The 2013 EOA determined that the City has a deficit of 35.8 acres of commercial land and a surplus of 235.9 acres of industrial land and concludes that excess industrial land should be converted to commercial land to address the unfulfilled need. 2013 EOA, pg 56, Table 26. These findings detail how the proposal to convert 33.5 acres of industrial land to commercial land is consistent with the 2013 EOA and comprehensive plan. When the application is approved, the City will be closer to accommodating the commercial land need, and the supply of industrial land will remain adequate because it will continue to be in excess of (but closer to) the adopted industrial land need. Additionally, Figure 27 of the 2013 EOA indicates that there are 5 industrial parcels that are 20+ acres in size, so the City will continue to have an adequate supply of larger industrial parcels.*

B. Goal 12: Transportation

Goal 12 is intended to "provide and encourage a safe, convenient and economic transportation system." See www.oregon.gov/LCD/docs/goals/goal12.pdf). Goal 12 is implemented by the administrative rules in OAR chapter 660, division 12, which is known as the "Transportation Planning Rule" or "TPR."

<https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3062>

- **Applicant Response:** *Kittelson & Associates Transportation Impact Analysis (TIA) includes detailed findings in response to the TPR, which are incorporated herein.*

3. McMinnville Comprehensive Plan (Volume 2: Goals and Policies)

Chapter IV: Economy of McMinnville

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Policy 21.00: Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the City. Such uses shall locate according to the goals and policies in the comprehensive plan.

- **Applicant Response:** *The 2013 EOA's conclusion about retail leakage, which is supported by the 2020 EOA and 3MLAP, is quoted above. The application summary findings in the "Property Description" and Project Background" sections and these findings describe the Property's suitability for capturing retail leakage and accommodate population-growth related retail demand. The proposed rezone will allow (upon subsequent land use reviews) which are not presently available or are underserved, to locate on the Property.*

Policy 21.01: The City shall periodically update its economic opportunities analysis to ensure that it has within its urban growth boundary (UGB) a 20-year supply of lands designated for commercial and industrial uses. The City shall provide an adequate number of suitable, serviceable sites in appropriate locations within its UGB. If it should find that it does not have an adequate supply of lands designated for commercial or industrial use it shall take corrective actions which may include, but are not limited to, re-designation of lands for such purposes, or amending the UGB to include lands appropriate for industrial or commercial use.

- **Applicant Response:** *In support of the requested land use change designation, the adopted 2013 EOA stated:*

"As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- *Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.*

- *Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.*

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56)

The proposal to rezone 33.5 excess industrial acres to commercial is consistent with Policy 21.01 and the 2013 EOA. The Property is suitable for commercial zoning, as described in the “Suitability of the Property for Conversion from Industrial to Commercial” section of the application findings and detailed throughout these findings, the Property includes site characteristics which are conducive to capturing retail leakage and accommodating population growth-related retail, such as visibility from and access to Highway 18 and proximity to retail leakage markets.

Policy 21.03: The City shall support existing businesses and industries and the establishment of locally owned, managed, or controlled small businesses.

- **Applicant Response:** *The 2013 EOA indicates that there will be an annual leakage of \$192 million in consumer spending in Yamhill County to areas outside its boundaries (Pg 32) along with a shortfall of 36 commercially designated acres through 2033 (Pg 56). Furthermore, the 2013 EOA states local businesses suffer from “Limited duration of tourism visitation & low expenditure capture. While the McMinnville area and Yamhill County can now boast some of the state’s top tourism attractions, visitor spending does not appear to match visitation. This is because visitors tend not to stay overnight (but are often day visitors) and do not appear to be making substantial expenditures while in the area. A key challenge for the future is to provide more and better value-added opportunities for visitors to spend more time and money while visiting the McMinnville area.” (2013 EOA Pg 32-33)*

The Property is suitable for capturing retail leakage documented in the 2013 EOA and further supported by the 2020 EOA and 3MLAP, as quoted above. Because the leakage sales are not being met in the market, existing businesses do not rely upon those sales, which means that satisfying the leakage will not impact existing business. Instead, existing businesses could be supported by retail development of the Property because consumers will stay within and be drawn to the market area.

Policy 21.05: Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the city. Such uses shall locate according to the goals and policies in the comprehensive plan

- **Applicant Response:** *See response to Policy 21.00.*

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future commercial lands, and discouraging strip development.

- **Applicant Response:** *The 2013 EOA concluded that utilizing existing commercially designated lands are not sufficient to accommodate the demonstrated commercial land need, and that re-designating excess industrial land is the solution.*

No specific development is proposed with this application. Once a formal project application is submitted to the City, the requested Planned Development overlay designation means that the development will be subject to the Planned Development Ordinance. The project application will be open to public comment, be reviewed by the Planning Commission, and approved at the discretion of the City Council. The project layout and design elements shall be assessed at that time.

General Policies:

Policy 22.00: The maximum and most efficient use of existing commercially designated lands will be encouraged as will the revitalization and reuse of existing commercial properties.

- **Applicant Response:** *The types of retail that is leaking from the City requires parcels that range from 5 to 20+ acres. The City's inventory of vacant and partially vacant commercially designated properties in that size range are very limited: the 2013 EOA, Figure 27 indicates there is one vacant commercially designated parcels that is 11 acres, and 2 over 20 acres, one of which is the Evergreen Aviation & Space Museum, which is encumbered with a tourism-related PUD; 2020 EOA, Exhibit 39 shows that there are zero vacant or partially vacant C-3 lot. This lack of inventory led the s, and a single 12.1 acre partially vacant C-3 lot the 2013 EOA concluded that utilizing existing commercially designated lands was not sufficient to accommodate the demonstrated commercial land need, and that re-designating excess industrial land is the solution. Therefore, the ability of existing commercial lands to be revitalized and reused will not be impacted by this amendment, because the needed retail uses that will be facilitated by this amendment cannot be accommodated on existing commercially zoned parcels.*

Policy 24.00: The cluster development of commercial uses shall be encouraged rather than auto-oriented strip development.

- **Applicant Response:** *No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance which will discourage auto-oriented strip development. The project application will be open to public*

comment, be reviewed by the Planning Commission, and approved at the discretion of the City Council. The project layout and design elements shall be assessed at that time.

Locational Policies:

Policy 24.50: The location, type, and amount of commercial activity within the urban growth boundary shall be based on community needs as identified in the Economic Opportunities Analysis.

Applicant Response: *The 2013 EOA identified a deficit of at least 36 acres of commercial land, which should be accommodated by redesignating excess industrial land. The 2013 EOA Conversion Suitability Factors (detailed above), as well as the 3MLAP and 2020 EOA, support the conclusion that the Property is suitable to accommodate retail leakage and growth-related retail uses. Among the Property's key site characteristics are site size, proximity to retail leakage markets, and visibility and access to Highway 18.*

Policy 25.00 Commercial uses will be located in areas where conflicts with adjacent land uses can be minimized and where city services commensurate with the scale of development are or can be made available prior to development.

Applicant Response: *The only existing adjacent uses south of Highway 18 are the Jackson Family Winery and the US Army National Guard Armory and Recruiting Office, which are located on M-2 and M-1 land east of the Property, farming activity on the M-L zoned land to the west, and farming activity on the land zoned M-2 to the south. Given the width of Highway 18, land north of the highway is not "adjacent" to the Property. Nevertheless, the uses north and north east of the Property include a senior housing development and single family development (R1 and R-4 zoning) and to the northwest is the Evergreen Aviation & Space Museum (C-3PD zoning).*

The Property is within the City's Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft "includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development." (3MLAP Memorandum 6, pg 10-13)

For the development of larger scale retail like the Project is expected to include, the Property's location is superior to other potential properties because of the minimal impact on surrounding neighborhoods. The only potential offsite impact is traffic. As detailed in the TIA, rezoning the Property would allow for the scale of retail development associated with

capturing retail leakage with minor upgrades to surrounding streets and a new intersection. There would minimal impacts to the overall urban fabric of the more established and densely developed areas of McMinnville. In comparison, any proposed development at the intersection of SH-18 and SH-99W (Linfield Property) would raise serious traffic infrastructure problems if it is to be developed with intense retail uses. This would include reconstruction of the Old Sheridan Road intersection and a reconfiguration and widening of the interchange between the two state highways. In that immediate vicinity, SH 99W is an interior arterial in McMinnville, and the regional traffic generated by major retail at this location would be disruptive to the internal city traffic patterns and the McMinnville “feel.”

Specifically for the Property, Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. (Attachment XX) The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address and minimize potential conflicts, if any, through revisions or conditions of approval, and any deficiencies in city services can be addressed through conditions of approval.

Policy 26.00: **The size of, scale of, and market for commercial uses shall guide their locations. Large-scale, regional shopping facilities, and heavy traffic-generating uses shall be located on arterials or in the central business district, and shall be located where sufficient land for internal traffic circulation systems is available (if warranted) and where adequate parking and service areas can be constructed.**

- **Applicant Response:** *As detailed in response to Policy 25.00 the Property is an appropriate location for commercial development. No specific development is proposed with this application. However, the type of retail that could be developed on the property that is intended to capture retail leakage would likely be considered large-scale or a regional shopping facility by Policy 26.00. The Property is a suitable location for these commercial uses based upon Policy 25.00's and 26.00's considerations. The Property is located on OR 18, which McMinnville's TSP classifies as a Major Arterial and a State Highway. The 33.5 acre Property is adequately sized to accommodate internal traffic circulation and parking. For example, the site plan at Exhibit XX includes an internal road system.*

Design Policies

Policy 29.00: New direct access to arterials by large-scale commercial developments shall be granted only after consideration is given to the land uses and traffic patterns in the area of development as well as at the specific site. Internal circulation roads, acceleration/deceleration lanes, common access collection points, signalization, and other traffic improvements shall be required wherever necessary, through the use of planned development overlays.

Policy 30.00: Access locations for commercial developments shall be placed so that excessive traffic will not be routed through residential neighborhoods and the traffic-carrying capacity of all adjacent streets will not be exceeded.

Policy 31.00: Commercial developments shall be designed in a manner which minimizes bicycle/pedestrian conflicts and provides pedestrian connections to adjacent residential development through pathways, grid street systems, or other appropriate mechanisms. (Ord.4796, October 14, 2003)

Policy 32.00: Where necessary, landscaping and/or other visual and sound barriers shall be required to screen commercial activities from residential areas.

Policy 33.00: Encourage efficient use of land for parking; small parking lots and/or parking lots that are broken up with landscaping and pervious surfaces for water quality filtration areas. Large parking lots shall be minimized where possible. All parking lots shall be interspersed with landscaping islands to provide a visual break and to provide energy savings by lowering the air temperature outside commercial structures on hot days, thereby lessening the need for inside cooling. (Ord.4796, October 14, 2003)

- **Applicant Response:** *No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address*

the Project's access, bicycle/pedestrian connections, landscaping/screening, parking, layout and design elements shall be assessed at that time.

Goal IV 4: To promote the downtown as a cultural, administrative, service, and retail center of McMinnville.

Downtown Development Policies

Policy 36.00: The City of McMinnville shall encourage a land use pattern that:

- 1. Integrates residential, commercial, and governmental activities in and around the core of the city;**
- 2. Provides expansion room for commercial establishments and allows dense residential development;**
- 3. Provides efficient use of land for adequate parking areas;**
- 4. Encourages vertical mixed commercial and residential uses; and,**
- 5. Provides for a safe and convenient auto-pedestrian traffic circulation pattern. (Ord.4796, October 14, 2003)**

- **Applicant Response:** *This application for designating additional land as "Commercial" in Comprehensive Plan under a C-3 zoning district would potentially permit additional retail development within the City that cannot be accommodated in the format of downtown merchant spaces. One fundamental goal of this land use change application is to maintain consumer spending within the City limits and will contribute to the overall vibrancy and well being of residents. Rather than cannibalizing retail dollars from the downtown district, alleviating the shortage of commercial acreage that is attributable to retail leakage could draw shoppers to McMinnville for a spectrum of needs that currently cannot be found within the City limits.*

Policy 41.00: The City of McMinnville shall encourage the expansion of retail and other commercial enterprises east of the railroad tracks and north and south of Third Street consistent with the adopted "Downtown Improvement Plan."

- **Applicant Response:** *The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville's commercial business district. Despite this land being designated "Commercial" land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the area east of the railroad tracks and north and south of Third Street.*

Policy 46.00: The City shall work to implement the recommendations of the adopted “McMinnville Downtown Improvement Plan.”

- **Applicant Response:** *The area included in the Downtown Improvement Plan adopted in 2000 focused on a targeted collection of parcels on the eastside of McMinnville’s commercial business district. Despite this land being designated “Commercial” land use and within the C-3 zoning district, the 2013 EOA indicates there remains a shortage of available commercial acreage within the City limits. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the McMinnville Downtown Improvement area.*

Proposals

Policy 6.00: A planned development overlay should be placed on the large cluster commercial development areas and the entrances to the City to allow for review of site design, on-site and off-site circulation, parking, and landscaping. The areas to be overlaid by this designation shall be noted on the zoning map and/or comprehensive plan map.

- **Applicant Response:** *The application requests a Planned Development overlay, consistent with Policy 6.00. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project’s site design, on-site and off-site circulation, parking, and landscaping, shall be assessed at that time.*

Policy 8.00: The City of McMinnville should encourage the development of a commercial planned development center in the southwestern portion of the city large enough in scale to serve the needs of the area’s population. The center should be in proximity of the intersection of Old Sheridan Road, U.S. Highway 99W, and Oregon Highway 18.

- **Applicant Response:** *This area is already zoned C-3, which allows large scale commercial development, and is currently undeveloped. The 2013 EOA included this area as a part of the City’s inventory of available commercial land and concluded that there is nevertheless a 35.8 acre deficit. The proposed amendment is targeted at satisfying the existing land need, which includes retail leakage. The amendment has no impact on the development potential of the southwestern portion of the city.*

Industrial Development

Goal IV 5: To continue the growth and diversification of McMinnville’s industrial base through the provision of an adequate amount of properly designated lands.

- **Applicant Response:** *In support of the requested land use change designation, the adopted 2013 EOA stated:*

“As with the prior 2001/03 EOA projections, an anticipated surplus is indicated for industrial lands versus a shortfall associated with commercial lands:

- *Commercial land demand is expected to exceed supply – resulting in a forecast shortfall of an estimated 36 acres through 2033.*
- *Industrial land demand is anticipated to come in well under the BLI supply – resulting in a surplus forecast at close to 236 acres over the 20-year planning horizon.*

In summary, this (2013) EOA update indicates that industrial land needs can be more than amply met over the next 20 years while commercial land supply will fall short of meeting anticipated demand.” (2013 EOA, Pg 56). Figure 27 of the 2013 EOA indicates that there are 5 industrial parcels that are 20+ acres in size, so the City will continue to have an adequate supply of larger industrial parcels if the Property is converted from Industrial to Commercial.

Goal IV 6: To ensure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

Locational Policies

Policy 49.00: The City of McMinnville shall use its zoning and other regulatory methods to prevent encroachment into industrial areas by incompatible land uses.

- **Applicant Response:** *The 2013 EOA concluded that there is an excess amount of industrial land. Converting some of that surplus land to commercial will have no impact on the uses permitted in the remaining industrial land. Further, 3MLP that is currently moving through the community and legislative review process recommends a mix of commercial and industrial uses within this area, specifically focusing commercial districts along the OR-18 frontage.*

Policy 49.01: The City shall designate an adequate supply of suitable sites to meet identified needs for a variety of different parcel sizes at locations which have direct access to an arterial or collector street without having to pass through residential neighborhoods.

Policy 49.02: The location, type, and amount of industrial activity within the Urban Growth Boundary shall be based on community needs as identified in the Economic Opportunities Analysis.

Policy 50.00: The City of McMinnville shall encourage industrial uses to locate adjacent to the airport and south of Three Mile Lane, adjacent to the existing Riverside Drive industrial area, and in existing industrial areas through proper designation of lands on the comprehensive plan and zoning maps. Comprehensive plan and/or zoning map changes to industrial designations in other areas may be granted if all the applicable goals and policies of the plan can be met.

- **Applicant Response:** *Policies 49.01, 49.02 and 50.00 are directed at the suitability of sites for industrial development. The 2013 EOA has “recommended to better match the commercial inventory to current and anticipated needs include re-designating a portion of the excess industrial inventory to commercial use including focus on needs for commercial sites across a range of size classes, increasing emphasis on redevelopment and density of development, and greater flexibility of use for mixed commercial/industrial areas. Also needed may be parcelization of some larger 20+ acre industrial sites for which there is no readily apparent demand to meet demonstrated needs for smaller industrial sites, especially in the 1-9- acre size ranges.” (2013 EOA, Pg 67).*

The 2013 EOA Conversion Suitability Factors (detailed above) confirm that the Property has site characteristics that are more appropriate for commercial development than industrial development. Redesignating the Property from Industrial to Commercial will not impact the adequacy of the supply of suitable industrial sites; the City will continue to have a surplus of over 200 acres of industrial land, including four parcels that are 20+ acres. 2013 EOA, Figure 27.

The Property is within the City’s Three Mile Lane Plan area updating 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The area contains approximately 1,340 acres of land with a variety of existing land uses and several large vacant parcels. Though the timeline for the adoption of this plan is unknown, the current draft “includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR SH 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development.” (3MLAP Memorandum 6, pg 10-13)

Policy 51.00: The City of McMinnville shall encourage the location of airport-related industrial uses only on the industrial land which is adjacent to the

airport. Those lands so reserved shall be designated in the planned development overlay covering this area.

- **Applicant Response:** *The Property is near the airport, but does not abut it, and is separated from the airport by a public park (Galen McBee Airport Park), the South Yamhill River, a military base and the Jackson Family Winery. The portion of the Property closest to the airport is the southerly 52.5 acres that will retain an Industrial land use designation.*

Policy 52.00: **The City of McMinnville shall create a new "limited light industrial" zone which shall be placed on the industrial areas on the south side of Three Mile Lane in those areas where residential development is expected on the north side of the road. The new zone will allow only those types of industrial uses that will not conflict with the residential uses.**

- **Applicant Response:** *Policy 52.00 is directed at the City pursuing a legislatively created new zoning designation. Policy 52.00 reflects the City's desire to minimize conflicts with residential uses north of Three Mile Lane. As detailed elsewhere in these findings, the uses allowed by the proposed C-3PD designation are more compatible with residential uses than those uses permitted allowed by the current M-3 zoning, which is consistent with Policy 52.00. Further, the City is in the process of re-evaluating the Three Mile Lane Area through the 3MLAP. That city-led long range planning process is the forum for addressing Policy 52.00.*

Chapter VI: Transportation System

Air

Policies:

Policy 115.00: **The City of McMinnville shall encourage the development of compatible land uses in the vicinity of the airport as identified in current and future airport and comprehensive plans**

- **Applicant Response:** *The Property is within .5 miles of the McMinnville Municipal Airport. While the Airport Layout Plan completed in 2004 discourages the expansion of residential use near the airport and encourages agricultural and manufacturing areas, it does not explicitly address commercial use (McMinnville Municipal Airport Layout Plan Study – December 2004, 1-9). The request to add a commercial element through the land use designation and zoning change would not run incongruent to the future sustainability and potential expansion of the airport.*

Streets

Policies:

Policy 119.00 The City of McMinnville shall encourage utilization of existing transportation corridors, wherever possible, before committing new lands.

- **Applicant Response:** *The OR 18 corridor has the capacity to accommodate trips to the proposed site without widening to six (6) lanes. The traffic impact analysis (TIA) supports this finding and recommends some access modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site with the proposed rezoning and subsequent commercial development. These modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.*

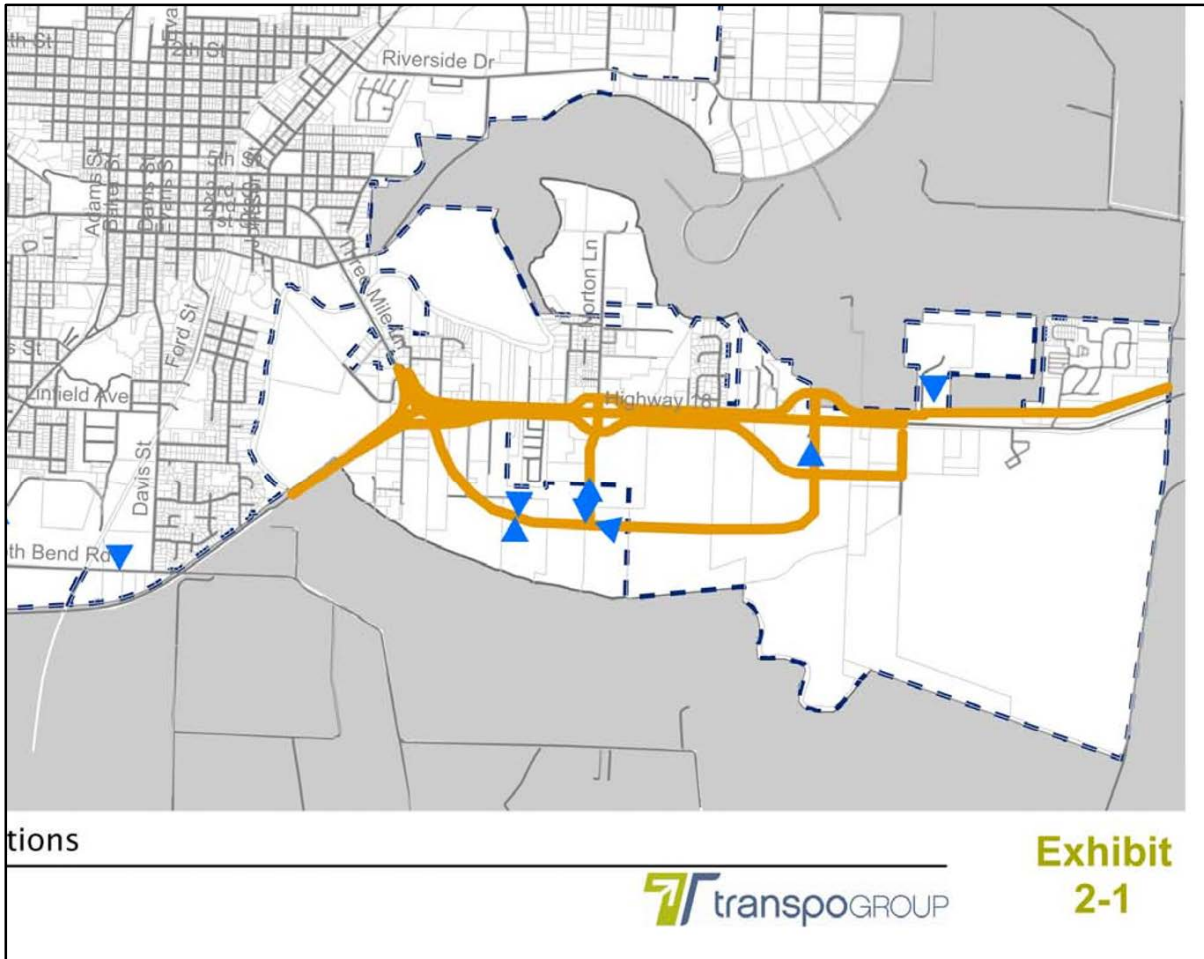
Policy 123.00: The City of McMinnville shall cooperate with other governmental agencies and private interest to insure the proper development and maintenance of the road network within the urban growth boundary.

- **Applicant Response:** *Kittelson & Associates, Inc. prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The scope, methodology, findings and recommendations have been coordinated with the City of McMinnville and the Oregon Department of Transportation (ODOT). In addition, at the time development is proposed on the Property in the future, the City of McMinnville will notice the ODOT, surrounding project owners, and the city at-large, issue a staff report and conduct planning commission and city council hearings to assess that proper development and maintenance of the road network is ensured.*

Connectivity and Circulation

Policy 132.26.05: New street connections, complete with appropriately planned pedestrian and bicycle features, shall be incorporated in all new developments consistent with the Local Street Connectivity map.

- **Applicant Response:** *The Local Street Connectivity (Exhibit 2-1 of the TSP) map identifies future east/west frontage road and back road connections south of OR 18, as shown in the figure below. The subsequent development of the Property under the proposed zoning will require the development of collector streets consistent with the transportation system plan and McMinnville (OR-18) Corridor Refinement Plan which require sidewalks and bicycle lane. The proposed development plan will need to show these connections as well as how pedestrians and bicyclists access the buildings on-site.*



Supportive of General Land Use Plan Designations and Development Patterns

Policy 132.27.00: The provision of transportation facilities and services shall reflect and support the land use designations and development patterns identified in the McMinnville Comprehensive Plan. The design and implementation of transportation facilities and services shall be based on serving current and future travel demand—both short-term and long-term planned uses.

- Applicant Response:** *The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed transportation facility modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan. Development will include construction of the collector streets identified in the TSP Exhibit 2-1 (frontage and back roads). As part of the design of these roadways, sidewalks and bicycle lanes will be provided.*

Growth Management

Policy 132.40.00: Mobility standards will be used to evaluate the transportation impacts of long-term growth. The City should adopt the intersection mobility standards as noted in Chapter 2 of the Transportation System Plan.

- **Applicant Response:** *The TIA study intersections within the City's jurisdiction and ODOT's jurisdiction and applied each jurisdiction's applicable mobility standard as a basis for recommending mitigation measures. See, for example, TIA Table 2 and 18.*

McMinnville TSP Implementation

Policy 132.62.00: (TSP as Legal Basis) The City of McMinnville shall use the McMinnville TSP as the legal basis and policy foundation for actions by decision-makers, advisory bodies, staff, and citizens in transportation issues. The goals, objectives, policies, implementation strategies, principles, maps, and recommended projects shall be considered in all decision-making processes that impact or are impacted by the transportation system.

- **Applicant Response:** *The proposed rezone and subsequent development of the subject property is consistent with the goals, objectives, policies, implementation strategies, principles, maps, and recommended projects within the McMinnville TSP as shown below:*

Goal: To encourage development of a transportation system that provides for the coordinated movement of people and freight in a safe and efficient manner.

The proposed rezone and subsequent commercial development work in the direction of achieving this goal by providing intersection improvements to increase the safety and traffic flow of the surrounding roadway network for all users. The proposed modifications are consistent with the implementation strategies (McMinnville (OR-18) Corridor Refinement Plan) as shown in Exhibit 4-6 (Projects and Programs) in the TSP, as well as the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plan maps set forth in the TSP.

Policies:

1. Transportation System Plan

The proposed site plan will be developed consistent with the Street System, Pedestrian, Bicycle, Public Transportation, Freight, Rail, Air and Pipeline Plans set forth in the TSP. The proposed rezoning and subsequent commercial development will fund transportation improvements which will work toward implementing the TSP.

2. Complete Streets

The traffic signals and intersection improvements identified in the TIA will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines. Site development will aim to create a pedestrian and bicycle friendly environment.

3. Multi-Modal Transportation System

The site plan review process will ensure that the proposed site is consistent with the Local Street Connectivity map and provides connections for pedestrians and bicycles.

4. Connectivity and Circulation

The Local Street Connectivity map identifies a future east/west connection south of OR 18. The site plan will be developed consistent with this plan and providing this connection. Pedestrian and bicycle facilities will be provided as appropriate for each roadway classification. Site development will preserve right-of-way for design of a future interchange at OR 18 and Cumulus Avenue.

5. Supportive of General Land Use Plan Designations and Development Patterns

The TIA provided a short-term (2022) and long-term (2037) operational analysis of the roadway network surrounding the site, finding that the proposed rezone can be approved assuming implementation of the recommended mitigation measures. With the proposed improvements, the proposed rezone results in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060. Additionally, the proposed modifications are consistent with the future improvements identified in the adopted 1996 McMinnville (OR-18) Corridor Refinement Plan.

6. Regional Mobility

The location of the proposed site along OR 18 provides ease of access to regional centers such as downtown McMinnville, Lafayette, and Newberg. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

7. Growth Management

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area. Additionally, the improvements recommended in the TIA bring local intersections (some of which do not meet level of service standards under existing conditions) up to standard. The proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today.

8. Transportation System and Energy Efficiency

The location of the proposed site along OR 18 provides opportunity for transportation system and energy efficiency with easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. In addition, the proposed uses may also reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today

9. Transportation Safety

The traffic impact analysis (TIA) recommends modifications to improve the safety of the OR 18 corridor and other intersections within the study area.

10. Public Safety

The site plan review process will ensure that emergency vehicle access is provided on the proposed site. In addition, the safety improvements identified in the TIA should result in crash reductions as a number of intersections within the study area.

11. Accessibility for Persons with Disabilities

On-site connections, as well as traffic signal and intersection improvements identified in the TIA, will be designed and constructed in compliance with the Americans with Disabilities (ADA) guidelines.

12. Economic Development

The proposed rezone meets the needs of the surrounding community. A recent market study indicated an over-abundance of industrial land and high demand for commercial uses in the area.

13. Livability

The site plan review process will incorporate multi-modal facilities to increase the livability of the greater McMinnville area.

14. Health and Welfare

The proposed site will be accessible via many modes of transportation, including transit and active transportation (by bicycle and by foot).

15. Transportation Sustainability

The location of the proposed site along OR 18 provides easy access to residents and employees of downtown McMinnville on their way to or from work, in some cases eliminating the need for out-of-direction travel. It is also anticipated that some people will stop at the site on their way to or from the coast. In addition, the proposed uses may also

reduce regional transportation demand by capturing existing trips that travel to the greater Portland and Salem area for these uses today. The traffic impact analysis (TIA) recommends some modifications to existing roadways intersecting OR 18 to improve the safety and flow of traffic in the vicinity of the site.

16. Aesthetics and Streetscaping

The site plan review process will incorporate aesthetics and streetscaping to enhance visitor experience and livability of the greater McMinnville area.

17. Intergovernmental Coordination and Consistency

Kittelson & Associates, Inc., prepared a transportation impact analysis (TIA) and Transportation Planning Rule (TPR) analysis for the proposed project. The methodology, findings and recommendations have been coordinated with the City of McMinnville and ODOT Region 2.

Chapter VII: Community Facilities and Services

Goal VII-1: *To provide necessary public and private facilities and utilities at levels commensurate with urban development, extended in a phased manner, and planned and provided in advance of or concurrent with development, in order to promote the orderly conversion of urbanizable and future urbanizable lands to urban lands within the McMinnville Urban Growth Boundary.*

- **Applicant Response:** *This Goal is targeted primarily at rural land that is included in the UGB and is transitioning to urbanizable and urban land, and directs the City to plan utilities for that transition. The Property is in the UGB, so this Goal is not applicable. Nevertheless, when development is proposed and evaluated through a public process in the future, the adequacy of public and private facilities for the development will be determined.*

Sanitary Sewer System

Policies:

Policy 138.00: **The City of McMinnville shall develop, or require development of, sewer system facilities capable of servicing the maximum levels of development envisioned in the McMinnville Comprehensive Plan**

- **Applicant Response:** *This Goal is targeted primarily at the City's facility planning. There are no known sanitary sewer deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of sewer system facilities will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.*

Storm Drainage

Policies:

Policy 142.00: The City of McMinnville shall insure that adequate storm water drainage is provided in urban developments through review and approval of storm drainage systems, and through requirements for connection to the municipal storm drainage system, or to natural drainage ways, where required.

- **Applicant Response:** *No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will address the Project's storm drainage shall be assessed at that time.*

Water and Sewer—Land Development Criteria

Policies

Policy 151.00: The City of McMinnville shall evaluate major land use decisions, including but not limited to urban growth boundary, comprehensive plan amendment, zone changes, and subdivisions using the criteria outlined below:

1. Sufficient municipal water system supply, storage and distribution facilities, as determined by McMinnville Water and Light, are available or can be made available, to fulfill peak demands and insure fire flow requirements and to meet emergency situation needs.
2. Sufficient municipal sewage system facilities, as determined by the City Public Works Department, are available, or can be made available, to collect, treat, and dispose of maximum flows of effluents.
3. Sufficient water and sewer system personnel and resources, as determined by McMinnville Water and Light and the City, respectively, are available, or can be made available, for the maintenance and operation of the water and sewer systems.
4. Federal, state, and local water and waste-water quality standards can be adhered to.
5. Applicable policies of McMinnville Water and Light and the City relating to water and sewer systems, respectively, are adhered to.

- **Applicant Response:** *There are no known water or sewage deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of water and sewer system facilities will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.*

Police and Fire Protection

Policies

Policy 155.00: **The ability of existing police and fire facilities and services to meet the needs of new service areas and populations shall be a criterion used in evaluating annexations, subdivision proposals, and other major land use decisions.**

- **Applicant Response:** *There are no known police or fire facility or service deficiencies in the vicinity of the Property. No development is proposed as a part of this application. When development is proposed and evaluated through a public process in the future, the adequacy of these facilities and services will be confirmed, and if necessary, conditions of approval will be imposed to address any deficiencies.*

Chapter VIII Energy

Energy Conservation

Goal VIII 2: To conserve all forms of energy through utilization of land use planning tools.

- **Applicant Response:** *One of the fundamental policies backing the rationale for this land use change request is the consumer spending leakage highlighted in the 2013 EOA. By allowing more potential retail development within the City, residents will no longer be required to drive longer distances to destinations such as Salem or southwest Portland for their needs, which conserves energy.*

Policies

Policy 178.00: **The City of McMinnville shall encourage a compact urban development pattern to provide for conservation of all forms of energy.**

- **Applicant Response:** *Statewide Planning Goal 14 and its implementing statutes and rules require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need. The 2013 EOA demonstrates a need for retail and an excess of industrial land, and the proposed comp plan designation and zoning map amendments satisfy a portion of this need. Accommodating the identified land need within the UGB is consistent with Goal 14 and encourages a compact urban development pattern.*

Chapter IX: Urbanization

Goal IX 1: To provide adequate lands to service the needs of the projected population to the year 2023, and to ensure the conversion of these lands in an orderly, timely manner to urban uses.

- **Applicant Response:** *The 2013 EOA quantifies the industrial and commercial land needs for the projected population and concludes that there is a need for retail and an excess of industrial land. The proposed Comprehensive Plan land use designation and zoning map amendments accommodate a portion of the commercial land need. Converting excess industrial land to needed commercial land is consistent with Statewide Planning Goal 14 and its implementing statutes and rules, which require a jurisdiction to first determine whether an identified land need can be accommodated within the UGB prior to expanding the UGB to accommodate the need.*

Land Use Development Tools

Policies

Policy 186.00: The City of McMinnville shall place planned development overlays on areas of special significance identified in Volume I of the McMinnville Comprehensive Plan. Those overlays shall set forth the specific conditions for development of the affected properties. Areas of significance identified in the plan shall include but not be limited to:

1. Three Mile Lane (north and south).

- **Applicant Response:** *The application requests a Planned Development overlay, consistent with Policy 186.00.1. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. Those ordinances require specific conditions for development of the Property, and will be reviewed in a public process.*

Chapter X: Citizen Involvement and Plan Amendment

Goal X 2: To periodically review and amend the McMinnville Comprehensive Plan to reflect changes in community circumstances, in citizen desires, and in the statewide goals.

- **Applicant Response:** *This Goal obligates the City to periodically review its Comprehensive Plan, so is not applicable to this application. Nevertheless, the application is consistent with this Goal because the proposal to revise the comprehensive land use plan designation for the site is responsive to the oversupply of industrial and demand for retail as addressed in the 2013 EOA. While consistent with the Three Mile Line Area Plan currently moving through the*

legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.

4. McMinnville Zoning Ordinance

17.74.020 Comprehensive Plan Map Amendment and Zone Change - Review Criteria.

An amendment to the official zoning map may be authorized, provided that the proposal satisfies all relevant requirements of this ordinance, and also provided that the applicant demonstrates the following:

- A. The proposed amendment is consistent with the goals and policies of the Comprehensive Plan.**
 - **Applicant Response:** *The analysis provided in Section 3 of this attachment demonstrates the application's compliance with the City's Comprehensive Plan and other adopted policies.*

- B. The proposed amendment is orderly and timely, considering the pattern of development in the area, surrounding land uses, and any changes which may have occurred in the neighborhood or community to warrant the proposed amendment;**
 - **Applicant Response:** *Criterion B is supported by the 2013 EOA, which found that the City could benefit from a regional retail center, that recapture of retail sales leakage could be achieved by concentrating retail along major highways, and that excess industrial land should be re-designated to commercial use when opportunities arise. While consistent with the Three Mile Line Area Plan currently moving through the legislative process, the timing on adoption of this larger policy document is unknown. The current application seeks to address the current deficit in available commercial land in a more directed and expedient manner.*

- C. Utilities and services can be efficiently provided to serve the proposed uses or other potential uses in the proposed zoning district.**
 - **Applicant Response:** *There are no known utility or service deficiencies. No specific development is proposed with this application. Once a formal project application is submitted to the City, pursuant to the requested Planned Development overlay, it will be subject to the Planned Development Ordinance and Zoning Ordinance. The project application will be reviewed in a public process, which will demonstrate the improvements required for City utilities and services to efficiently serve the site.*

17.51 Planned Development Overlay:

17.51.010 Purpose

* * *

B. The Council, the Commission, or the property owner of a particular parcel may apply for a planned development designation to overlay an existing zone without submitting any development plans; however, no development of any kind may occur until a final plan has been submitted and approved. (The Planning Director shall note such properties and direct that no building permit be issued in respect thereto.)

1. A planned development overlay may be approved under these circumstances for a property which has unique characteristics (e.g., geological, ecological, location, or the nature of the surrounding property) and the development of which may have an impact upon the surrounding area or the city as a whole. A planned development overlay initiated by the Council or the Planning Commission shall address itself to the purposes set forth herein.

- **Applicant Response:** *Comprehensive Plan Policy 6.00 recommends placing a Planned Development overlay on large cluster commercial development areas, and other policies encourage heightened review of proposed development to ensure compatibility with nearby uses. These policies provide a basis for imposing a planned development overlay on the Property, which has the unique characteristics of accommodating needed retail uses to accommodate retail leakage and growth related demand.*

C. The Council and Planning Commission, with the assistance of the Planning Director, shall ensure that no planned development overlay granted under Section A or B above which is merely a guise to circumvent the intent of the zoning ordinance shall be approved. A denial of such a zone request based upon this principle shall be enunciated in the findings of fact adopted by the Planning Commission;

- **Applicant Response:** *No specific development is proposed at this time, so the requested Planned Development overlay is not an effort to circumvent the intent of the zoning ordinance. Instead, as noted above, the imposition of the Planned Development overlay is consistent with applicable Comprehensive Plan Policies.*

D. A planned development overlay shall be heard and approved under the public hearing procedures set forth in Chapter 17.72 (Applications and Review Process) of this ordinance. (A planned development overlay and change of the underlying zone may be processed simultaneously.)

- **Applicant Response:** *The Planned Development overlay request is being considered concurrent with the Comprehensive Plan designation and Zoning Map designating*

amendment requests, in compliance with the application and review processes in Chapter 17.72.

E. A planned development overlay proposed by the Council, the Planning Commission, or the property owner under subsection B above shall be subject to all of the hearing requirements again at such time as the final plans under Section 17.51.030 are submitted, unless those requirements have been specifically changed in the planned development approval;

- **Applicant Response:** *The property owner will comply with these requirements at the time final plans for development of the Property are submitted.*



MEMORANDUM

EXPIRES: 12/31/2021

Date: December 18, 2020

Project #: 24369

To: Jamie Fleckenstein, PLA, & Heather Richards, PCED, City of McMinnville
Dorothy Upton, PE, Keith Blair, PE, Dan Fricke, & Michael Duncan, ODOT Region 2

Cc: Michael Strahs, Kimco Realty & Alan Roodhouse, RPS Development Company

From: Kristine Connolly, PE, Marc Butorac, PE, PTOE, PMP & Alec Kauffman

Project: Three Mile Lane Rezone

Subject: Transportation Impact Analysis

Kimco McMinnville, LLC (Kimco) is proposing a rezone of approximately 33.5 acres of vacant land in McMinnville, Oregon. The proposed site is located on the southwest corner of OR-18 (Salmon River Highway) and NE Cumulus Avenue. The site is currently zoned M-2 (General Industrial). Kimco is proposing to rezone to C-3 (General Commercial). The site location and overall site vicinity are shown in Exhibit 1. This transportation impact analysis (TIA) report documents the transportation impacts associated with the rezone and a near-term reasonable worst-case development scenario under the proposed rezone. The TIA is intended to address City of McMinnville and Oregon Department of Transportation (ODOT) review criteria and evaluate compliance with the Transportation Planning Rule (TPR). The results of this study indicate that the proposed rezone can be approved assuming implementation of the identified mitigation measures that result in no significant impacts under Oregon Administrative Rule (OAR) 660-012-0060.

Exhibit 1. Site Vicinity and Proposed Study Intersections



SUMMARY OF FINDINGS

Year 2020 Existing Conditions

- Two of the nine study intersections were found to exceed the applicable review agency mobility targets:
 - NE Three Mile Lane/NE 1st Street
 - OR-18/SE Cruickshank Road
- The recent five-year crash history of one study intersection exceeds statewide 90th percentile crash rates:
 - OR-18/SE Cruickshank Road: This unsignalized intersection experienced a large proportion of angle crashes (approximately 80%) over the five-year review period, and approximately 70% of the reported crashes involved a vehicle making a northbound left-turn movement. This suggests a need to potentially restrict left-turns from SE Cruickshank Road onto OR-18 due to the insufficient number gaps in eastbound traffic.

Year 2022 Background Conditions

- The two study intersections that do not satisfy applicable mobility targets under existing conditions experience additional delay with background growth.

Proposed Development Plan

- The 33.5-acre site is currently zoned M-2 (General Industrial). Kimco is proposing to rezone to C-3 (General Commercial).
- Table 1 provides the trip generation estimates under the existing and proposed zoning:

Table 1. Trip Generation Potential Comparison – 33.5-acre Zone Change

Land Use	ITE Code	Size	Daily Trips	PM Peak Hour		
				Total	In	Out
Existing M-2 General Industrial Zone Reasonable Worst-Case Development Scenario						
Medical-Dental Office Building (10 acres at 25%)	720	108,900 SF	4,096	371	104	267
Industrial Park (23.5 acres at 40%)	130	409,464 SF	1,954	164	34	130
Net New Trips			6,050	535	138	397
Proposed C-3 General Commercial Zone Reasonable Worst-Case Development Scenario						
Shopping Center (33.5 acres at 25%) <i>Less Pass-by Trips (34%)</i>	820	364,815 SF	14,496 <i>(4,929)</i>	1,416 <i>(480)</i>	680 <i>(240)</i>	736 <i>(240)</i>
Net New Trips			9,567	936	440	496
Difference = Proposed – Existing			3,517	401	302	99

Year 2022 Total Conditions

- The two study intersections that do not satisfy applicable review agency mobility targets under 2022 background conditions experience additional delay with site development.
- Three additional intersections do not satisfy applicable mobility targets with the addition of site-generated trips:
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue

Year 2037 Background Conditions (Without Proposed Zone Change)

- Assuming the recommendations to mitigate 2022 site impacts are in place, six of the nine study intersections were found to exceed the applicable review agency mobility targets in the planning horizon year 2037, which was selected to represent fifteen years after opening per guidance in the Oregon Highway Plan (OHP, Reference 1):
 - NE 3rd Street/NE Johnson Street
 - NE Three Mile Lane/NE 1st Street
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue
 - OR-18/SE Loop Road

Year 2037 Total Conditions (With Proposed Zone Change)

- The six intersections that do not satisfy applicable review agency mobility targets under 2037 background conditions experience additional delay with site development, with the exception of the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection at which the shift in travel patterns associated with the zone change improve the operating capacity of the intersection.

RECOMMENDATIONS

The following mitigation measures are recommended for implementation in conjunction with the proposed development and to address impacts of the proposed zone change:

- NE Three Mile Lane/NE 1st Street
 - Install a traffic signal and restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - Restrict left-turns from the minor approaches onto Three Mile Lane (left-turns from Three Mile Lane can be maintained). Alternative access can be provided to the approximately ten homes south of Three Mile Lane via an improved connection to SE Mountain View Lane. North of Three Mile Lane, there is alternative access to OR-18 via SE Norton Lane.
- OR-18/SE Norton Lane
 - Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/NE Cumulus Avenue
 - Modify the existing traffic signal and construct a 275-foot exclusive eastbound right-turn lane and 500-foot northbound left-turn lane (left-turns from NE Cumulus Avenue should have permitted/protected phasing). Optimize signal timing to provide additional time to eastbound and westbound through movements. Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.
- OR-18/SE Loop Road
 - Restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway.
- OR-18/SE Cruickshank Road
 - Restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via the OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange.

The proposed rezone can be approved without creating significant impacts per OAR 660-012-0060 assuming these mitigation measures are implemented.

Regardless of the proposed rezone and subsequent development, the following intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/NE 1st Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Additional details of the study methodology, findings and recommendations are provided in the remaining sections of this report.

STUDY SCOPE & ANALYSIS METHODOLOGY

This section provides an overview of the TIA study scope, study intersections, traffic analysis time periods and scenarios, analysis methodology and applicable review agency mobility targets.

Study Scope

This study identifies the transportation-related impacts associated with the proposed rezone and was prepared in accordance with the City of McMinnville and Oregon Department of Transportation (ODOT) requirements. Details of the TIA assumptions and methodology are documented herein and reflect the outcome of the preliminary scoping meeting held with agency staff on March 19, 2020, and agency feedback on the preliminary scoping letter dated April 23, 2020.

Study Intersections

The study intersections are listed below and are identified by a numerical identification corresponding with the analysis figures in this report. Exhibit 1 illustrates the study intersection locations.

1. NE Three Mile Lane/NE 1st Street
2. NE 3rd Street/NE Johnson Street
3. NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
4. SE Norton Lane/NE Cumulus Avenue
5. OR-18/SE Norton Lane
6. OR-18/NE Cumulus Avenue
7. OR-18/SE Armory Way
8. OR-18/SE Loop Road
9. OR-18/SE Cruickshank Road

Traffic Analysis Time Periods and Scenarios

Based on historical traffic data, the weekday PM peak time period represents both the peak travel times along OR-18 and peak weekday commercial site traffic. Therefore, intersection operations were evaluated during the weekday afternoon peak hour occurring between 3:00 – 6:00 PM.

This report evaluates the following transportation scenarios:

- 2020 Existing traffic conditions;
- Forecast year 2022 background traffic conditions, without development of the subject site;
- Forecast year 2022 total traffic conditions with reasonable worst-case development of the subject site under the proposed commercial zoning;
- Horizon year 2037 background traffic conditions with development of the subject site under the existing industrial zoning; and,

- Horizon year 2037 total traffic conditions with reasonable worst-case development of the subject site under the proposed commercial zoning.

Year 2037 was selected as the planning horizon per guidance in the OHP (Reference 1), which states that the planning horizon shall be “the greater of 15 years or the planning horizon of the applicable local and regional transportation system plans for amendments to transportation plans, comprehensive plans or land use regulations.” The planning horizon of McMinnville’s currently adopted Transportation System Plan (TSP, Reference 3) is 2023.

Analysis Methodology

All intersection capacity analyses described in this report were performed in accordance with the procedures stated in the *Highway Capacity Manual, 6th Edition* (HCM, Reference 4) using PTV Vistro 2020 software in accordance with analysis guidance provided in the ODOT Analysis Procedures Manual (APM, Reference 5). Intersection V/C is the operational performance measures reported in this study. In Vistro, the shared lane volume-to-capacity (V/C) ratio is the sum of the reported V/C for each movement in the shared lane at unsignalized intersections. Overall intersection V/C is reported for signalized intersections.

To ensure that the analyses were based on a reasonable worst-case scenario, peak 15-minute flow rates were used in the evaluation of all intersection levels of service. For this reason, the analyses reflect conditions that are only likely to occur for 15 minutes out of each average peak hour.

Queueing analyses presented in this report reflect 95th percentile queues and were obtained from PTV Vistro 2020 software.

Performance Measures & Operating Standards

Study intersection operating standards adopted by the respective transportation review authorities for the facilities they operate and maintain are summarized below.

City of McMinnville Operating Standards

Four study intersections are within City of McMinnville jurisdiction (Intersections #1 through #4). According to the City’s TSP (Reference 3), a v/c ratio of 0.90 is the acceptable operating standard for these intersections.

ODOT Mobility Targets

The 1999 Oregon Highway Plan (OHP, Reference 1) defines ODOT v/c ratio mobility targets based on facility type. Mobility targets vary for intersections along OR-18 (Intersections #5 through #9).

Summary of Applicable Agency Operating Standards

Table 2 summarizes the operation standards and jurisdiction administering each study intersection.

Table 2. Study Intersection Mobility Targets

	Study Intersection	Traffic Control	Jurisdiction	Mobility Target (V/C) ¹
1	NE 3rd Street/NE Johnson Street	Signalized	City of McMinnville	0.90
2	NE Three Mile Lane/NE 1st Street	Two Way Stop Control	City of McMinnville	0.90
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	Two Way Stop Control	City of McMinnville	0.90
4	SE Norton Lane/NE Cumulus Avenue	Two Way Stop Control	City of McMinnville	0.90
5	OR-18/SE Norton Lane	Signalized	ODOT	0.80
6	OR-18/NE Cumulus Avenue	Signalized	ODOT	0.80
7	OR-18/SE Armory Way	Two Way Stop Control	ODOT	major approaches = 0.80 minor approaches = 0.95
8	OR-18/SE Loop Road	Two Way Stop Control	ODOT	major approaches = 0.80 minor approaches = 0.90
9	OR-18/SE Cruickshank Road	Two Way Stop Control	ODOT	major approaches = 0.70 minor approaches = 0.75

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

EXISTING CONDITIONS

The existing conditions analysis identifies field conditions and the current operational, traffic control, and geometric characteristics of the roadways and other transportation facilities within the study area.

Site Conditions and Adjacent Land Uses

The proposed site is currently vacant and zoned for industrial use. The land uses in the vicinity of the site include Evergreen Aviation and McMinnville Municipal Airport to the east, vacant industrial land immediately west, and a mix of industrial, commercial and residential land uses to the north, including the Evergreen Aviation and Space Museum.

Transportation Facilities

Table 3 summarizes roadways in the site vicinity that will be assessed as part of the TIA.

Table 3. Existing Transportation Facilities

Street	Functional Classification ¹	Jurisdictional Authority	Motor Vehicle Travel Lanes	Posted Speed (mph)	Sidewalks	Striped Bicycle Lanes	On-Street Parking
OR-18	Urban Statewide Expressway (Freight Route) (ODOT) Major Arterial and State Highway (McMinnville)	ODOT	4-5	45-55	No	No	No
NE Three Mile Lane/NE 3 rd Street	Major Collector	City of McMinnville	2-3	20-40	Yes	Partial ²	No
NE Johnson Street	Minor Arterial	City of McMinnville	2-3	25	Yes	Yes	No
NE 1st Street	Minor Collector	City of McMinnville	2	25	Partial ³	No	No
SE Nehemiah Lane	Local Street	City of McMinnville	2	35	Partial ⁴	No	No
NE Cumulus Avenue	Minor Collector (North) Major Collector (South)	City of McMinnville	2	35	Partial ⁵	No	No
SE Norton Lane	Minor Collector	City of McMinnville	2-3	NP	Partial ⁶	No	No
SE Armory Way	Minor Collector	City of McMinnville	2	25	No	No	No
SE Loop Road	N/A	City of McMinnville	2	35	No	No	No
SE Cruickshank Road	N/A	City of McMinnville	2	NP	No	No	No

NP = Not Posted

¹Per Oregon Highway Plan (OHP, Reference 1) and *City of McMinnville Transportation System Plan*, Exhibit 2-3 (Reference 3).

²There is a striped bicycle lane on both side from Johnson Street to 1st Street.

³There are sidewalks on the north side of 1st Street west Three Mile Lane.

⁴There are sidewalks on the north side of Nehemiah west of the intersection of Nehemiah Lane and Three Mile Lane.

⁵There are sidewalks on the north side of Cumulus (north) west of Norton Lane and on the west side of Cumulus north of OR-18.

⁶There are sidewalks on the east side of Norton north of OR-18, and on both sides of Norton south of OR-18.

Transit Facilities

Weekday bus service is currently provided by the Yamhill County Transit Area (YCTA) “East-West” Loops along Three Mile Lane between Norton Lane and west side of McMinnville at approximately 60-minute headways between 7:00 AM to 6:00 PM. Weekday headways are approximately 60 minutes.

Intersection Crash History

Reported crash history for each study intersection was reviewed in an effort to identify potential safety issues. ODOT provided crash records for the five-year period from January 1, 2013 through December 31, 2017. Table 4 summarizes the crash data. Appendix A contains the ODOT crash data. No crashes were reported at OR-18/SE Armory Way (Intersection #7).

Table 4. Intersection Crash History (January 1, 2013 through December 31, 2017)

Intersection	Collision Type					Severity			Total Crashes
	Rear End	Turning	Angle	Bike /Ped	Other	PDO ¹	Injury	Fatal	
1 NE 3rd Street/NE Johnson Street	8	4	3	0	1	9	7	0	16
2 NE Three Mile Lane/NE 1st Street	1	1	1	0	0	0	0	0	3
3 NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	4	0	3	0	1	5	3	0	8
4 SE Norton Lane/NE Cumulus Avenue	1	0	0	0	1	1	1	0	2
5 OR-18/SE Norton Lane	12	2	3	1	1	7	12	0	19
6 OR-18/NE Cumulus Avenue	0	2	0	0	0	0	2	0	2
7 OR-18/SE Armory Way	0	0	0	0	0	0	0	0	0
8 OR-18/SE Loop Road	0	0	1	0	0	0	1	0	1
9 OR-18/SE Cruickshank Road	3	2	33	0	4	14	28	0	42

¹PDO = Property Damage Only

ODOT provides an annual list of safety priority index system (SPIS) locations which are based on reported crash data. The intent of the SPIS list is to identify roadway segments exhibiting an unusually high occurrence of crashes and is used to select locations for investigation. Review of the SPIS list determined that the section of OR-18 near Loop Road and Cruickshank Road is within the top fifteen percent of intersections.

Crash rates were calculated for each of the study intersections following the analysis methodology presented in Exhibit 4-1 of the ODOT Analysis Procedures Manual, Version 2 (APM, Reference 5). The APM provides 90th percentile intersection crash rates at a variety of intersection configurations in Oregon based on the number of approaches and traffic control types. Table 5 below shows the comparison of

the five-year crash history with the 90th percentile intersection crash rates from the APM. Crash rates are reported per million entering vehicles.

Table 5. Intersection Crash Rate Assessment

	Location	Total Crashes	90 th Percentile Intersection Crash Rate	Observed Crash Rate at Intersection	Observed>90 th Percentile Crash Rate?
1	NE 3rd Street/NE Johnson Street	16	0.860	0.51	No
2	NE Three Mile Lane/NE 1st Street	3	0.408	0.08	No
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	8	0.408	0.23	No
4	SE Norton Lane/NE Cumulus Avenue	2	0.408	0.18	No
5	OR-18/SE Norton Lane	19	0.860	0.35	No
6	OR-18/NE Cumulus Avenue	2	0.860	0.04	No
7	OR-18/SE Armory Way	0	0.293	0.00	No
8	OR-18/SE Loop Road	1	0.293	0.02	No
9	OR-18/SE Cruickshank Road	42	0.293	1.03	Yes

As shown in Table 5 and the ODOT SPIS list, the intersection of OR-18/Cruickshank Road exceeds statewide 90th percentile crash rates and is in the top fifteen percent of intersections on the SPIS list. This unsignalized intersection experienced a large proportion of angle crashes (approximately 80%). Upon further review, it was found that a high proportion of the crashes reported at this intersection (approximately 70%) involved a vehicle making a northbound left-turn movement. This suggests a need to restrict the northbound left-turns from SE Cruickshank Road onto OR-18 as identified in the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2).

Existing Traffic Volumes

Given the impacted traffic patterns due to the current COVID-19 pandemic and State of Oregon stay at home order, new traffic counts were not collected for this analysis. Rather, historical and detector data was used. Weekday PM peak hour intersection turning movement counts were collected in 2012 for Intersection #3, and ODOT provided 2018 turning movement counts for intersections #2 and #4 through #9 as well as February 2020 signal detector counts at intersection #1. These traffic counts are included in Appendix B.

A 1.3% linear annual growth rate was applied to the 2018 traffic counts and a 1.5% linear annual growth rate was applied to the 2012 traffic counts to estimate year 2020 existing traffic volumes. This rate was calculated based on the average historical traffic volumes recorded at ODOTs Automatic Traffic Recorder (ATR) 36-006 located southwest of the City of McMinnville on Highway 18 and ATR 36-004 located northeast of the City of McMinnville in Newberg on Highway 99W.

A seasonal adjustment factor was calculated and applied to the 2020 traffic volumes to reflect 30th highest hour conditions, per the APM (Reference 5) using the same ATRs as noted above. This seasonal adjustment factor calculation is included in Appendix C.

Existing Traffic Operations

Existing intersection capacity was assessed using the previously described analysis methodology and compared to the respective agency operating standards. Existing lane configurations and traffic control devices at the study intersections are included in Appendix C.

Table 6 summarizes the existing 2020 traffic operations for the weekday PM peak hour. Appendix C includes the existing conditions intersection operations analysis worksheets.

Table 6. Estimated 2020 Existing Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.70
2	NE Three Mile Lane/NE 1st Street	0.90	EBR	0.98
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.74
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.21
5	OR-18/SE Norton Lane	0.80	-	0.68
6	OR-18/NE Cumulus Avenue	0.80	-	0.54
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.12
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.27
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.09

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 6, all but two study intersections were found to operate acceptably under 2020 existing conditions. The following intersections exceed the applicable performance requirement:

- NE Three Mile Lane/NE 1st Street
 - This intersection (#2) does not satisfy the City of McMinnville’s standard of a V/C ratio ≤ 0.90. Over-capacity conditions on the eastbound approach are related to the high southbound through volume on Three Mile Lane.
- OR-18/SE Cruickshank Road
 - This intersection (#9) does not satisfy ODOT’s mobility target of a V/C ratio ≤ 0.75 on the SE Cruickshank Road approach. As stated previously, the crash history at this intersection shows a high proportion of angle crashes associated with the northbound left-turn movement, which likely reflects an inefficient number of available gaps in eastbound OR-18 traffic.

TRANSPORTATION IMPACT ANALYSIS

The transportation impact analysis identifies how the study area's transportation system will operate in the future with and without development of the site under the proposed zone change.

Year 2022 Background Traffic Volumes and Conditions

Future traffic volumes were derived by applying a 2.2% annual background growth rate to the 2020 existing traffic volumes. This annual growth factor was derived from previous studies of the area surrounding the site and the City's EMME 2 model used for the City's TSP, and should thus reflect growth associated with the land use assumptions in the TSP. In addition, the City of McMinnville provided information regarding three recently completed land use actions in the vicinity of the study area. These are generally consistent with existing zoning, and therefore should be included in the 2.2% growth rate associated with the land use assumptions in the TSP.

The City's Transportation System Plan (TSP) calls for two future new interchanges at OR-18/NE Three Mile Lane and OR-18/NE Cumulus Avenue as part of the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2). These two new interchanges are intended to replace the overpass at OR-18/NE Three Mile Lane and signal at OR-18/NE Cumulus Avenue in anticipation of traffic growth. The TSP also identifies a future traffic signal at the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection. These improvements are not funded at this time and conversations with City and ODOT staff have indicated that the identified improvements cannot be relied upon to receive funding within the timeframe of this TIA.

Year 2022 Background Traffic Operations

Table 7 summarizes the 2022 background traffic conditions for the weekday PM peak hour. Appendix D includes the 2022 background conditions intersection operations analysis worksheets.

As shown in Table 7, the two study intersections that do not satisfy applicable mobility targets under existing conditions experience additional delay with background growth.

Table 7. Estimated 2022 Background Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.73
2	NE Three Mile Lane/NE 1st Street	0.90	EBR	1.08
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.84
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.22
5	OR-18/SE Norton Lane	0.80	-	0.70
6	OR-18/NE Cumulus Avenue	0.80	-	0.56
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.13
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.32
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.20

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Year 2022 Background Traffic Mitigations

The following mitigation measures are recommended to address the impacts of anticipated background growth:

- NE Three Mile Lane/NE 1st Street
 - Install a traffic signal. Preliminary ODOT traffic signal warrants are met assuming up to a 77% reduction in right-turn volumes in the shared eastbound left-through-right lane. At this location on the urban Three Mile Lane corridor, an 85% reduction (which is typically used by ODOT) is unreasonable given the unique nature of the high southbound through volumes with limited gaps for vehicles turning from the minor approaches.
- OR-18/SE Cruickshank Road
 - Restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange. Exhibit 2 illustrates these alternatives.

Exhibit 2. Reroute of Northbound Left-Turns at OR-18/SE Cruickshank Road

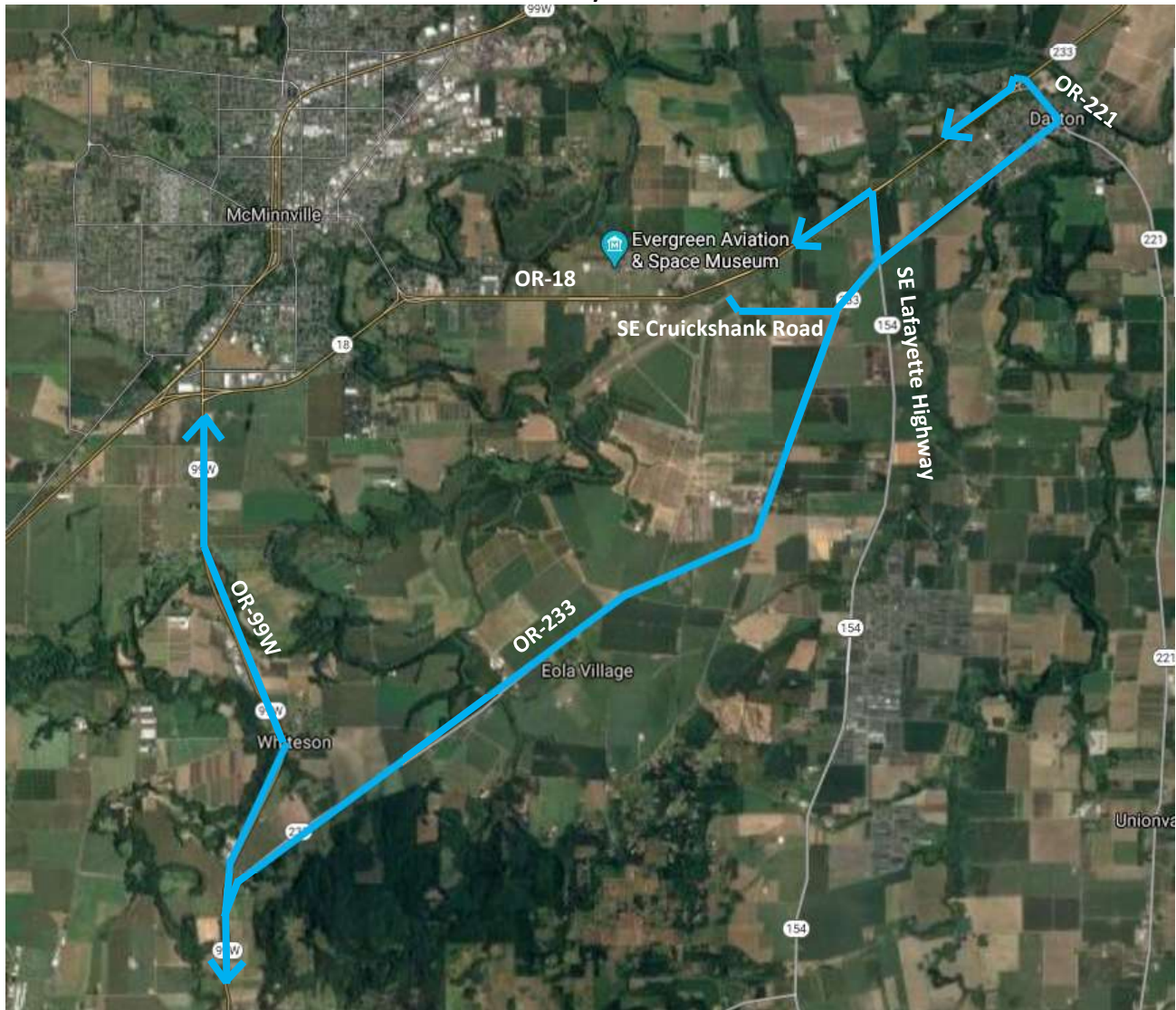


Table 8 summarizes the 2022 background traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix E includes the 2022 background conditions intersection operations analysis worksheets with mitigation.

As shown in Table 8, all study intersections were found to operate acceptably under 2022 background conditions with the identified mitigation.

Table 8. Estimated 2022 Background Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.73
2	NE Three Mile Lane/NE 1st Street	0.90	-	0.85
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.84
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.22
5	OR-18/SE Norton Lane	0.80	-	0.70
6	OR-18/NE Cumulus Avenue	0.80	-	0.56
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.13
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.32
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.04

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right
V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)
CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Trip Generation and Assignment

To provide a conservative analysis, this report assumes a reasonable worst case for the existing and proposed zoning in accordance with the City of McMinnville zoning code. Based on the allowable land uses in the code, it was determined that the reasonable worst-case scenario under the existing M-2 (General Industrial) zoning would consist of the following land uses:

- Based on the site’s close proximity to the Willamette Valley Medical Center, 10 out of the 33.5 acres is assumed to be medical office with a floor area ratio (FAR) of approximately 0.25, for a total floor area of approximately 108,900 square feet.
- The remaining 23.5 acres is assumed to be industrial park with a FAR of approximately 0.40, for a total floor area of approximately 409,464 square feet.

The reasonable worst-case scenario under the proposed C-3 (General Commercial) zoning was calculated assuming a retail development with a FAR of approximately 0.25 over the entire site area of 33.5 acres, for a total floor area of approximately 364,815 square feet.

Trip generation estimates for both scenarios were developed using data from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (Reference 6). The trip generation estimates were adjusted to reflect pass-by trips, or vehicle trips to the site already traveling along OR-18. Pass-by trips to don’t change the traffic conditions on the overall system, but do change the turning movements at the OR-18/NE Cumulus Avenue intersection. Table 9 compares the trip generation estimates under the existing and proposed zoning for the weekday PM peak hour.

Table 9. Trip Generation Potential Comparison – 33.5-acre Zone Change – Weekday PM Peak Hour

Land Use	ITE Code	Size	Daily Trips	Total	In	Out
Existing M-2 General Industrial Zone Reasonable Worst Case Development Scenario						
Medical-Dental Office Building (10 acres at 25%)	720	108,900 SF	4,096	371	104	267
Industrial Park (23.5 acres at 40%)	130	409,464 SF	1,954	164	34	130
Net New Trips			6,050	535	138	397
Proposed C-3 General Commercial Zone Reasonable Worst Case Development Scenario						
Shopping Center (33.5 acres at 25%)	820	364,815 SF	14,496	1,416	680	736
<i>Less Pass-by Trips (34%)</i>			<i>(4,929)</i>	<i>(480)</i>	<i>(240)</i>	<i>(240)</i>
Net New Trips			9,567	936	440	496
Difference = Proposed - Existing			3,517	401	302	99

As shown in Table 9, the proposed zone change would increase the trip generation potential of the site compared to the existing industrial zoning by 401 trips during the weekday PM peak hour. These new trips were assigned to the study area roadway system based on existing traffic patterns and forecast market data for the proposed development, also maintaining consistency with the scope of study for the site approved by both agencies in 2012. The site will serve local areas such as McMinnville, Dayton, and as far reaching as Newberg and in addition will also provide services to reach currently underserved locations in the Willamette Valley, and along the central northern Oregon coast. The traffic generated by the proposed development is expected to follow this trip distribution pattern:

- 35 percent to the west on OR-18 (serving southern McMinnville, the parts of the central Willamette Valley and the northern Oregon coast);
- 35 percent to the north on Three-Mile Lane (serving downtown and the majority of McMinnville); and
- 30 percent to the east via OR-18 (serving Dayton, outlying areas, and portions of Newberg).

Within the City of McMinnville, it is expected that the commercial uses under the rezoning will result in a re-allocation of trips to/from and within the downtown area. For example, many trips originating from the residential areas along OR-18 and regionally that currently travel to the downtown area today will alter their trips to visit the new commercial businesses and thus reduce trips entering the downtown areas. Conversely, a proportion of the trips already occurring in the downtown areas (e.g., trips from the residential areas to the west of OR-99W that travel to downtown and the southwest commercial areas by the college) may travel to the new commercial area creating new trips on OR-18. The proposed development and type of land uses will also result in capturing more regional trips (e.g., residents in McMinnville that currently travel to Salem or the greater Portland area to shop) that originate in McMinnville and keeping them local. These trips will be shorter in nature and will still travel within the downtown area, but won't represent new trips within that area.

With that in mind, the origins and destinations of commercial trips within McMinnville were assessed to estimate the expected re-routing of some trips at study intersections within the City of McMinnville (Intersections #1 through #3). The details of this analysis assessing the cumulative impacts of new and

re-routed trips within McMinnville are provided in Appendix F. The weekday PM peak hour site-generated trip assignment under the proposed zoning is also included in Appendix F.

Year 2022 Total Traffic Operations

The total traffic conditions analysis forecasts the operation of the study area’s transportation system with the inclusion of traffic generated by site under the proposed commercial zoning. Total traffic conditions were determined by adding the estimated site-generated trips to the year 2022 background traffic volumes for the weekday PM peak hour.

Table 10 summarizes the 2022 total traffic operations for the weekday PM peak hour. Appendix F includes the 2022 total conditions intersection operations analysis worksheets.

Table 10. Estimated 2022 Total Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.74
2	NE Three Mile Lane/NE 1st Street	0.90	EBR	1.16
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.98
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.23
5	OR-18/SE Norton Lane	0.80	-	0.82
6	OR-18/NE Cumulus Avenue	0.80	-	1.21
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.18
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.45
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.53

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right
V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)
CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 10, the two study intersections that do not satisfy applicable mobility targets under existing or 2022 background traffic conditions experience additional delay with site development. In addition, three other intersections do not satisfy applicable mobility targets with the addition of site-generated trips:

- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - The minor street approaches at this intersection (#3) do not satisfy the City of McMinnville’s standard of a V/C ratio ≤ 0.90. Over-capacity conditions on the minor approaches are related to the high through volumes on OR-18.
- OR-18/SE Norton Lane

- This intersection (#5) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 . The overall intersection capacity is reduced below the mobility target due to increased eastbound and westbound traffic through the intersection associated with site development.
- OR-18/NE Cumulus Avenue
 - This intersection (#6) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 . Additional turn lanes are needed to accommodate site-related traffic at this intersection.

Year 2022 Total Traffic Mitigations

The following mitigation measures are recommended for implementation in conjunction with the proposed development:

- NE Three Mile Lane/NE 1st Street
 - Consistent with 2022 background conditions, install a traffic signal.
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - Restrict left-turns from the minor approaches onto Three Mile Lane (left-turns from Three Mile Lane can be maintained). Alternative access can be provided to the approximately ten homes south of Three Mile Lane via an enhanced connection to SE Mountain View Lane. North of Three Mile Lane, there is alternative access to OR-18 via SE Norton Lane.
- OR-18/SE Norton Lane
 - Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/NE Cumulus Avenue
 - Modify the existing traffic signal and construct an exclusive eastbound right-turn lane and northbound left-turn lane (left-turns from NE Cumulus Avenue should have permitted/protected phasing). Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/SE Cruickshank Road
 - Consistent with 2022 background conditions and historical crash trends at the intersection, restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange (see Exhibit 2).

Table 11 summarizes the 2022 total traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix G includes the 2022 total conditions intersection operations analysis worksheets with mitigation.

Table 11. Estimated 2022 Total Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.74
2	NE Three Mile Lane/NE 1st Street	0.90	-	0.87
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.58
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.23
5	OR-18/SE Norton Lane	0.80	-	0.80
6	OR-18/NE Cumulus Avenue	0.80	-	0.79
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.18
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.45
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	0.05

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right
V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)
CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Year 2022 Total Traffic 95th Percentile Queues

Year 2022 total traffic weekday PM peak hour 95th percentile queues at the OR-18/NE Cumulus Avenue intersection with implementation of recommended mitigation measures are summarized in Table 12.

Table 12. Summary of 95th Percentile Queues, 2022 Total Traffic Conditions

Intersection	Movement	Available Queue Storage (feet)	95 th Percentile Queue (feet)	Queue Storage Adequate?
			Weekday PM Peak Hour	
6 OR-18/NE Cumulus Avenue	NBL	New	525	Yes
	NBTR	Continuous	350	Yes
	SBL	125 (Striped) Additional Storage in excess of 300	100	Yes
	SBT	Continuous	0	Yes
	SBR	125 (Exclusive) Additional Storage in excess of 300 ¹	200	Yes
	EBL	125	75	Yes
	EBT	Continuous	425	Yes
	EBR	New	200	Yes
	WBL	125 (Striped) Additional Storage in excess of 300	225	Yes
	WBT	Continuous	525	Yes
WBR	175	50	Yes	

Where: EB = eastbound, WB = westbound, NB = northbound, SB = southbound, L = left-turn, T = through, R = right-turn

Queues rounded up to the nearest vehicle length, assumed to be 25 feet

¹During occasions of peak queueing, the southbound through lane may be used for overflow storage from the southbound right-turn lane.

As shown in Table 12, all 95th percentile queues during year 2022 total mitigated traffic conditions would be accommodated by the available storage. Based on the anticipated 95th percentile queues, it is recommended that the new northbound left-turn lane be constructed with 525 feet of storage, and the new eastbound right-turn lane be constructed with at least 250 feet of storage (the storage length required for anticipated 2037 95th percentile queues, to be described in more detail later in this report).

Year 2037 Background Traffic Volumes and Conditions

Consistent with the 2022 background traffic volumes, future volumes were derived by applying a 2.2% annual background growth rate to the 2022 existing traffic volumes. However, this growth factor already accounts for development of the site under the existing industrial zoning. Therefore, the growth rate to obtain 2037 background traffic volumes was reduced to approximately 1.7% so as not to double-count site trips through the study intersections.

The 2037 background traffic conditions analysis forecasts the operation of the study area's transportation system with the inclusion of traffic generated by site under the existing industrial zoning. Background traffic conditions were determined by adding the estimated site-generated trips (under existing zoning) and additional 15 years of background growth (at 1.7%) to the year 2022 background traffic volumes for the weekday PM peak hour.

This analysis assumes the implementation of all improvements recommended to mitigate year 2022 total traffic conditions.

Year 2037 Background Operations

Table 13 summarizes the 2037 horizon year background traffic operations for the weekday PM peak hour. Appendix H includes the 2037 background conditions intersection operations analysis worksheets.

As shown in Table 13, the following intersections are expected to exceed the applicable performance requirement in 2037 with the addition of background growth:

- The NE 3rd Street/NE Johnson Street intersection (#1) does not satisfy the City of McMinnville's standard of a V/C ratio ≤ 0.90 .
- The NE Three Mile Lane/NE 1st Street intersection (#2) does not satisfy the City of McMinnville's standard of a V/C ratio ≤ 0.90 .
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street (#3) does not satisfy the City of McMinnville's standard of a V/C ratio ≤ 0.90 .
- OR-18/SE Norton Lane (#5) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 .
- OR-18/NE Cumulus Avenue (# 6) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.80 .
- The OR-18/SE Loop Road intersection (#8) does not satisfy ODOT's mobility target of a V/C ratio ≤ 0.90 on the SE Loop Road approach.

Table 13. Estimated 2037 Background Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.97
2	NE Three Mile Lane/NE 1st Street	0.90	-	1.04
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.98
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.32
5	OR-18/SE Norton Lane	0.80	-	0.93
6	OR-18/NE Cumulus Avenue	0.80	-	0.83
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.37
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.95
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.08

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

Year 2037 Background Traffic Mitigations

The following mitigation measures are recommended to address the impacts of anticipated long-term growth:

- NE Three Mile Lane/NE 1st Street
 - Restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- OR-18/SE Loop Road
 - Restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway. Exhibit 3 illustrates these alternatives.

Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.

Exhibit 3. Reroute of Southbound Left-Turns at OR-18/SE Loop Road

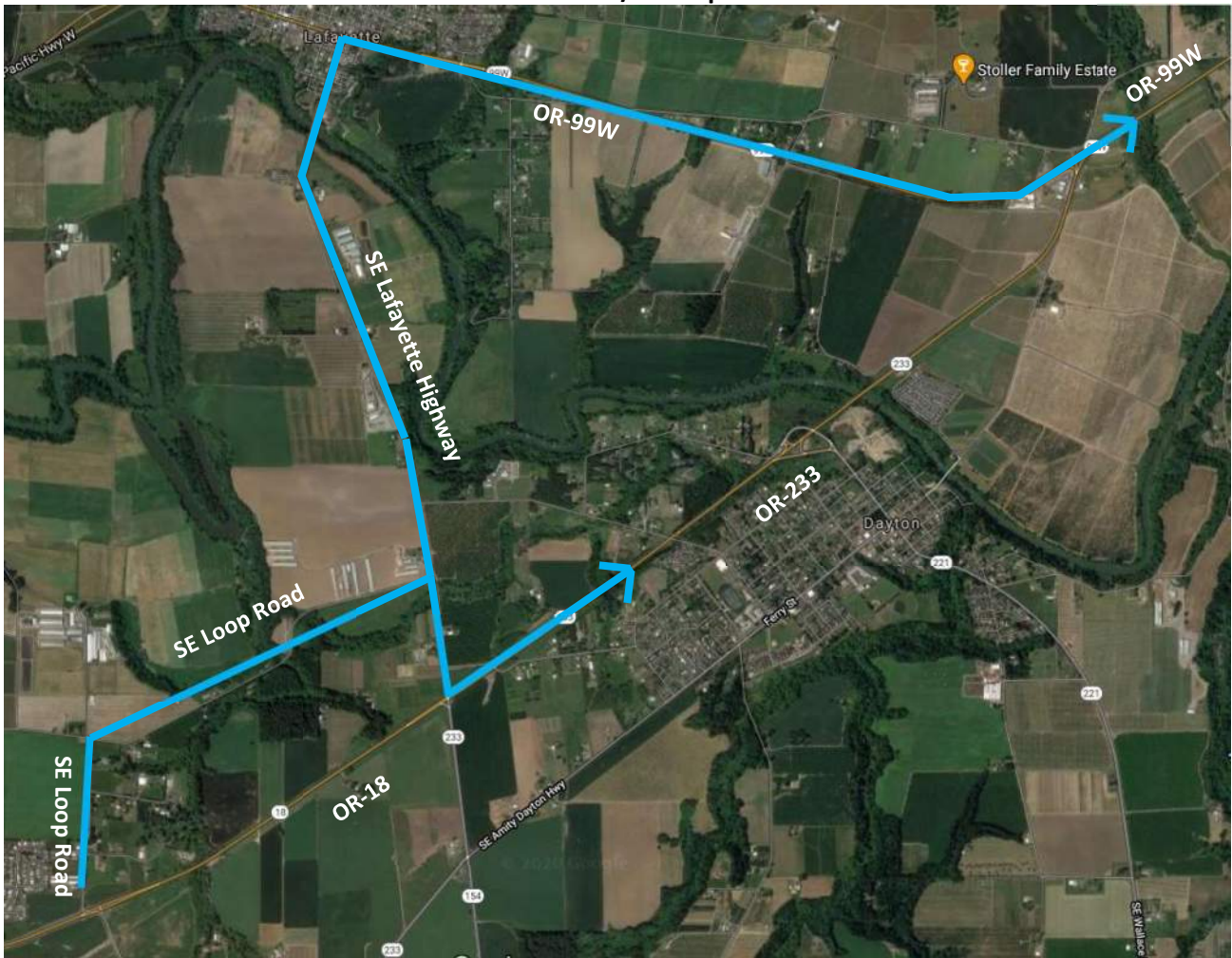


Table 14 summarizes the 2037 background traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix I includes the 2037 background conditions intersection operations analysis worksheets with mitigation.

Table 14. Estimated 2037 Background Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	0.97
2	NE Three Mile Lane/NE 1st Street	0.90	-	0.98
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.98
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.32
5	OR-18/SE Norton Lane	0.80	-	0.93
6	OR-18/NE Cumulus Avenue	0.80	-	0.77
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.37
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.09
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.08

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 14, with implementation of the recommended mitigation at NE Three Mile Lane/NE 1st Street, intersection operations are still anticipated to exceed the applicable performance requirement in 2037 with the addition of background growth. However, the V/C under 2037 total traffic conditions is improved from 2037 background traffic conditions (as will be demonstrated later in this report). The following three intersections are also expected to exceed the applicable performance requirement in 2037:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Regardless of the proposed rezone and subsequent development, these intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations. As will be demonstrated later in this report, the change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J). Therefore, no additional mitigation is recommended as part of this report at these four intersections which continue to exceed applicable agency mobility targets under 2037 mitigated conditions.

Year 2037 Total Traffic Volumes

The 2037 total traffic conditions analysis forecasts the operation of the study area’s transportation system with the inclusion of additional site trips associated with the proposed rezone. Total traffic conditions were determined by adding the difference in site-generated trips between the existing and proposed zoning to the year 2037 background traffic volumes for the weekday PM peak hour.

Year 2037 Total Traffic Operations

Table 15 summarizes the 2037 horizon year total traffic operations for the weekday PM peak hour. Appendix K includes the 2037 total conditions intersection operations analysis worksheets.

Table 15. Estimated 2037 Total Traffic Operations for Weekday PM Peak Hour

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	1.00
2	NE Three Mile Lane/NE 1st Street	0.90	-	1.09
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.93
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.33
5	OR-18/SE Norton Lane	0.80	-	0.96
6	OR-18/NE Cumulus Avenue	0.80	-	0.85
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.42
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	1.14
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.09

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 15, the six intersections that do not satisfy applicable review agency mobility targets under 2037 background conditions experience additional delay with the proposed rezone, with the exception of the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection at which the shift in travel patterns associated with the zone change improve the operating capacity of the intersection.

Year 2037 Total Traffic Mitigations

The following additional mitigation measures are recommended for implementation in conjunction with the proposed development to account for the long-term impact of the proposed rezone:

- NE Three Mile Lane/NE 1st Street
 - Consistent with 2037 background conditions, restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- OR-18/SE Loop Road
 - Consistent with 2037 background conditions, restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway (see Exhibit 3).

Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.

Table 16 summarizes the 2037 total traffic operations for the weekday PM peak hour with the above recommended mitigation. Appendix L includes the 2037 total conditions intersection operations analysis worksheets with mitigation.

Table 16. Estimated 2037 Total Traffic Operations for Weekday PM Peak Hour with Mitigation

Study Intersection		Mobility Target (V/C) ¹	CM	V/C
1	NE 3rd Street/NE Johnson Street	0.90	-	1.00
2	NE Three Mile Lane/NE 1st Street	0.90	-	1.02
3	NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.93
4	SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.33
5	OR-18/SE Norton Lane	0.80	-	0.96
6	OR-18/NE Cumulus Avenue	0.80	-	0.79
7	OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.42
8	OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.09
9	OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBR	0.09

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

As shown in Table 16, with implementation of the recommended mitigation at NE Three Mile Lane/NE 1st Street, intersection operations are still anticipated to exceed the applicable performance requirement in 2037. However, the V/C under 2037 total traffic conditions is improved from 2037 background traffic conditions. The following three intersections are also expected to exceed the applicable performance requirement in 2037:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Regardless of the proposed rezone and subsequent development, these intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations. The change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J). Therefore, no additional mitigation is recommended as part of this report at these four intersections which continue to exceed applicable agency mobility targets under 2037 mitigated conditions.

Year 2037 Total Traffic 95th Percentile Queues

Year 2037 total traffic weekday PM peak hour 95th percentile queues at the OR-18/NE Cumulus Avenue intersection with implementation of recommended mitigation measures are summarized in Table 17.

Table 17. Summary of 95th Percentile Queues, 2037 Total Traffic Conditions

Intersection	Movement	Available Queue Storage (feet)	95 th Percentile Queue (feet)	Queue Storage Adequate?
			Weekday PM Peak Hour	
6 OR-18/NE Cumulus Avenue	NBL (Dual)	New	400	Yes
	NBTR	Continuous	600	Yes
	SBL	125 (Striped) Additional Storage in excess of 300	175	Yes
	SBT	Continuous	0	Yes
	SBR	125 (Exclusive) Additional Storage in excess of 300 ¹	300	Yes
	EBL	125	125	Yes
	EBT	Continuous	650	Yes
	EBR	New	250	Yes
	WBL	125 (Striped) Additional Storage in excess of 300	250	Yes
	WBT	Continuous	900	Yes
	WBR	175	50	Yes

Where: EB = eastbound, WB = westbound, NB = northbound, SB = southbound, L = left-turn, T = through, R = right-turn

Queues rounded up to the nearest vehicle length, assumed to be 25 feet

¹During occasions of peak queueing, the southbound through lane may be used for overflow storage from the southbound right-turn lane.

As shown in Table 17, all 95th percentile queues during year 2037 total mitigated traffic conditions would be accommodated by the available storage. Based on the anticipated 95th percentile queues, it is recommended that the second northbound left-turn lane (if appropriate given other area improvements) be constructed with 350 feet of storage, and the new eastbound right-turn lane be constructed with at least 250 feet of storage.

Traffic Operations Summary

Table 18 compares the traffic operations for all scenarios analyzed in this study.

Table 18. Traffic Operations for all Study Scenarios for Weekday PM Peak Hour

Study Intersection	Mobility Target (V/C) ¹	2020 Existing		2022 Background		2022 Background (Mitigated)		2022 Total		2022 Total (Mitigated)		Year 2022 Mitigations	2037 Background		2037 Background (Mitigated)		2037 Total		2037 Total (Mitigated)		Year 2037 Mitigations
		CM	V/C	CM	V/C	CM	V/C	CM	V/C	CM	V/C		CM	V/C	CM	V/C	CM	V/C	CM	V/C	
1 NE 3rd Street/NE Johnson Street	0.90	-	0.70	-	0.73	-	-	-	0.74	-	-	-	0.97 ²	-	-	-	1.00 ²	-	-	-	-
2 NE Three Mile Lane/NE 1st Street	0.90	EBR	0.98	EBR	1.08	-	0.85	EBR	1.16	-	0.87	Install traffic signal	-	1.04	-	0.98	-	1.09	-	1.02 ³	Add EBR
3 NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street	0.90	WBR	0.74	WBR	0.84	-	-	WBR	0.98	WBR	0.58	Restrict EBL and WBL, provide neighborhood connection	WBR	0.98 ²	-	-	WBR	0.93 ^{2,4}	-	-	-
4 SE Norton Lane/NE Cumulus Avenue	0.90	EBL	0.21	EBL	0.22	-	-	EBL	0.23	-	-	-	EBL	0.32	-	-	EBL	0.33	-	-	-
5 OR-18/SE Norton Lane	0.80	-	0.68	-	0.70	-	-	-	0.82	-	0.80	Signal timing optimization	-	0.93 ²	-	-	-	0.96 ²	-	-	-
6 OR-18/NE Cumulus Avenue	0.80	-	0.54	-	0.56	-	-	-	1.21	-	0.79	Add NBL, signal timing optimization	-	0.83	-	0.77	-	0.85	-	0.79	Add second NBL
7 OR-18/SE Armory Way	major approaches = 0.80 minor approaches = 0.95	NBL	0.12	NBL	0.13	-	-	NBL	0.18	-	-	-	NBL	0.37	-	-	NBL	0.42	-	-	-
8 OR-18/SE Loop Road	major approaches = 0.80 minor approaches = 0.90	SBL	0.27	SBL	0.32	-	-	SBL	0.45	-	-	-	SBL	0.95	SBR	0.09	SBL	1.14	SBR	0.09	Restrict SBL
9 OR-18/SE Cruickshank Road	major approaches = 0.70 minor approaches = 0.75	NBL	1.09	NBL	1.20	NBR	0.04	NBL	1.53	NBR	0.05	Restrict NBL	NBR	0.08	-	-	NBR	0.09	-	-	-

WB= Westbound, SB = Southbound, EB = Eastbound, NB = Northbound, L = Left, T = Through, R = Right

V/C= Intersection volume-to-capacity ratio (signalized) / Critical lane group volume-to-capacity ratio (unsignalized)

CM= Critical Movement

¹Mobility targets at Intersections #7 through #9 provided by ODOT based on Table 6 in the OHP (Reference 1) and the functional classification and location of each section of roadway.

²The change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J).

³Intersection operations with implementation of the recommended mitigation at Intersection #2 still exceed the mobility target. However, the V/C is improved from 2037 background traffic conditions.

⁴The shift in travel patterns on Three Mile Lane associated with the proposed zone change improve the operating capacity of Intersection #3 by creating more gaps for the critical WBR movement.

TRANSPORTATION PLANNING RULE ANALYSIS

The Transportation Planning Rule (TPR, Oregon Administrative Rule (OAR) 660-012-0060) analysis identifies how the study area’s transportation system would operate in the year 2037 under the existing industrial zoning of M-2 and the proposed commercial zoning of C-3 during the weekday PM peak hour. OAR 660-012-0060(1) and (2) establish a two-step process for evaluating an amendment’s impacts on roads. The first step in assessing an amendment’s potential transportation impact is to compare the trip generation potential of the site assuming a “reasonable worst-case” development scenario under the existing and proposed zoning. If the trip generation potential increases under the proposed zoning, additional operational analysis is required to assess whether the rezone will “significantly affect” the transportation system.

Summary of Applicable Oregon Administrative Rule Criteria

OAR Section 660-12-0060 of the TPR sets forth the relative criteria for evaluating plan and land use regulation amendments. Table 19 summarizes the criteria in Section 660-012-0060 and the applicability to the proposed zoning designation change application.

Table 19. Summary of Criteria in OAR 660-012-0060

Section	Criteria	Applicable?
1	Describes how to determine if a proposed land use action results in a significant effect.	Yes
2	Describes measures for complying with Criteria #1 where a significant effect is determined.	Yes
3	Describes measures for complying with Criteria #1 and #2 without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility.	Yes
4	Determinations under Criteria #1, #2, and #3 are coordinated with other local agencies.	Yes
5	Indicates that the presence of a transportation facility shall not be the basis for an exception to allow development on rural lands.	No
6	Indicates that local agencies should credit developments that provide a reduction in trips.	No
7	Outlines requirements for a local street plan, access management plan, or future street plan.	No
8	Defines a mixed-use, pedestrian-friendly neighborhood.	No
9	A significant effect may not occur if the rezone is identified on the City’s Comprehensive Plan and assumed in the adopted Transportation System Plan.	No
10	Agencies may consider measures other than vehicular capacity if within an identified multimodal mixed-use area (MMA).	No
11	Allows agencies to override the finding of a significant effect if the application meets the balancing test.	No

As shown in Table 19, there are eleven criteria that apply to Plan and Land Use Regulation Amendments. Of these, only Criteria #1 through #4 are applicable to the proposed land use action. These criteria are provided below in italics with our response shown in standard font.

OAR 660-12-0060(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10)

of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: As demonstrated in the transportation impact analysis detailed in this report, the impact of the 401 additional site-generated trips associated with reasonable worst-case development for the proposed commercial rezoning during the weekday PM peak hour (See Table 8) is expected to have a “significant effect” under year 2037 conditions.

OR 660-12-0060(2) If a local government determines that there would be a significant effect, then the local government must ensure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility measured at the end of the planning period identified in the adopted TSP through one or a combination of the remedies listed in (a) through (e) below, unless the amendment meets the balancing test in subsection (2)(e) of this section or qualifies for partial mitigation in section (11) of this rule. A local government using subsection (2)(e), section (3), section (10) or section (11) to approve an amendment recognizes that additional motor vehicle traffic congestion may result and that other facility providers would not be expected to provide additional capacity for motor vehicles in response to this congestion.

(a) Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.

(b) Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of this division; such amendments shall include a funding plan or mechanism consistent with section (4) or include an amendment to the transportation finance plan so that the facility, improvement, or service will be provided by the end of the planning period.

(c) Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.

(d) Providing other measures as a condition of development or through a development agreement or similar funding method, including, but not limited to, transportation system management measures or minor transportation improvements. Local governments shall, as part of the amendment, specify when measures or improvements provided pursuant to this subsection will be provided.

(e) Providing improvements that would benefit modes other than the significantly affected mode, improvements to facilities other than the significantly affected facility, or improvements at other locations, if:

(A) The provider of the significantly affected facility provides a written statement that the system-wide benefits are sufficient to balance the significant effect, even though the improvements would not result in consistency for all performance standards;

(B) The providers of facilities being improved at other locations provide written statements of approval; and

(C) The local jurisdictions where facilities are being improved provide written statements of approval

Response: As demonstrated in the transportation impact analysis detailed in this report, there are two intersections anticipated to exceed mobility targets at which the proposed rezone has a “significant effect” on intersection operations under year 2037 conditions:

1. NE Three Mile Lane/NE 1st Street
2. OR-18/SE Loop Road

The impact of site-generated trips associated with the proposed rezone can be mitigated by implementing the mitigation measures recommended in the prior sections of this report.

OAR 660-12-0060 (3) Notwithstanding sections (1) and (2) of this rule, a local government may approve an amendment that would significantly affect an existing transportation facility without assuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility where:

(a) In the absence of the amendment, planned transportation facilities, improvements and services as set forth in section (4) of this rule would not be adequate to achieve consistency with the identified function, capacity or performance standard for that facility by the end of the planning period identified in the adopted TSP;

(b) Development resulting from the amendment will, at a minimum, mitigate the impacts of the amendment in a manner that avoids further degradation to the performance of the facility by the time of the development through one or a combination of transportation improvements or measures;

(c) The amendment does not involve property located in an interchange area as defined in paragraph (4)(d)(C); and

(d) For affected state highways, ODOT provides a written statement that the proposed funding and timing for the identified mitigation improvements or measures are, at a minimum, sufficient to avoid further degradation to the performance of the affected state highway. However, if a local government provides the appropriate ODOT regional office with written notice of a proposed amendment in a manner that provides ODOT reasonable opportunity to submit a written statement into the record of the local government proceeding, and ODOT does not provide a written statement, then the local government may proceed with applying subsections (a) through (c) of this section.

Response: As demonstrated in the prior sections of this report, there are three intersections anticipated to exceed mobility targets at which the proposed rezone does not have a “significant effect” on intersection operations under year 2037 conditions:

1. NE 3rd Street/NE Johnson Street
2. NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
3. OR-18/SE Norton Lane

While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations. The change in capacity between 2037 background and 2037 total traffic conditions is less than or equal to +0.03 V/C, and therefore considered to be an insignificant impact per the guidance provided in the May 25, 2011, Oregon Highway Plan – Policy Intent Statements memorandum from ODOT (see Appendix J). Therefore, no additional mitigation is recommended as part of this report at these three intersections which continue to exceed applicable agency mobility targets under 2037 mitigated conditions.

OAR 660-12-0060 (4) Determinations under sections (1)–(3) of this rule shall be coordinated with affected transportation facility and service providers and other affected local governments.

Response: The transportation impact study and TPR analysis for this project have been coordinated with the City of McMinnville and ODOT Region 2.

SUMMARY OF FINDINGS

Year 2020 Existing Conditions

- Two of the nine study intersections were found to exceed the applicable review agency mobility targets:
 - NE Three Mile Lane/NE 1st Street
 - OR-18/SE Cruickshank Road
- The recent five-year crash history of one study intersection exceeds statewide 90th percentile crash rates:
 - OR-18/SE Cruickshank Road: This unsignalized intersection experienced a large proportion of angle crashes (approximately 80%) over the five-year review period, and approximately 70% of the reported crashes involved a vehicle making a northbound left-turn movement. This suggests a need to potentially restrict left-turns from SE Cruickshank Road onto OR-18 due to the insufficient number gaps in eastbound traffic.

Year 2022 Background Conditions

- The two study intersections that do not satisfy applicable mobility targets under existing conditions experience additional delay with background growth.

Proposed Development Plan

- The 33.5-acre site is currently zoned M-2 (General Industrial). Kimco is proposing to rezone to C-3 (General Commercial).
- Table 20 provides the trip generation estimates under the existing and proposed zoning:

Table 20. Trip Generation Potential Comparison – 33.5-acre Zone Change

Land Use	ITE Code	Size	Daily Trips	PM Peak Hour		
				Total	In	Out
Existing M-2 General Industrial Zone Reasonable Worst-Case Development Scenario						
Medical-Dental Office Building (10 acres at 25%)	720	108,900 SF	4,096	371	104	267
Industrial Park (23.5 acres at 40%)	130	409,464 SF	1,954	164	34	130
Net New Trips			6,050	535	138	397
Proposed C-3 General Commercial Zone Reasonable Worst-Case Development Scenario						
Shopping Center (33.5 acres at 25%) <i>Less Pass-by Trips (34%)</i>	820	364,815 SF	14,496 <i>(4,929)</i>	1,416 <i>(480)</i>	680 <i>(240)</i>	736 <i>(240)</i>
Net New Trips			9,567	936	440	496
Difference = Proposed – Existing			3,517	401	302	99

Year 2022 Total Conditions

- The two study intersections that do not satisfy applicable review agency mobility targets under 2022 background conditions experience additional delay with site development.
- Three additional intersections do not satisfy applicable mobility targets with the addition of site-generated trips:
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue

Year 2037 Background Conditions (Without Proposed Zone Change)

- Assuming the recommendations to mitigate 2022 site impacts are in place, six of the nine study intersections were found to exceed the applicable review agency mobility targets in the planning horizon year 2037, which was selected to represent fifteen years after opening per guidance in the Oregon Highway Plan (OHP, Reference 1):
 - NE 3rd Street/NE Johnson Street
 - NE Three Mile Lane/NE 1st Street
 - NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - OR-18/SE Norton Lane
 - OR-18/NE Cumulus Avenue
 - OR-18/SE Loop Road

Year 2037 Total Conditions (With Proposed Zone Change)

- The six intersections that do not satisfy applicable review agency mobility targets under 2037 background conditions experience additional delay with site development, with the exception of the NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street intersection at which the shift in travel patterns associated with the zone change improve the operating capacity of the intersection.

RECOMMENDATIONS

The following mitigation measures are recommended for implementation in conjunction with the proposed development and to address impacts of the proposed zone change:

- NE Three Mile Lane/NE 1st Street
 - Install a traffic signal and restripe the west leg of the intersection to provide an exclusive right-turn lane with overlap phasing.
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
 - Restrict left-turns from the minor approaches onto Three Mile Lane (left-turns from Three Mile Lane can be maintained). Alternative access can be provided to the approximately ten homes south of Three Mile Lane via an improved connection to SE Mountain View Lane. North of Three Mile Lane, there is alternative access to OR-18 via SE Norton Lane.
- OR-18/SE Norton Lane
 - Optimize signal timing to provide additional time to eastbound and westbound through movements.
- OR-18/NE Cumulus Avenue
 - Modify the existing traffic signal and construct a 275-foot exclusive eastbound right-turn lane and 500-foot northbound left-turn lane (left-turns from NE Cumulus Avenue should have permitted/protected phasing). Optimize signal timing to provide additional time to eastbound and westbound through movements. Note that the addition of a second (dual) northbound left-turn lane at the OR-18/NE Cumulus Avenue would accommodate long-term traffic volumes at the intersection. However, it is not recommended at this time as the future improvements identified in the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) will likely eliminate the need for the lane via the construction of a future interchange.
- OR-18/SE Loop Road
 - Restrict southbound left-turns from SE Loop Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via SE Lafayette Highway.
- OR-18/SE Cruickshank Road
 - Restrict northbound left-turns from SE Cruickshank Road onto OR-18 (left-turns from OR-18 can be maintained). This improvement is consistent with the 1996 McMinnville (OR-18) Corridor Refinement Plan (Reference 2) and alternative access to OR-18 is provided via the OR-99W/OR-18 interchange, SE Lafayette Highway, and/or the OR-221/OR-18 interchange.

The proposed rezone can be approved without creating significant impacts per OAR 660-012-0060 assuming these mitigation measures are implemented.

Regardless of the proposed subsequent development, the following intersections should continue to be monitored by the responsible agency and may require additional mitigation in future years based on Year 2037 conditions. While these locations are projected to require additional mitigation in the future as a function of continued local and regional growth, the proposed zone change has a negligible long-term impact on intersection operations:

- NE 3rd Street/NE Johnson Street
- NE Three Mile Lane/NE 1st Street
- NE Three Mile Lane/SE Nehemiah Lane – NE Cumulus Avenue – NE Pacific Street
- OR-18/SE Norton Lane

Please contact us if you need any additional information regarding our analyses.

REFERENCES

- 1.) Oregon Department of Transportation. *1999 Oregon Highway Plan*. May 2015 Update
- 2.) City of McMinnville. *McMinnville Corridor Refinement Plan*. February 1996
- 3.) City of McMinnville. *City of McMinnville Transportation System Plan*. 2010
- 4.) Transportation Research Board. *Highway Capacity Manual 6th Edition*. 2016
- 5.) Oregon Department of Transportation. *Analysis Procedures Manual Version 2*. March 2020 Update
- 6.) Institute of Transportation Engineers. *Trip Generation Manual, 10th Edition*. 2017

APPENDICES

Appendix A – Crash Data

Appendix B – Traffic Count Data

Appendix C – 2020 Existing Traffic Volumes and Analysis

Appendix D – 2022 Background Traffic Volumes and Analysis

Appendix E – 2022 Mitigated Background Traffic Analysis

Appendix F – 2022 Total Traffic Volumes and Analysis

Appendix G – 2022 Mitigated Total Traffic Analysis

Appendix H – 2037 Background Traffic Volumes and Analysis

Appendix I – 2037 Mitigated Background Traffic Analysis

Appendix J – Oregon Highway Plan Policy Intent Statements

Appendix K – 2037 Total Traffic Volumes and Analysis

Appendix L – 2037 Mitigated Total Traffic Analysis

Appendix A Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Third Sst & Johnson St
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
REAR-END	0	0	1	1	0	0	1	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	1	1	1	1	1	2	0	0
2017 TOTAL	0	1	2	3	0	1	2	2	1	2	1	3	0	0
YEAR: 2016														
REAR-END	0	0	2	2	0	0	0	1	1	1	1	2	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	0	1	0	2	2	0	0
2016 TOTAL	0	1	3	4	0	1	0	1	2	1	3	4	0	0
YEAR: 2015														
REAR-END	0	1	0	1	0	1	0	0	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	2	0	0	1	0	1	1	0	0
2015 TOTAL	0	2	0	2	0	3	0	0	1	1	1	2	0	0
YEAR: 2014														
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
SIDESWIPE - MEETING	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2014 TOTAL	0	1	1	2	0	1	0	2	0	2	0	2	0	0
YEAR: 2013														
ANGLE	0	1	1	2	0	2	0	2	0	2	0	2	0	0
REAR-END	0	1	2	3	0	1	0	2	0	3	0	3	0	0
2013 TOTAL	0	2	3	5	0	3	0	4	0	5	0	5	0	0
FINAL TOTAL	0	7	9	16	0	9	2	9	4	11	5	16	0	0

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING

CITY OF MCMINNVILLE, YAMHILL COUNTY

Intersectional Crashes at Third Sst & Johnson St
 January 1, 2013 through December 31, 2017

SER#	P	G	S	W	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SPCL	MOVE	A	S	PED	ACTN	EVENT	CAUSE												
INVEST	E	A	/	C	O	DATE	FC	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL TYP	TRLR	QTY	FROM	PRTC	INJ	G	E	LICNS	RES	LOC	ERROR	ACTN	EVENT	CAUSE			
UNLOC?	D	C	J	L	K	LAT/LONG	DISTNC	INTERSECTION	SEQ #	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	OWNER	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACTN	EVENT	CAUSE		
															02	NONE	0	STRGHT													
01374	N	N	N	N	N	12/29/2015	14	JOHNSON ST	INTER	CROSS	N		N	RAIN	O-1 L-TURN	01	NONE	0	STRGHT												
CITY						Tue	5P	0	CN			TRF	SIGNAL	N	WET	TURN															
No	45	12	36.10	-123	11	19.15		1	01		0			N	DUSK	INJ															
00082	N	N	N			01/01/2016	14	JOHNSON ST	INTER	CROSS	N		N	CLR	O-1 L-TURN	01	NONE	9	STRGHT												
NONE						Fri	7A	0	CN			TRF	SIGNAL	N	UNK	TURN															
No	45	12	36.10	-123	11	19.15		1	02		1			N	DAWN	PDO															
00358	N	N	N	N	N	05/02/2013	14	JOHNSON ST	INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE	0	STRGHT												
CITY						Thu	4P	0	CN			TRF	SIGNAL	N	DRY	ANGL															
No	45	12	36.07	-123	11	19.14		1	03		0			N	DAY	PDO															
01087	N	N	N	N	N	12/04/2013	14	JOHNSON ST	INTER	CROSS	N		N	CLR	ANGL-OTH	01	NONE	0	STRGHT												
CITY						Wed	12P	0	CN			TRF	SIGNAL	N	DRY	ANGL															
No	45	12	36.07	-123	11	19.14		1	04		1			N	DAY	INJ															
01376	N	N	N	N	N	11/13/2016	14	JOHNSON ST	INTER	CROSS	N		N	RAIN	O-1 L-TURN	01	NONE	0	STRGHT												
CITY						Sun	5P	0	CN			L-GRN-SIG	N	WET	TURN																
No	45	12	36.10	-123	11	19.15		1	04		0			N	DLIT	INJ															

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING

CITY OF MCMINNVILLE, YAMHILL COUNTY

Intersectional Crashes at Third Sst & Johnson St
 January 1, 2013 through December 31, 2017

SER#	INVEST	UNLOC?	E A / C O	DATE	FC	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SPCL USE	MOVE	A S	PED	ACTN	EVENT	CAUSE					
			E L M H R	DAY/TIME		FIRST STREET	DIRECT	(MEDIAN)	TRAF-	RNDBT	SURF	COLL TYP	TRLR QTY	FROM	G E LICNS	LOC								
			D C J L K	LAT/LONG	DISTNC	SECOND STREET	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	OWNER	TO	P#	TYPE	SVR TY	E X RES	ERROR				
													02	NONE	0		TURN-L							
													PRVTE				N E						000	00
													PSNGR CAR			01	DRVR	NONE	18 F	N-VAL	028,004	000	02	
00108			N N N N N	02/04/2017	14	JOHNSON ST	INTER	CROSS	N		N RAIN	O-1 L-TURN	01	NONE	0		TURN-L							
CITY			N	Sat	4P	0	CN		TRF SIGNAL		N WET	TURN		PRVTE			N E						000	00
No			45 12 36.10	-123 11 19.15		1	04	1			N DUSK	INJ		PSNGR CAR		01	DRVR	NONE	85 M	OR-Y	028	000	02	
													02	NONE	0		STRGHT							
													PRVTE				S N						000	00
													PSNGR CAR			01	DRVR	INJC	22 F	OR-Y	000	000	00	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Three Mile Ln & First St
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2016														
REAR-END	0	0	1	1	0	0	1	1	0	1	0	1	0	0
2016 TOTAL	0	0	1	1	0	0	1	1	0	1	0	1	0	0
YEAR: 2014														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2014 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR: 2013														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	0	3	3	0	0	1	3	0	3	0	3	0	0

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Three Mile Ln, McMinnville Spur (483) & Nehemiah Ln / Cumulus Ave
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	1	1	1	1	2	0	0
2017 TOTAL	0	2	2	4	0	2	0	3	1	3	1	4	0	0
YEAR: 2014														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	0	1	1	0	1
REAR-END	0	1	1	2	0	4	0	2	0	2	0	2	0	0
2014 TOTAL	0	1	2	3	0	4	0	3	0	2	1	3	0	1
YEAR: 2013														
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	3	5	8	0	6	0	7	1	6	2	8	0	1

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

483 MCMINNVILLE SPUR
 D
 R
 S
 U
 P G S W

Intersectional Crashes at Three Mile Ln, McMinnville Spur (483) & Nehemiah Ln / Cumulus Ave
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	MOVE	A S	P E	LICNS	PED	ACTN	EVENT	CAUSE
INVEST	E L M H R	DAY/TIME	CITY	RD CHAR	MILEPNT	FIRST STREET	INT-REL	TRLR QTY	OWNER	G E						
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	DIRECT	LR	SECOND STREET	TRAF-	VEH TYPE	FROM							
				LOCTN		INTERSECTION SEQ#	DRVWY	#								
00534	N N N	05/21/2014	YAMHILL	1	14		5-LEG	01 NONE	0 STRGHT						013	07
NONE	N	Wed 3P		UN	0		STOP SIGN	PRVTE	N S					000		00
			MCMINVL UA	06	0		N DAY	PSNGR CAR						000		07
No	45 12	8.44 -123 10	46.21			048300100S00										
								02 NONE	0 STOP						011 013	00
								PRVTE	N S					000	000	00
								PSNGR CAR						000	000	00
										01 DRVR	NONE	25 F	OR-Y	000	000	00
																00
										02 PSNG	NO<5	01 M		000	000	00
										03 PSNG	NO<5	01 F		000	000	00
								03 NONE	0 STOP						011	00
								PRVTE	N S							00
								PSNGR CAR		01 DRVR	NONE	27 F	OR-Y	000	000	00
00314	N N N N N	03/30/2017	YAMHILL	1	14		5-LEG	01 NONE	0 STRGHT							07,27
CITY	N	Thu 9A		MN	0		UNKNOWN	PRVTE	N S					000		00
			MCMINVL UA	06	0		N DAY	PSNGR CAR		01 DRVR	NONE	34 M	OR-Y	043,016	038	07,27
No	45 12	8.44 -123 10	46.21			048300100S00										
								02 NONE	0 STOP						011	00
								PRVTE	N S					000	000	00
								PSNGR CAR		01 DRVR	INJC	28 F	OR-Y	000	000	00
00022	Y N N N N	01/07/2017	YAMHILL	1	14		5-LEG	01 NONE	0 TURN-R						124	01,08
CITY	N	Sat 1P		MN	0		STOP SIGN	PRVTE	S E					000	124	00
			MCMINVL UA	06	0		N DAY	PSNGR CAR		01 DRVR	NONE	19 F	OR-Y	047,001,007	017	01,08
No	45 12	8.44 -123 10	46.21			048300100S00										
								02 NONE	0 STOP						012	00
								PRVTE	E W					000	000	00
								PSNGR CAR		01 DRVR	INJC	61 F	OR-Y	000	000	00
00275	N N N N N	03/17/2014	YAMHILL	1	14		5-LEG	01 NONE	0 STRGHT							07
CITY	N	Mon 12P		MN	0		STOP SIGN	PRVTE	S N					000		00
			MCMINVL UA	06	0		N DAY	PSNGR CAR		01 DRVR	NONE	39 F	OR-Y	026	000	07
No	45 12	8.44 -123 10	46.21			048300100S00										
								02 NONE	0 STOP						011	00
								PRVTE	S N					000	000	00
								PSNGR CAR		01 DRVR	INJC	19 M	OR-Y	000	000	00
										02 PSNG	INJC	43 F		000	000	00

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at Norton Ln & Cumulus Ave
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2014														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	1	0	1
2014 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	1
YEAR: 2013														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	1	1	2	0	1	0	2	0	2	0	2	0	1

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
 D
 R
 S
 U
 P G S W

Intersectional Crashes at Norton Ln & Cumulus Ave
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE																						
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	FIRST	STREET	RD CHAR	TRLR QTY	MOVE	A	S																			
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	MILEPNT	SECOND	STREET	DIRECT	OWNER	FROM	P	R	T	C	I	N	J	G	E	L	I	C	N	S	P	E	D				
				LRS	INTERSECTION	SEQ#	LOCTN	(#LANES)	CNTL	DRVWY	LIGHT	SVRTY	V#	VEH TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACTN	EVENT	CAUSE				
00068	N N N	01/29/2013	YAMHILL	1	14		INTER	01 NONE	0	STRGHT																			07	
CITY	N	Tue 12P	MCMINNVILLE	FR	0	NE CUMULUS AVE	W	PRVTE	W E																				00	
			MCMINVL UA	47.16		NE NORTON LN	06									01	DRVR	NONE	19	F	OR-Y		026					07		
No	45 12	5.75 -123	9 59.70	0039AT100S00			1																							
								02 NONE	0	STOP																				
								PRVTE	W E																					00
								PSNGR CAR								01	DRVR	NONE	18	M	OR-Y		000						00	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING

CITY OF MCMINNVILLE, YAMHILL COUNTY

Intersectional Crashes at Norton Ln & Cumulus Ave
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	FC	CITY STREET FIRST STREET	RD CHAR	INT-TYP (MEDIAN)	INT-REL	OFF-RD	WTHR	CRASH TYP	SPCL USE	MOVE	A S	G E LICNS		PED	ACTN	EVENT	CAUSE					
														DAY/TIME	DISTNC					SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT
UNLOC?	D C J L K	LAT/LONG		INTERSECTION SEQ #	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	OWNER	TO	P#	TYPE	SVRTY	E X RES	LOC	ERROR	ACTN	EVENT	CAUSE		
00232	N N N N N	03/04/2014	14	NE CUMULUS AVE	INTER	3-LEG	N		Y CLD	FIX OBJ	01	NONE	0	STRGHT								059,062,121	17	
CITY	N	Tue 4P	0	NE NORTON LN	N			STOP SIGN	N DRY	FIX		PRVTE	S N									000	059,062,121	00
No	45 12	5.76 -123 9	59.70	1	06	0			N DAY	INJ		PSNGR CAR		01	DRVR	INJB	55 M	OR-Y	081			000		17
																								OR<25

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
TURNING MOVEMENTS	0	2	0	2	0	3	0	2	0	1	1	2	0	0
2017 TOTAL	0	2	0	2	0	3	0	2	0	1	1	2	0	0
YEAR: 2016														
ANGLE	0	1	0	1	0	3	0	1	0	1	0	1	0	0
PEDESTRIAN	0	1	0	1	0	1	0	0	1	0	1	1	0	0
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	1	1	2	0	3	0	1	1	2	0	2	0	0
2016 TOTAL	0	4	2	6	0	8	0	4	2	5	1	6	0	0
YEAR: 2015														
REAR-END	0	1	0	1	0	3	0	1	0	1	0	1	0	0
2015 TOTAL	0	1	0	1	0	3	0	1	0	1	0	1	0	0
YEAR: 2014														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	1	1	0	1	0	1
REAR-END	0	2	2	4	0	2	0	0	3	4	0	4	0	0
2014 TOTAL	0	2	3	5	0	2	0	0	4	5	0	5	0	1
YEAR: 2013														
REAR-END	0	3	2	5	0	4	0	3	2	4	1	5	0	0
2013 TOTAL	0	3	2	5	0	4	0	3	2	4	1	5	0	0
FINAL TOTAL	0	12	7	19	0	20	0	10	8	16	3	19	0	1

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
 D
 R
 S
 U
 P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Norton Ln
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD# FC	CONN #	INT-TYP	SPCL USE	MOVE	A S	P E	LICNS	PED	ACTN	EVENT	CAUSE
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	FIRST STREET	RD CHAR	TRLR QTY	OWNER	G E	RES	LOC	ERROR			
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	MILEPNT	SECOND STREET	DIRECT	VEH TYPE	FROM	E X	RES	LOC	ERROR			
				LR	INTERSECTION SEQ#	LOCTN	# LANES								
00187	N N N	03/10/2013	YAMHILL	1 14		INTER	01 NONE	0 STRGHT							07
NONE	N	Sun 5P	MCMINNVILLE	MN 0	NE NORTON LN	N	01 NONE	0 STRGHT					000		00
			MCMINVL UA	46.69	SALMON RIVER HY	06	0						000		07
No	45 12	3.32 -123	9 59.63	003900100S00	1										
							02 NONE	0 STOP					011		00
							01 NONE	0 STOP					000	000	00
							02 PSNG	INJC	24 F	OR-Y	000	000	000	000	00
00179	Y N N N N	02/18/2014	YAMHILL	1 14		INTER	01 NONE	0 STRGHT						040	01
STATE	N	Tue 4P	MCMINNVILLE	MN 0	NE NORTON LN	E	01 NONE	0 STRGHT					000	040	00
			MCMINVL UA	46.69	SALMON RIVER HY	05	0						000	000	01
No	45 12	3.32 -123	9 59.63	003900100S00	1										
00309	N N N	03/26/2014	YAMHILL	1 14		INTER	01 NONE	0 STRGHT							07
NONE	N	Wed 2P	MCMINNVILLE	MN 0	NE NORTON LN	E	01 NONE	0 STRGHT					000		00
			MCMINVL UA	46.69	SALMON RIVER HY	06	0						000		07
No	45 12	3.32 -123	9 59.63	003900100S00	1										
							02 NONE	0 STOP					011		00
							01 NONE	0 STOP					000	000	00
00500	N N N	05/03/2016	YAMHILL	1 14		INTER	01 NONE	9 STRGHT							29
NONE	N	Tue 7A	MCMINNVILLE	MN 0	NE NORTON LN	E	01 NONE	9 STRGHT					000		00
			MCMINVL UA	46.69	SALMON RIVER HY	06	0						000	000	00
No	45 12	3.32 -123	9 59.72	003900100S00	1										
							02 NONE	9 STOP					011		00
							01 NONE	9 STOP					000	000	00
00716	N N N N N	06/28/2016	YAMHILL	1 14		INTER	01 NONE	0 STRGHT							07
STATE	N	Tue 5P	MCMINNVILLE	MN 0	NE NORTON LN	E	01 NONE	0 STRGHT					006		00
			MCMINVL UA	46.69	SALMON RIVER HY	06	0						000	000	07
No	45 12	3.32 -123	9 59.72	003900100S00	1										
							02 NONE	0 STOP					011		00
							01 NONE	0 STOP					000	000	00

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cumulus Ave
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2016														
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
2016 TOTAL	0	1	0	1	0	1	0	0	1	1	0	1	0	0
YEAR: 2013														
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
2013 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	0
FINAL TOTAL	0	2	0	2	0	2	0	1	1	2	0	2	0	0

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
 D
 R
 S
 U
 P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cumulus Ave
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	MOVE	A S	ACTN	EVENT	CAUSE					
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	FIRST	STREET	RD CHAR	TRLR QTY	OWNER	FROM	PRTC	INJ	G E LICNS	PED				
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	MILEPNT	SECOND	STREET	DIRECT	VEH TYPE	TO	E X RES	LOC	ERROR						
				LRS	INTERSECTION	SEQ#	LOCTN	(#LANES)										
00914	N N N N N	10/15/2013	YAMHILL	1	14		INTER	01	NONE	0	TURN-L							
NONE	N	Tue 2P	MCMINNVILLE	MN	0	SALMON RIVER HY	W		PRVTE	W N			000	08,27				
			MCMINVL UA	47.39		CUMULUS AVE CN	06	0			01	DRVR	NONE	81 F OTH-Y	006,016	038	08,27	
No	45 12	3.23 -123	9 8.34	003900100S00			1							N-RES				
									02	NONE	0	STRGHT					000	00
									PRVTE	W E								00
									PSNGR	CAR	01	DRVR	INJC	39 F SUSP	000	000		00
														OR<25				
01457	Y N N N N	12/02/2016	YAMHILL	1	14		INTER	01	NONE	0	TURN-L							
STATE	N	Fri 3P	MCMINNVILLE	MN	0	SALMON RIVER HY	CN		PRVTE	W N			000	04				
			MCMINVL UA	47.39		CUMULUS AVE CN	02	0			01	DRVR	NONE	48 F OR-Y	000	000		00
No	45 12	3.23 -123	9 8.34	003900100S00			1							OR<25				
											02	PSNG	INJC	00 F	000	000		00
									02	NONE	0	STRGHT					000	00
									PRVTE	E W								00
									PSNGR	CAR	01	DRVR	NONE	16 M OR-Y	020	000		04
														OR<25				

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Armory Way
January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Loop Rd
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2016														
TURNING MOVEMENTS	0	1	0	1	0	4	0	1	0	0	1	1	0	0
2016 TOTAL	0	1	0	1	0	4	0	1	0	0	1	1	0	0
FINAL TOTAL	0	1	0	1	0	4	0	1	0	0	1	1	0	0

Disclaimers: Effective 2016, collection of “Property Damage Only” (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
 January 1, 2013 through December 31, 2017

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2017														
TURNING MOVEMENTS	0	6	2	8	0	15	1	4	4	7	1	8	0	0
2017 TOTAL	0	6	2	8	0	15	1	4	4	7	1	8	0	0
YEAR: 2016														
TURNING MOVEMENTS	0	4	1	5	0	9	0	4	1	4	1	5	0	0
2016 TOTAL	0	4	1	5	0	9	0	4	1	4	1	5	0	0
YEAR: 2015														
ANGLE	0	0	1	1	0	0	0	0	1	0	1	1	0	0
REAR-END	0	0	1	1	0	0	0	1	0	0	1	1	0	0
SIDESWIPE - MEETING	0	0	1	1	0	0	1	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	9	3	12	0	24	0	10	2	10	2	12	0	0
2015 TOTAL	0	9	6	15	0	24	1	12	3	11	4	15	0	0
YEAR: 2014														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	0	1	0	1	0	1
REAR-END	0	0	1	1	0	0	0	1	0	0	1	1	0	0
TURNING MOVEMENTS	0	2	1	3	0	2	0	1	2	2	1	3	0	0
2014 TOTAL	0	2	4	6	0	2	0	3	2	4	2	6	0	1
YEAR: 2013														
BACKING	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	1	0	1
REAR-END	0	1	0	1	0	1	0	0	1	0	1	1	0	0
TURNING MOVEMENTS	0	5	0	5	0	9	0	4	1	5	0	5	0	0
2013 TOTAL	0	7	1	8	0	11	0	6	2	7	1	8	0	1
FINAL TOTAL	0	28	14	42	0	61	2	29	12	33	9	42	0	2

Disclaimers: Effective 2016, collection of "Property Damage Only" (PDO) crash data elements was reduced for vehicles and participants. Age, Gender, License, Error and other elements are no longer available for PDO crash reporting. Please keep this in mind when comparing 2016 PDO crash data to prior years.

A higher number of crashes may be reported as of 2011 compared to prior years. This does not necessarily reflect an increase in annual crashes. The higher numbers may result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics. For all disclaimers, see https://www.oregon.gov/ODOT/Data/documents/Crash_Data_Disclaimers.pdf.

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
January 1, 2013 through December 31, 2017

SER#	EA / CO	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	RD CHAR	INT-REL	OFFRD	WTHR	CRASH TYP	SPCL USE	MOVE	A	S	PED	CAUSE								
INVEST	ELMHR	DAY/TIME	CITY	CMPT/MLG	MILEPNT	FIRST STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL TYP	TRLR QTY	OWNER	FROM	PRTC	INJ	G E	LICNS	LOC	ERROR	ACTN	EVENT	CAUSE		
UNLOC?	DCJLK	LAT/LONG	URBAN AREA	LRS	INTERSECTION	SEQ#	LOCTN	(#LANES)	CNTL	DRVWY	LIGHT	SVRTY	V#	VEH TYPE	TO	P#	TYPE	SVRTY	E X	RES	LOC	ERROR	ACTN	EVENT	CAUSE	
													02 NONE	0	STRGHT											
													PRVTE		S N								006		00	
													PSNGR CAR			01	DRVR	NONE	22	F	OR-Y	000	000		00	
																02	PSNG	INJC	22	M	OR<25	000	000		00	
00951	NNNNN	09/18/2015	YAMHILL	1	14		INTER	3-LEG	N		N CLR	ANGL-OTH	01 NONE	0	TURN-L										02	
STATE	N	Fri	5P	MN	0		S	STOP SIGN			N DRY	TURN	PRVTE		S W								015		00	
						MCMINVL UA		48.59		06	2	N DAY	PDO		PSNGR CAR		01	DRVR	NONE	34	M	OR-Y	028,014	000		02
No	45	12	9.91 -123	7	40.92			003900100S00																		
													02 NONE	0	TURN-L											00
													PRVTE		E S									000		00
													PSNGR CAR			01	DRVR	NONE	40	M	OR-Y	000	000		00	
01304	NNNNN	12/14/2015	YAMHILL	1	14		INTER	3-LEG	N		N FOG	ANGL-OTH	01 NONE	0	STRGHT										092,124	26
STATE	N	Mon	6P	MN	0		S	STOP SIGN			N WET	ANGL	PRVTE		W E								007	092,124	26	
						MCMINVL UA		48.59		06	1	N DARK	PDO		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y	000	017		00
No	45	12	9.91 -123	7	40.92			003900100S00																		
													02 NONE	0	STOP											00
													PRVTE		S N									011		00
													PSNGR CAR			01	DRVR	NONE	33	F	SUSP	000	000		00	
00021	YNNNN	01/07/2017	YAMHILL	1	14		INTER	3-LEG	N		N SNOW	ANGL-OTH	01 NONE	0	TURN-R										124	01,08
COUNTY	N	Sat	1P	MN	0		S	STOP SIGN			N ICE	TURN	PRVTE		W S								000	124	00	
						MCMINVL UA		48.59		06	1	N DAY	INJ		PSNGR CAR		01	DRVR	NONE	60	F	OR-Y	047,001,007	017		01,08
No	45	12	9.91 -123	7	40.92			003900100S00																		
													02 NONE	0	STRGHT											00
													PRVTE		S N									006		00
													PSNGR CAR			01	DRVR	INJB	26	F	OR-Y	000	000		00	
																02	PSNG	INJB	08	F	OR<25	000	000		00	
00153	NNN	02/28/2013	YAMHILL	1	02		INTER	3-LEG	N		Y CLR	FIX OBJ	01 NONE	0	STRGHT										092,050	10
NONE	N	Thu	12P	MN	0		CN	CHANNEL			N DRY	FIX	PRVTE		W E								007	092,050	00	
								48.59		01	1	N DAY	INJ		PSNGR CAR		01	DRVR	INJC	18	F	OR-Y	081	000		10
No	45	12	9.91 -123	7	40.92			003900100S00																		
00336	NNN	04/11/2015	YAMHILL	1	14		INTER	3-LEG	N		N CLR	ANGL-OTH	01 NONE	0	TURN-L											02
NONE	N	Sat	4P	MN	0		CN	CHANNEL			N DRY	TURN	UNKN		S W								015		00	
						MCMINVL UA		48.59		01	1	N DAY	PDO		UNKNOWN		01	DRVR	NONE	00	F	UNK	028	000		02
No	45	12	9.91 -123	7	40.92			003900100S00																		

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
 January 1, 2013 through December 31, 2017

SER#	E A / C O DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE	MOVE	A S	P E D	ACTN	EVENT	CAUSE
INVEST	E L M H R DAY/TIME	CITY	CMPT/MLG	MILEPNT	FIRST STREET	RD CHAR	TRLR QTY	OWNER	G E	LICNS	LOC	ERROR	
UNLOC?	D C J L K LAT/LONG	URBAN AREA	LRS	INTERSECTION SEQ#	LOCTN	(#LANES)	VEH TYPE	TO	E X	RES			
							02 NONE	0 STRGHT					
							PRVTE	W E				000	00
							PSNGR CAR		01 DRVR	INJB	24 M	OR-Y	000
												000	00
									02 PSNG	INJB	07 M	OR<25	000
												000	00
00156	N N N N N 02/21/2017	YAMHILL	1	14		INTER	01 NONE	0 STRGHT					02
STATE	N Tue 4P		MN	0		CN	PRVTE	W E				000	00
		MCMINVL UA		48.59		04			01 DRVR	INJA	44 F	OR-Y	000
No	45 12 9.91 -123 7 40.92			003900100S00								000	00
							02 NONE	0 TURN-L					00
							PRVTE	S W				000	00
							PSNGR CAR		01 DRVR	NONE	54 M	N-VAL	028
												000	02
													OR<25
00873	N N N N N 08/17/2017	YAMHILL	1	14		INTER	01 NONE	0 STRGHT					013
STATE	N Thu 1P		MN	0		CN	PRVTE	W E				000	013
		MCMINVL UA		48.59		04			01 DRVR	INJC	46 M	OR-Y	000
No	45 12 9.91 -123 7 40.92			003900100S00								000	00
							02 NONE	0 TURN-L					015
							PRVTE	S W				000	00
							PSNGR CAR		01 DRVR	NONE	28 F	OTH-Y	028
												000	02
												000	00
									02 PSNG	INJB	52 M	N-RES	000
												000	00
									03 PSNG	INJC	31 M		000
												000	00
									04 PSNG	INJC	06 M		000
												000	00
							03 NONE	0 STRGHT					022
							PRVTE	E W				000	00
							PSNGR CAR		01 DRVR	INJB	71 F	OR-Y	000
												000	00
									02 PSNG	INJB	66 F	OR>25	000
												000	00
00976	N N N N N 09/12/2017	YAMHILL	1	14		INTER	01 NONE	9 STRGHT					02
STATE	N Tue 2P		MN	0		CN	N/A	W E				000	00
		MCMINVL UA		48.59		04			01 DRVR	NONE	00 U	UNK	000
No	45 12 9.91 -123 7 40.92			003900100S00								000	00
												UNK	
							02 NONE	9 TURN-L					015
							N/A	S W				000	00
							PSNGR CAR		01 DRVR	NONE	00 U	UNK	000
												000	00
												UNK	

OREGON DEPARTMENT OF TRANSPORTATION - POLICY, DATA AND ANALYSIS DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CONTINUOUS SYSTEM CRASH LISTING

039 SALMON RIVER
 D
 R
 S U
 P G S W

Intersectional Crashes at OR-18, Salmon River Hwy (039) & Cruickshank Rd
 January 1, 2013 through December 31, 2017

SER#	E A / C O	DATE	COUNTY	RD#	FC	CONN #	INT-TYP	SPCL USE															
INVEST	E L M H R	DAY/TIME	CITY	CMPT/MLG	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH TYP	TRLR QTY	MOVE	A S									
UNLOC?	D C J L K	LAT/LONG	URBAN AREA	MILEPNT	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL TYP	OWNER	FROM	PRTC	INJ	G E	LICNS	PED	ACTN	EVENT	CAUSE		
				LRS	INTERSECTION SEQ#	LOCTN	(#LANES)	CNTL	DRVWY	LIGHT	SVRTY	V#	VEH TYPE	TO	P#	TYPE	SVRTY	E X	RES	LOC	ERROR		
01335	N N N N N	12/04/2017	YAMHILL	1	14	INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE	9	TURN-L							03	
STATE	N	Mon		MN	0	CN		STOP SIGN	N	DRY	TURN	N/A	S	W								00	
			MCMINVL UA		48.59	04	1		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	UNK	000	000	00
No	45	12	9.91 -123	7	40.92	003900100S00																00	
																						00	
																						00	

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
055	SPRAY	BLINDED BY WATER SPRAY
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN, ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED
4	EXP	EXPIRED
8	N-VAL	OTHER NON-VALID LICENSE
9	UNK	UNKNOWN IF DRIVER WAS LICENSED AT TIME OF CRASH

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNEED FROM WRONG LANE
007	TO WRONG	TURNEED INTO WRONG LANE
008	ILLEG U	U-TURNEED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHICLE)
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)
135	RAIL OCC	INJURED OCCUPANT OF RAILWAY TRAIN, LIGHT RAIL, STREET CAR OR CABLE CAR

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUplet
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY (K)
2	INJA	SUSPECTED SERIOUS INJURY (A)
3	INJB	SUSPECTED MINOR INJURY (B)
4	INJC	POSSIBLE INJURY (C)
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE
9	NONE	NO APPARENT INJURY (O)

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY
9	PARKNG	PARKING MANEUVER

NON-MOTORIST LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYAL
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN (
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	OTHR	OTHER TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFGR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING
095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS
099	UNKNOWN	UNKNOWN OR NOT DEFINITE

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

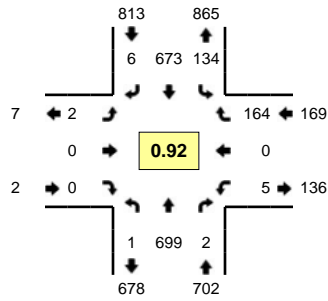
WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

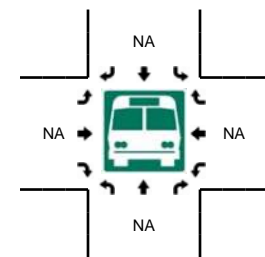
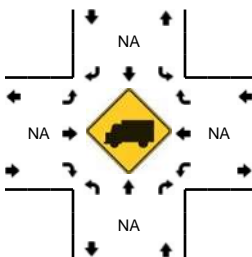
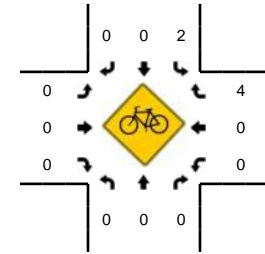
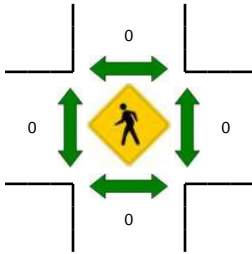
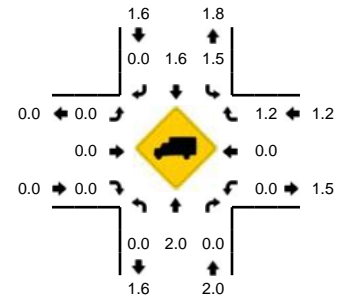
Appendix B Intersection Turning Movement Count Data

LOCATION: NE 3 Mile Ln -- NE Cumulus Ave/SE Nehemiah Ln
CITY/STATE: McMinnville, OR

QC JOB #: 10766601
DATE: Wed, May 23 2012



Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	NE 3 Mile Ln (Northbound)				NE 3 Mile Ln (Southbound)				NE Cumulus Ave/SE Nehemiah Ln (Eastbound)				NE Cumulus Ave/SE Nehemiah Ln (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
4:00 PM	0	43	0	0	4	49	1	0	0	0	0	0	0	0	0	10	0	107	
4:05 PM	0	36	0	0	7	44	0	0	1	0	0	0	1	0	18	0	107		
4:10 PM	0	53	1	0	11	43	0	0	0	0	1	0	1	0	18	0	128		
4:15 PM	1	60	0	0	9	43	1	0	0	0	0	0	0	0	15	0	129		
4:20 PM	0	46	0	0	9	46	0	0	0	0	0	0	0	0	7	0	108		
4:25 PM	0	54	0	0	7	43	1	0	0	0	0	0	1	0	13	0	119		
4:30 PM	0	60	0	0	18	47	0	0	0	0	0	0	1	0	21	0	147		
4:35 PM	0	46	0	0	4	67	0	0	0	0	0	0	0	0	13	0	130		
4:40 PM	1	53	0	0	9	58	0	0	0	0	0	0	0	0	15	0	136		
4:45 PM	0	55	0	0	13	43	0	0	0	0	0	0	0	0	8	0	119		
4:50 PM	0	51	0	0	13	62	1	0	0	0	0	0	0	0	16	0	143		
4:55 PM	0	49	0	0	11	55	0	0	0	0	0	0	0	0	12	0	127	1500	
5:00 PM	0	58	1	0	10	66	1	0	1	0	0	0	1	0	17	0	155	1548	
5:05 PM	0	53	0	0	18	68	0	0	0	0	0	0	1	0	12	0	152	1593	
5:10 PM	0	59	0	0	15	60	0	0	0	0	0	0	0	0	13	0	147	1612	
5:15 PM	0	82	1	0	12	51	0	0	1	0	0	0	1	0	9	0	157	1640	
5:20 PM	0	62	0	0	4	39	1	0	0	0	0	0	0	0	13	0	119	1651	
5:25 PM	0	71	0	0	7	57	3	0	0	0	0	0	1	0	15	0	154	1686	
5:30 PM	0	36	0	0	13	55	1	0	0	0	0	0	1	1	6	0	113	1652	
5:35 PM	0	44	0	0	12	48	0	0	0	0	0	0	0	0	10	0	114	1636	
5:40 PM	0	45	0	0	10	40	0	0	0	0	1	0	1	0	12	0	109	1609	
5:45 PM	0	46	1	0	14	35	0	0	0	0	0	0	0	0	9	0	105	1595	
5:50 PM	0	37	0	0	14	33	1	0	0	0	0	0	1	0	14	0	100	1552	
5:55 PM	0	31	1	0	7	39	0	0	0	0	0	0	1	0	13	0	92	1517	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	0	776	4	0	180	716	0	0	4	0	0	0	8	0	136	0	1824		
Heavy Trucks	0	12	0	0	0	8	0	0	0	0	0	0	0	0	8	0	28		
Pedestrians		0				0				0				0			0		
Bicycles	0	0	0		0	0	0		0	0	0		0	0	1		1		
Railroad																			
Stopped Buses																			

Comments:

**Summary of Traffic Count
Transportation Development Division**

Site: 48445
County: Yamhill
City: McMinnville

Date: 4/3/2018
Hours: 6:00 AM-10:00 PM
Highway #: 039
SALMON RIVER HIGHWAY NO. 39
Location: (OR18) at Norton Ln (483 AB)
Weather:

Milepoint: 46.69
Count Number: 1.00

Time of Day	Summary By Movements													Entering Volumes				
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	North	East	South	West	
6:00	10	0	2	8	6	51	0	2	5	11	129	8	232	12	65	7	148	
6:15	10	0	8	6	7	66	0	5	9	10	143	17	281	18	79	14	170	
6:30	15	1	4	5	13	80	1	10	12	12	169	18	340	20	98	23	199	
6:45	16	3	10	18	17	106	4	6	8	11	175	52	426	29	141	18	238	
7:00	17	1	5	17	9	124	3	3	17	8	189	21	414	23	150	23	218	
7:15	11	2	13	26	14	165	1	2	18	21	161	34	468	26	205	21	216	
7:30	9	2	18	29	17	192	4	6	23	25	164	28	517	29	238	33	217	
7:45	14	2	16	38	22	221	4	6	25	26	178	60	612	32	281	35	264	
8:00	9	2	13	45	12	162	6	5	10	52	160	58	534	24	219	21	270	
8:15	28	4	13	51	12	157	4	7	21	47	151	41	536	45	220	32	239	
8:30	19	6	14	34	9	142	5	7	20	41	148	30	475	39	185	32	219	
8:45	16	3	9	34	10	139	8	10	22	31	133	34	449	28	183	40	198	
9:00	14	4	17	14	12	130	3	7	30	22	129	29	411	35	156	40	180	
9:15	13	1	14	22	10	111	9	7	33	19	124	25	388	28	143	49	168	
9:30	19	1	18	15	13	127	5	5	29	23	143	37	435	38	155	39	203	
9:45	15	8	27	22	10	133	6	9	41	29	143	34	477	50	165	56	206	
10:00	24	2	27	21	9	121	7	11	36	28	140	20	446	53	151	54	188	
10:15	25	4	21	19	6	158	5	11	31	34	145	33	492	50	183	47	212	
10:30	15	7	21	28	9	161	8	13	39	27	145	27	500	43	198	60	199	
10:45	27	4	24	27	9	140	9	11	34	19	125	41	470	55	176	54	185	
11:00	27	6	27	22	7	123	8	7	40	31	127	24	449	60	152	55	182	
11:15	19	3	21	24	6	177	8	10	41	16	133	27	485	43	207	59	176	
11:30	41	11	30	17	14	156	7	8	41	24	141	23	513	82	187	56	188	
11:45	28	8	46	21	13	159	11	10	48	31	148	19	542	82	193	69	198	
12:00	36	7	39	19	14	171	14	12	48	35	151	29	575	82	204	74	215	
12:15	22	5	27	35	11	144	7	9	44	28	132	24	488	54	190	60	184	
12:30	24	5	37	30	4	162	10	10	32	29	160	25	528	66	196	52	214	
12:45	21	4	20	15	7	152	3	13	23	21	159	32	470	45	174	39	212	
13:00	14	4	20	23	8	135	4	15	27	20	173	24	467	38	166	46	217	
13:15	32	2	29	20	7	132	6	10	33	23	137	39	470	63	159	49	199	
13:30	27	4	20	30	11	135	4	11	33	23	136	36	470	51	176	48	195	
13:45	21	3	30	20	7	172	3	15	42	18	138	28	497	54	199	60	184	
14:00	15	1	29	21	6	190	6	11	48	24	130	25	506	45	217	65	179	
14:15	19	3	19	23	6	166	5	11	45	19	148	28	492	41	195	61	195	
14:30	33	2	25	16	7	167	5	10	39	20	157	33	514	60	190	54	210	
14:45	19	0	23	25	7	164	6	10	59	28	176	30	547	42	196	75	234	
15:00	26	4	19	19	5	208	3	6	37	17	183	19	546	49	232	46	219	
15:15	17	1	31	25	12	175	3	11	36	22	167	27	527	49	212	50	216	
15:30	23	4	36	21	10	183	5	13	45	20	206	23	589	63	214	63	249	
15:45	23	4	20	26	6	198	5	9	47	17	201	23	579	47	230	61	241	
16:00	15	2	29	35	15	236	4	21	67	28	216	20	688	46	286	92	264	
16:15	19	1	27	24	14	250	4	8	37	20	199	17	620	47	288	49	236	
16:30	28	2	29	27	9	246	6	15	48	18	196	13	637	59	282	69	227	
16:45	18	2	36	21	8	260	4	14	47	23	200	18	651	56	289	65	241	
17:00	39	2	40	16	5	237	5	9	64	20	209	25	671	81	258	78	254	
17:15	26	2	30	19	11	237	1	12	37	26	203	17	621	58	267	50	246	
17:30	22	3	18	18	6	209	2	13	50	9	169	20	539	43	233	65	198	
17:45	15	3	19	13	8	236	3	4	29	17	132	20	499	37	257	36	169	
18:00	12	2	11	15	7	166	7	6	27	12	127	14	406	25	188	40	153	
18:15	14	3	14	20	7	184	2	4	19	17	149	12	445	31	211	25	178	
18:30	10	3	16	11	9	137	5	8	23	17	134	20	393	29	157	36	171	
18:45	11	0	8	22	9	125	0	7	18	9	122	17	348	19	156	25	148	
19:00	7	1	7	16	1	139	2	2	27	10	134	10	356	15	156	31	154	
19:15	16	0	14	10	2	102	0	13	32	10	116	13	328	30	114	45	139	
19:30	9	1	18	9	3	86	3	3	28	8	109	9	286	28	98	34	126	
19:45	8	1	8	7	1	83	3	9	11	7	89	12	239	17	91	23	108	
20:00	10	3	8	2	2	82	0	2	12	8	91	5	225	21	86	14	104	
20:15	9	0	11	5	1	92	0	3	7	14	71	14	227	20	98	10	99	
20:30	13	2	15	7	4	88	0	6	6	7	92	10	250	30	99	12	109	
20:45	11	1	10	6	2	68	1	3	8	3	56	2	171	22	76	12	61	
21:00	6	0	3	4	1	64	0	0	6	5	51	2	142	9	69	6	58	
21:15	15	2	4	6	0	54	3	1	5	5	63	4	162	21	60	9	72	
21:30	5	0	5	7	0	45	0	2	6	1	51	8	130	10	52	8	60	
21:45	5	1	3	3	2	59	2	2	3	4	40	3	127	9	64	7	47	
Total Count	1156	175	1225	1254	521	9440	272	521	1888	1260	9116	1490	28318	2556	11215	2681	11866	
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
24hr Volume	1272	193	1348	1380	574	10384	300	574	2077	1386	10028	1639	31150	2812	12337	2950	13053	

**Summary of Traffic Count
Transportation Development Division**

Site: 48446 Date: 4/3/2018
 County: Yamhill Hours: 6:00 AM-10:00 PM
 City: McMinnville Highway #: 039
 Milepoint: 47.39 SALMON RIVER HIGHWAY
 Location: NO. 39 at Cumulus Ave
 Count Number: 1.00 Weather:

Time of Day	Summary By Movements							Entering Volumes			
	N-E	N-W	E-N	E-W	W-N	W-E	TOTAL	North	East	West	
6:00	4	15	2	54	4	139	218	19	56	143	
6:15	7	8	1	69	4	148	237	15	70	152	
6:30	7	12	0	89	9	186	303	19	89	195	
6:45	9	14	5	138	8	196	370	23	143	204	
7:00	3	14	4	134	3	187	345	17	138	190	
7:15	6	16	7	180	8	180	397	22	187	188	
7:30	3	15	6	230	9	175	438	18	236	184	
7:45	3	32	22	260	25	169	511	35	282	194	
8:00	3	12	10	201	25	150	401	15	211	175	
8:15	2	15	6	206	27	158	414	17	212	185	
8:30	1	15	10	158	20	150	354	16	168	170	
8:45	3	15	9	173	22	139	361	18	182	161	
9:00	1	14	10	153	15	135	328	15	163	150	
9:15	2	15	10	125	20	128	300	17	135	148	
9:30	3	24	7	120	21	149	324	27	127	170	
9:45	5	17	10	159	25	132	348	22	169	157	
10:00	5	14	8	151	19	142	339	19	159	161	
10:15	5	21	11	147	22	173	379	26	158	195	
10:30	7	28	6	165	20	154	380	35	171	174	
10:45	3	16	7	163	33	128	350	19	170	161	
11:00	6	12	7	142	30	140	337	18	149	170	
11:15	6	16	21	195	25	130	393	22	216	155	
11:30	7	34	19	154	24	162	400	41	173	186	
11:45	0	28	15	164	32	158	397	28	179	190	
12:00	7	24	14	165	28	168	406	31	179	196	
12:15	4	31	11	168	35	132	381	35	179	167	
12:30	10	27	16	169	29	162	413	37	185	191	
12:45	8	22	16	156	35	157	394	30	172	192	
13:00	10	26	11	136	27	161	371	36	147	188	
13:15	9	23	12	134	19	182	379	32	146	201	
13:30	4	27	9	147	30	135	352	31	156	165	
13:45	2	31	16	179	32	156	416	33	195	188	
14:00	13	46	6	167	18	139	389	59	173	157	
14:15	9	29	8	160	22	149	377	38	168	171	
14:30	7	21	6	169	34	179	416	28	175	213	
14:45	11	28	14	179	29	175	436	39	193	204	
15:00	17	36	7	184	28	175	447	53	191	203	
15:15	9	21	12	191	28	170	431	30	203	198	
15:30	11	36	7	182	43	199	478	47	189	242	
15:45	15	30	13	211	34	205	508	45	224	239	
16:00	20	27	9	245	28	211	540	47	254	239	
16:15	17	32	7	259	34	204	553	49	266	238	
16:30	18	36	9	253	25	207	548	54	262	232	
16:45	13	35	11	241	16	212	528	48	252	228	
17:00	29	26	9	244	24	239	571	55	253	263	
17:15	16	43	15	225	31	220	550	59	240	251	
17:30	12	28	11	212	30	163	456	40	223	193	
17:45	9	38	7	204	14	146	418	47	211	160	
18:00	8	36	5	153	13	130	345	44	158	143	
18:15	13	32	7	179	22	144	397	45	186	166	
18:30	10	17	2	138	26	129	322	27	140	155	
18:45	13	22	5	139	19	121	319	35	144	140	
19:00	11	22	11	128	15	122	309	33	139	137	
19:15	9	31	3	82	17	132	274	40	85	149	
19:30	5	12	5	87	12	106	227	17	92	118	
19:45	2	6	1	85	15	98	207	8	86	113	
20:00	3	10	1	74	17	84	189	13	75	101	
20:15	0	9	2	96	12	78	197	9	98	90	
20:30	1	9	0	83	12	87	192	10	83	99	
20:45	4	10	1	69	13	69	166	14	70	82	
21:00	3	12	3	52	5	41	116	15	55	46	
21:15	0	8	1	55	14	70	148	8	56	84	
21:30	2	2	2	49	5	59	119	4	51	64	
21:45	2	9	0	53	6	41	111	11	53	47	
Total Count	467	1392	518	9832	1346	9465	23020	1859	10350	10811	
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
24hr Volume	514	1532	570	10816	1481	10412	25322	2045	11385	11893	

Summary of Traffic Count Transportation Development Division

Site: 49196	Date: 4/3/2018
County: Yamhill	Hours: 2:00 PM-6:00 PM
City: McMinnville	Highway #: 039
	HIGHWAY NO. 39 (OR18)
Milepoint: 47.67	Location: at Armory Way
Count Number: 1.00	Weather:

Time of Day	Summary By Movements							Entering Volumes		
	E-S	E-W	S-E	S-W	W-E	W-S	TOTAL	East	South	West
14:00	0	167	1	0	150	0	318	167	1	150
14:15	0	173	1	1	165	0	340	173	2	165
14:30	0	169	0	2	183	1	355	169	2	184
14:45	1	193	0	0	177	2	373	194	0	179
15:00	1	201	1	0	190	1	394	202	1	191
15:15	2	189	1	2	186	2	382	191	3	188
15:30	1	190	0	2	202	1	396	191	2	203
15:45	1	222	1	4	220	0	448	223	5	220
16:00	1	258	3	1	230	2	495	259	4	232
16:15	0	268	2	1	212	1	484	268	3	213
16:30	0	248	3	6	229	0	486	248	9	229
16:45	0	262	1	0	236	0	499	262	1	236
17:00	0	249	1	0	260	1	511	249	1	261
17:15	0	236	2	0	228	0	466	236	2	228
17:30	0	221	0	0	183	1	405	221	0	184
17:45	0	213	0	1	157	1	372	213	1	158
Total Count	7	3459	17	20	3208	13	6724	3466	37	3221
24hr Factor	1	1	1	1	1	1	1	1	1	1
24hr Volume	7	3459	17	20	3208	13	6724	3466	37	3221

**Summary of Traffic Count
Transportation Development Division**

Site: 48441	Date: 4/13/2018
County: Yamhill	Hours: 2:00 PM-6:00 PM
City: McMinnville	Highway #: 039
Milepoint: 48.53	SALMON RIVER HIGHWAY
Count Number: 1.00	Location: NO. 39 at SE Loop Rd (local)
	Weather:

Time of Day	Summary By Movements							Entering Volumes		
	N-E	N-W	E-N	E-W	W-N	W-E	TOTAL	North	East	West
14:00	2	11	3	156	3	141	316	13	159	144
14:15	0	2	1	156	5	149	313	2	157	154
14:30	2	9	1	155	5	157	329	11	156	162
14:45	3	2	1	177	6	179	368	5	178	185
15:00	2	7	4	190	5	180	388	9	194	185
15:15	4	4	1	176	3	174	362	8	177	177
15:30	1	5	2	173	4	181	366	6	175	185
15:45	1	5	0	223	4	206	439	6	223	210
16:00	1	4	0	241	3	226	475	5	241	229
16:15	2	5	0	261	1	205	474	7	261	206
16:30	2	4	2	241	3	228	480	6	243	231
16:45	4	5	1	247	2	220	479	9	248	222
17:00	3	4	0	236	1	257	501	7	236	258
17:15	0	5	1	215	1	226	448	5	216	227
17:30	1	5	0	213	1	181	401	6	213	182
17:45	3	1	3	207	3	146	363	4	210	149
Total Count	31	78	20	3267	50	3056	6502	109	3287	3106
24hr Factor	1	1	1	1	1	1	1	1	1	1
24hr Volume	31	78	20	3267	50	3056	6502	109	3287	3106

**Summary of Traffic Count
Transportation Development Division**

Site: 48447 Date: 4/3/2018
 County: Yamhill Hours: 6:00 AM-10:00 PM
 City: Highway #: 039
 Milepoint: 48.59 Location: NO. 39 at SE Cruickshank Rd
 Count Number: 1.00 Weather:

Time of Day	Summary By Movements						Entering Volumes			
	E-S	E-W	S-E	S-W	W-E	W-S	TOTAL	East	South	West
6:00	2	48	7	11	126	19	213	50	18	145
6:15	2	48	7	14	141	23	235	50	21	164
6:30	1	64	1	27	144	44	281	65	28	188
6:45	3	102	1	36	137	56	335	105	37	193
7:00	1	109	9	34	146	46	345	110	43	192
7:15	3	133	6	61	148	46	397	136	67	194
7:30	2	151	8	77	143	30	411	153	85	173
7:45	2	204	6	91	138	25	466	206	97	163
8:00	0	133	3	48	112	32	328	133	51	144
8:15	1	175	3	55	114	28	376	176	58	142
8:30	1	127	2	35	134	29	328	128	37	163
8:45	2	140	2	50	115	24	333	142	52	139
9:00	1	92	2	40	101	22	258	93	42	123
9:15	1	101	0	31	95	31	259	102	31	126
9:30	1	105	0	27	114	32	279	106	27	146
9:45	3	118	2	33	111	22	289	121	35	133
10:00	0	126	1	33	99	33	292	126	34	132
10:15	0	114	1	24	134	28	301	114	25	162
10:30	2	130	2	25	112	26	297	132	27	138
10:45	0	117	1	42	100	32	292	117	43	132
11:00	3	121	0	21	100	26	271	124	21	126
11:15	0	133	1	43	102	27	306	133	44	129
11:30	1	117	2	35	136	23	314	118	37	159
11:45	2	148	4	30	116	25	325	150	34	141
12:00	1	133	3	34	125	36	332	134	37	161
12:15	3	119	2	30	86	20	260	122	32	106
12:30	3	143	3	27	131	26	333	146	30	157
12:45	1	131	1	23	124	25	305	132	24	149
13:00	1	105	3	32	132	37	310	106	35	169
13:15	1	118	2	31	132	38	322	119	33	170
13:30	2	118	1	24	98	35	278	120	25	133
13:45	0	135	4	43	114	30	326	135	47	144
14:00	1	125	0	32	118	25	301	126	32	143
14:15	3	124	2	36	125	24	314	127	38	149
14:30	2	117	4	36	141	18	318	119	40	159
14:45	2	140	0	38	145	37	362	142	38	182
15:00	2	151	0	45	150	32	380	153	45	182
15:15	3	130	4	46	133	43	359	133	50	176
15:30	1	143	6	32	141	46	369	144	38	187
15:45	2	178	1	46	167	44	438	180	47	211
16:00	8	179	2	61	171	55	476	187	63	226
16:15	5	197	3	64	168	39	476	202	67	207
16:30	5	184	1	58	183	49	480	189	59	232
16:45	7	184	3	64	171	51	480	191	67	222
17:00	4	168	3	67	203	64	509	172	70	267
17:15	4	156	4	61	171	55	451	160	65	226
17:30	4	166	7	47	128	53	405	170	54	181
17:45	3	164	2	47	121	27	364	167	49	148
18:00	4	110	1	31	113	17	276	114	32	130
18:15	2	134	0	36	108	31	311	136	36	139
18:30	0	114	2	33	119	22	290	114	35	141
18:45	0	100	1	32	107	23	263	100	33	130
19:00	1	102	0	20	106	32	261	103	20	138
19:15	3	57	1	23	95	32	211	60	24	127
19:30	1	68	1	17	83	30	200	69	18	113
19:45	3	62	1	17	70	20	173	65	18	90
20:00	3	63	1	25	65	15	172	66	26	80
20:15	0	66	2	12	58	15	153	66	14	73
20:30	2	65	0	13	65	13	158	67	13	78
20:45	1	57	1	14	67	9	149	58	15	76
21:00	1	43	0	9	30	14	97	44	9	44
21:15	0	41	0	9	49	13	112	41	9	62
21:30	0	47	0	10	43	13	113	47	10	56
21:45	2	35	0	14	30	7	88	37	14	37
Total Count	125	7528	143	2262	7504	1944	19506	7653	2405	9448
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
24hr Volume	138	8281	158	2489	8255	2139	21457	8419	2646	10393

**Summary of Traffic Count
Transportation Development Division**

Site: 48443	Date: 4/3/2018
County: Yamhill	Hours: 2:00 PM-6:00 PM
City: McMinnville	Highway #: 483
Milepoint: 47.16	HIGHWAY NO. 483 E.
Count Number: 1.00	Location: MCMINNVILLE FRONTAGE RD
	Weather:

Time of Day	Summary By Movements							Entering Volumes			
	N-S	N-W	S-N	S-W	W-N	W-S		TOTAL	North	South	West
14:00	39	12	35	16	16	5		123	51	51	21
14:15	32	16	32	14	14	9		117	48	46	23
14:30	50	19	26	14	13	13		135	69	40	26
14:45	31	16	38	20	14	10		129	47	58	24
15:00	38	10	20	16	11	13		108	48	36	24
15:15	35	18	33	17	12	13		128	53	50	25
15:30	46	14	32	14	16	14		136	60	46	30
15:45	37	22	28	19	17	12		135	59	47	29
16:00	41	16	39	28	9	9		142	57	67	18
16:15	34	13	26	21	7	8		109	47	47	15
16:30	41	6	31	20	10	18		126	47	51	28
16:45	46	9	31	17	9	12		124	55	48	21
17:00	54	20	33	8	13	26		154	74	41	39
17:15	39	7	26	20	10	17		119	46	46	27
17:30	26	5	21	8	10	16		86	31	29	26
17:45	21	8	21	11	8	14		83	29	32	22
Total Count	610	211	472	263	189	209		1954	821	735	398
24hr Factor	1	1	1	1	1	1		1	1	1	1
24hr Volume	610	211	472	263	189	209		1954	821	735	398

**Summary of Traffic Count
Transportation Development Division**

Site: 48444
County: Yamhill
City: McMinnville

Date: 4/3/2018
Hours: 6:00 AM-10:00 PM
Highway #: 7077

Milepoint: 46.99
Count Number: 1.00

Location: 3 Mile Ln at First St
Weather:

Time of Day	Summary By Movements													TOTAL	Entering Volumes			
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	North		East	South	West	
6:00	0	49	0	1	0	0	29	0	11	0	1	31	122	49	1	40	32	
6:15	1	53	1	0	0	0	33	0	7	1	0	33	129	55	0	40	34	
6:30	0	91	0	0	0	1	40	0	11	0	0	46	189	91	1	51	46	
6:45	1	102	2	1	0	1	71	0	15	0	0	55	248	105	2	86	55	
7:00	0	89	0	1	0	0	63	0	17	1	0	47	218	89	1	80	48	
7:15	0	96	0	0	1	0	95	0	31	1	0	53	277	96	1	126	54	
7:30	0	90	1	0	0	0	115	0	40	0	0	45	291	91	0	155	45	
7:45	0	130	6	1	0	0	167	0	58	1	0	62	425	136	1	225	63	
8:00	1	151	0	2	0	0	119	0	27	0	0	61	361	152	2	146	61	
8:15	1	145	2	0	0	0	81	0	29	1	0	52	311	148	0	110	53	
8:30	0	90	0	0	0	0	99	0	26	0	0	48	263	90	0	125	48	
8:45	0	108	0	0	0	0	112	0	30	1	0	36	287	108	0	142	37	
9:00	0	95	1	2	0	0	103	1	30	0	0	38	270	96	2	134	38	
9:15	0	112	0	1	0	0	109	1	28	0	0	29	280	112	1	138	29	
9:30	1	110	0	1	0	0	83	1	31	0	0	30	257	111	1	115	30	
9:45	3	95	1	2	1	0	113	1	36	1	0	28	281	99	3	150	29	
10:00	0	116	1	0	0	0	119	0	26	2	0	47	311	117	0	145	49	
10:15	0	123	0	0	1	0	106	2	40	1	0	46	319	123	1	148	47	
10:30	0	107	0	1	0	0	123	0	34	1	0	38	304	107	1	157	39	
10:45	0	106	1	1	0	0	105	0	32	0	0	38	283	107	1	137	38	
11:00	0	109	0	0	0	0	112	1	22	1	0	33	278	109	0	135	34	
11:15	1	88	0	1	0	0	123	0	36	2	0	40	291	89	1	159	42	
11:30	0	114	0	0	0	0	129	0	39	0	0	37	319	114	0	168	37	
11:45	1	107	1	0	0	0	134	1	38	1	0	23	306	109	0	173	24	
12:00	0	143	3	0	0	0	131	0	46	1	0	42	366	146	0	177	43	
12:15	1	112	1	0	0	0	121	0	44	1	1	42	323	114	0	165	44	
12:30	0	114	1	0	1	0	112	0	24	2	0	38	292	115	1	136	40	
12:45	1	103	3	0	0	0	120	0	33	1	0	49	310	107	0	153	50	
13:00	1	115	1	0	0	0	96	1	30	0	0	37	281	117	0	127	37	
13:15	1	126	1	1	0	0	110	0	26	0	1	56	322	128	1	136	57	
13:30	1	99	0	2	0	0	104	0	28	1	0	51	286	100	2	132	52	
13:45	0	109	0	0	0	0	127	0	37	3	0	26	302	109	0	164	29	
14:00	0	119	0	0	0	0	158	2	33	0	0	43	355	119	0	193	43	
14:15	0	129	1	1	0	0	119	0	36	0	0	42	328	130	1	155	42	
14:30	1	144	0	2	0	0	142	0	38	1	0	39	367	145	2	180	40	
14:45	2	123	7	0	0	0	138	0	57	1	0	56	384	132	0	195	57	
15:00	1	138	2	0	0	0	143	0	38	0	0	48	370	141	0	181	48	
15:15	0	141	0	0	1	0	135	0	38	0	0	42	357	141	1	173	42	
15:30	3	184	0	0	0	1	140	1	43	0	0	43	415	187	1	184	43	
15:45	0	165	0	0	2	0	112	0	39	1	0	44	363	165	2	151	45	
16:00	0	151	0	1	0	0	184	1	53	0	0	49	439	151	1	238	49	
16:15	1	170	1	0	0	0	159	0	65	0	0	42	438	172	0	224	42	
16:30	1	157	2	2	1	0	149	2	58	0	0	64	436	160	3	209	64	
16:45	2	196	2	0	0	0	138	0	55	2	0	74	469	200	0	193	76	
17:00	0	219	0	0	0	0	170	1	59	2	0	60	511	219	0	230	62	
17:15	2	184	0	1	0	0	158	2	65	2	0	61	475	186	1	225	63	
17:30	1	147	0	0	0	0	146	0	50	0	0	42	386	148	0	196	42	
17:45	1	128	1	0	0	0	140	0	60	1	0	37	368	130	0	200	38	
18:00	3	98	0	0	0	0	153	0	71	0	0	41	366	101	0	224	41	
18:15	1	121	1	0	0	0	120	1	42	0	0	42	328	123	0	163	42	
18:30	0	132	0	0	0	0	96	1	42	1	0	37	309	132	0	139	38	
18:45	0	109	2	2	0	0	63	1	36	0	1	37	251	111	2	100	38	
19:00	3	106	0	0	0	0	83	0	24	0	1	27	244	109	0	107	28	
19:15	0	81	0	0	0	0	89	0	33	1	0	31	235	81	0	122	32	
19:30	3	88	0	1	0	0	70	0	29	0	0	16	207	91	1	99	16	
19:45	1	68	0	2	0	0	48	0	21	1	0	26	167	69	2	69	27	
20:00	1	79	0	1	0	0	48	1	23	0	0	18	171	80	1	72	18	
20:15	0	69	0	0	0	0	57	0	14	0	0	12	152	69	0	71	12	
20:30	1	44	0	1	0	0	43	0	23	0	0	25	137	45	1	66	25	
20:45	2	43	0	0	0	0	53	0	21	2	0	14	135	45	0	74	16	
21:00	0	30	0	0	0	0	29	0	16	0	0	7	82	30	0	45	7	
21:15	2	41	0	0	0	0	39	0	15	1	0	11	109	43	0	54	12	
21:30	0	33	0	1	0	0	26	0	12	0	0	14	86	33	1	38	14	
21:45	0	25	0	0	0	0	24	0	12	0	0	15	76	25	0	36	15	
Total Count	47	7059	46	33	8	3	6676	22	2183	40	5	2496	18618	7152	44	8881	2541	
24hr Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
24hr Volume	52	7765	51	37	9	4	7344	25	2402	44	6	2746	20480	7868	49	9770	2796	

3rd St at Johnson St (McMinnville)

Time	Ph1	Ph2	Ph3	Ph4	Ph5	Ph6	Ph7	Ph8
15:15	24	84		264	56	116	360	256
15:30	16	192		304	56	124	548	244
Peak Hour 15:45	8	120		352	32	136	512	352
17:00 16:00	20	120		304	56	120	400	228
18:00 16:15	20	92		300	44	152	376	184
16:30	32	128		340	60	156	516	232
16:45	28	132		332	24	200	532	292
17:00	36	236		400	28	180	516	312
17:15	28	160		424	48	180	508	272
17:30	16	92		272	40	112	440	196
17:45	28	76		288	28	104	324	176
18:00	20	96		212	64	132	360	172
18:15	12	60		296	28	140	316	124
18:30	4	124		276	36	124	348	240
18:45	16	108		308	48	104	280	132
19:00	0	56		212	24	76	232	108
19:15	4	40		140	16	72	196	88
19:30	16	76		144	16	40	228	92
19:45	4	84		140	40	36	116	100
20:00	20	48		132	28	56	168	224
20:15	4	76		120	40	56	128	132
20:30	0	40		128	4	52	116	76
20:45	4	60		68	28	52	108	88
21:00	8	36		76	20	32	96	84
21:15	0	20		92	24	48	84	36
21:30	0	36		108	16	32	80	60
21:45	12	16		44	8	40	56	44
22:00	12	24		68	0	40	68	32
22:15	0	12		52	4	12	32	44
22:30	4	24		48	16	24	48	20
22:45	0	20		24	4	24	32	12
23:00	0	12		24	4	20	28	12

TOTAL COUNTS: 214 1495 3653 624 1872 5027 3389
PEAK HOUR VOLUME: 44 236 424 80 200 548 436
PEAK HOUR TIME: 12:00 17:00 17:15 13:15 12:00 15:30 7:45

Col= 21 22 23 24 25 26 27 28 29
Col Letter= U V W X Y Z AA AB AC

PED Total

1160	5404	32
1484	5412	24
1512	5392	8
1248	5420	8
1168	5880	8
1464	6332	4
1540	6036	12
1708	5520	16
1620	4868	8
1168	4224	8
1024	4208	8
1056	4180	0
976	3832	4
1152	3412	8
996	2872	4
708	2396	4
556	2364	4
612	2364	4
520	2168	0
676	2056	4
556	1732	8
416	1480	0
408	1396	4
352	1208	0
304	1100	0
332	952	0
220	804	4
244	700	0
156	556	4
184		0
116		4
100		0

158

1708 6332

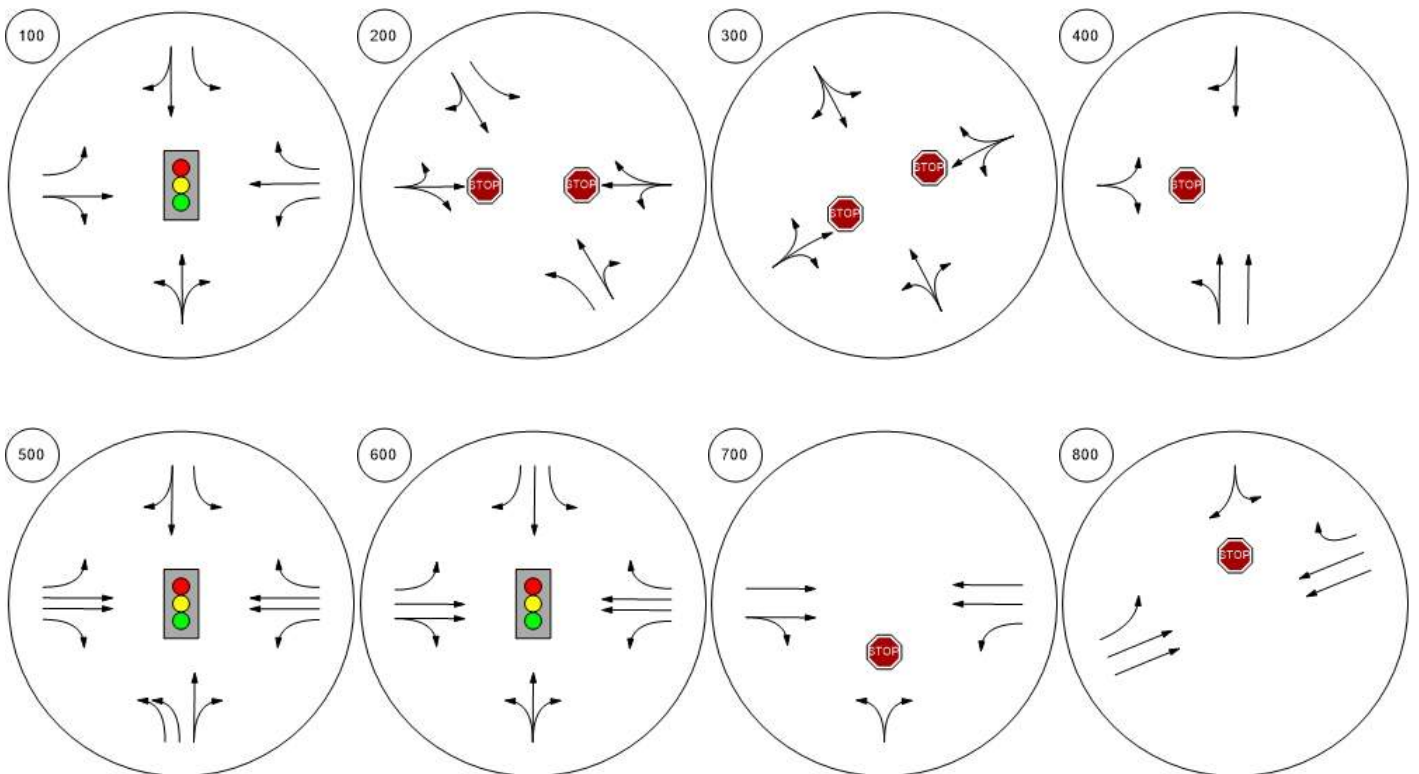
32

15:15

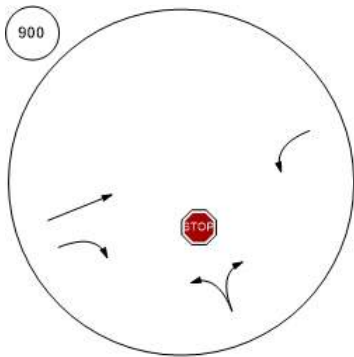
30	31	32	33	34	35	36
AD	AE	AF	AG	AH	AI	AJ

Appendix C 2020 Existing Traffic Volumes and Analysis

Lane Configuration and Traffic Control



Lane Configuration and Traffic Control



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Season Adjustment Factor Calcs

Date: June 4, 2020

36-004

	2015	2016	2017	2018	2019
Peak Month (August)	107%	108%	105%	105%	108%
Count Date (April 3 rd)	99%*	101%*	100%*	100%*	101%*

XXX% Outliers *Interpolated due to count date

Avg **Peak Month** (August) is: $(108\%+107\%+105\%)/3 = 106.7\%$

Avg **Count Date** (April 3rd) is: $(100\%+100\%+101\%)/3 = 100.3\%$

Seasonal adjustment for **Count Date** = $106.7\%/100.3\% = 1.064$

36-006

	2015	2016	2017	2018	2019
Peak Month (August)	114%	117%	116%	117%	118%
Count Date (April 3 rd)	98%*	99%*	100%*	97%*	99%*

XXX% Outliers *Interpolated due to count date

Avg **Peak Month** (August) is: $(117\%+116\%+117\%)/3 = 116.7\%$

Avg **Count Date** (April 3rd) is: $(98\%+99\%+99\%)/3 = 98.7\%$

Seasonal adjustment for **Count Date** = $116.7\%/98.7\% = 1.182$

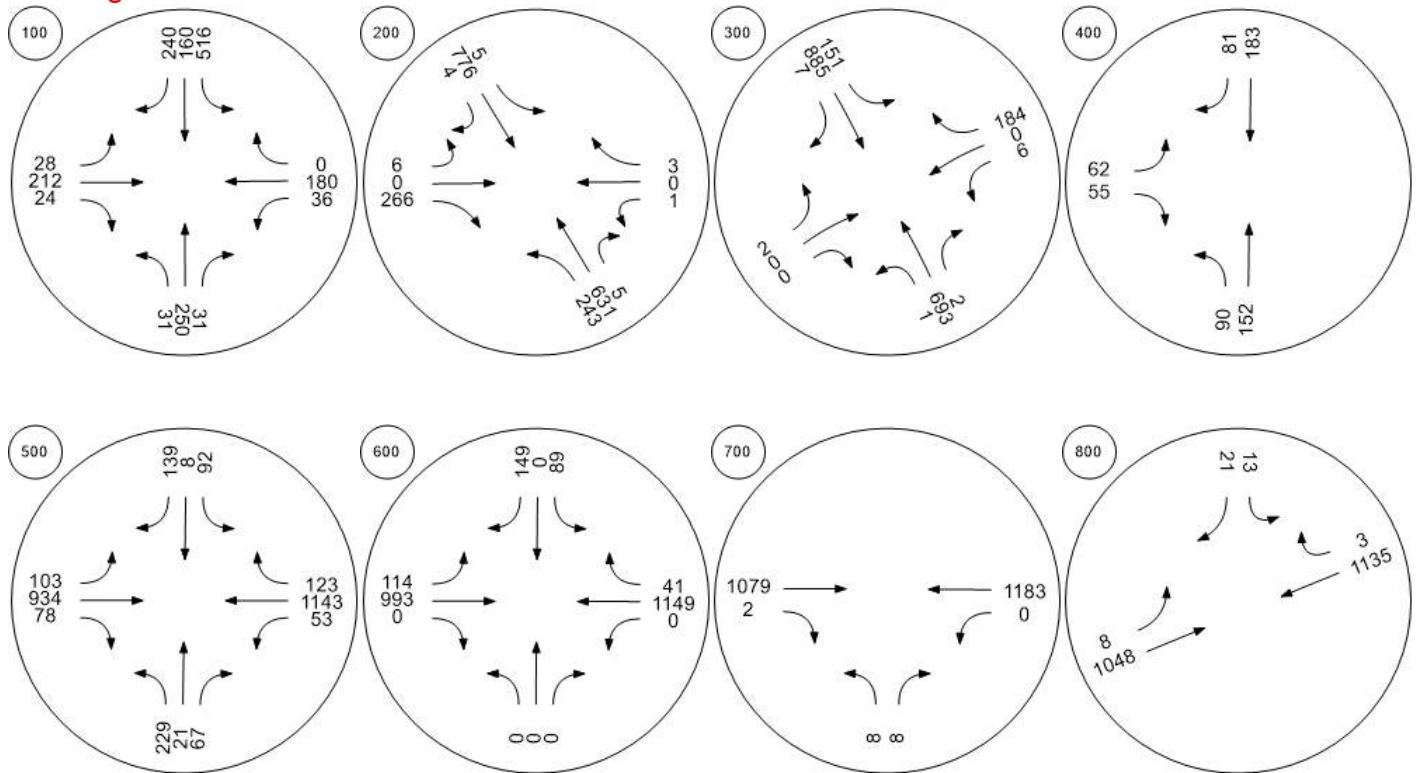
Average:

Seasonal adjustment for **Count Date** = 1.123

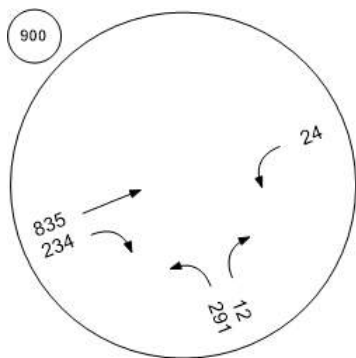
Traffic Volume - Base Volume



Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Base Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	36.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	63	8	129	40	60	7	53	6	9	45	0
Total Analysis Volume [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	102	102	102	102	102	102	102
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	35	63	2	17	11	26
g / C, Green / Cycle	0.23	0.34	0.61	0.02	0.16	0.11	0.25
(v / s)_i Volume / Saturation Flow Rate	0.21	0.32	0.26	0.02	0.14	0.02	0.11
s, saturation flow rate [veh/h]	1514	1603	1522	1603	1653	1603	1683
c, Capacity [veh/h]	391	545	931	33	272	70	422
d1, Uniform Delay [s]	33.90	27.17	4.38	49.73	38.98	40.17	28.43
k, delay calibration	0.27	0.34	0.17	0.08	0.22	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.79	21.34	0.50	32.73	15.20	5.69	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.95	0.43	0.85	0.87	0.51	0.43
d, Delay for Lane Group [s/veh]	42.69	48.51	4.88	82.46	54.18	45.85	29.11
Lane Group LOS	D	D	A	F	D	D	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.74	13.82	1.90	1.01	6.50	0.91	3.34
50th-Percentile Queue Length [ft/ln]	193.57	345.60	47.47	25.19	162.60	22.67	83.49
95th-Percentile Queue Length [veh/ln]	12.31	19.92	3.42	1.81	10.69	1.63	6.01
95th-Percentile Queue Length [ft/ln]	307.65	498.04	85.45	45.34	267.17	40.81	150.28

Movement, Approach, & Intersection Results

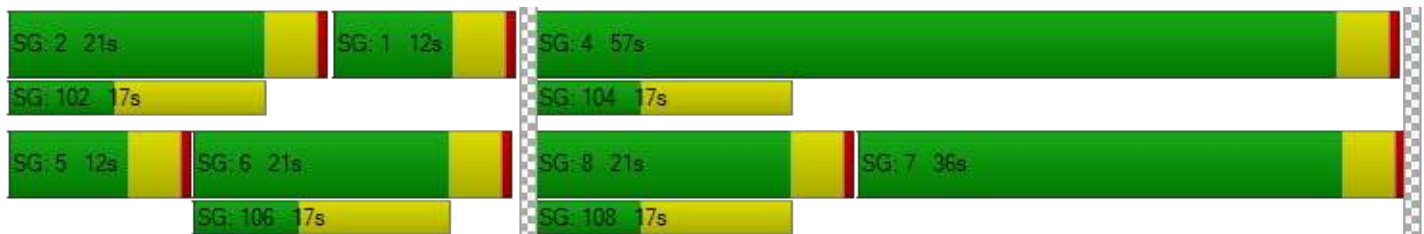
d_M, Delay for Movement [s/veh]	42.69	42.69	42.69	48.51	4.88	4.88	82.46	54.18	54.18	45.85	29.11	0.00
Movement LOS	D	D	D	D	A	A	F	D	D	D	C	
d_A, Approach Delay [s/veh]	42.69			29.45			57.18			31.90		
Approach LOS	D			C			E			C		
d_I, Intersection Delay [s/veh]	36.47											
Intersection LOS	D											
Intersection V/C	0.698											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.974	2.328	2.216	2.368
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.074	3.071	1.995	1.916
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Two-way stop	Delay (sec / veh):	696.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.182

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	65	170	1	1	209	1	2	0	72	0	0	1
Total Analysis Volume [veh/h]	261	678	5	5	834	4	6	0	286	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.01	0.00	0.01	0.01	0.00	0.20	0.00	0.78	0.18	0.00	0.01
d_M, Delay for Movement [s/veh]	11.71	0.00	0.00	9.36	0.00	0.00	188.40	166.88	80.95	696.66	136.61	48.90
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	E
95th-Percentile Queue Length [veh/ln]	1.43	0.00	0.00	0.02	0.00	0.00	9.94	9.94	9.94	0.55	0.55	0.55
95th-Percentile Queue Length [ft/ln]	35.80	0.00	0.00	0.45	0.00	0.00	248.48	248.48	248.48	13.87	13.87	13.87
d_A, Approach Delay [s/veh]	3.24			0.06			83.15			210.84		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	13.55											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.164

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	188	1	41	240	2	1	0	0	2	0	50
Total Analysis Volume [veh/h]	1	753	2	164	962	8	2	0	0	7	0	200
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			Yes	Yes
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.19	0.01	0.00	0.16	0.00	0.00	0.25	0.00	0.49
d_M, Delay for Movement [s/veh]	10.02	0.00	0.00	10.20	0.00	0.00	10000.0	10000.0	10000.0	162.16	144.12	42.57
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.71	0.71	0.71	1.00	1.00	1.00	5.32	5.32	5.32
95th-Percentile Queue Length [ft/ln]	0.10	0.10	0.10	17.64	17.64	17.64	25.00	25.00	25.00	133.09	133.09	133.09
d_A, Approach Delay [s/veh]	0.01			1.48			10000.00			46.61		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	14.93											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇂		⇨	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	152	183	81	62	55
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	40	48	21	16	14
Total Analysis Volume [veh/h]	95	160	193	85	65	58
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.14	0.07
d_M, Delay for Movement [s/veh]	8.09	0.00	0.00	0.00	13.47	9.87
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.24	0.12	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	6.10	3.05	0.00	0.00	12.23	12.23
d_A, Approach Delay [s/veh]	3.01		0.00		11.77	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.38					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	6	18	24	2	37	27	248	21	14	304	33
Total Analysis Volume [veh/h]	244	22	71	98	9	148	110	994	83	56	1216	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	60	0	20	60	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	112	112	112	112	112	112	112	112	112	112
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	11	22	9	20	64	55	55	64	53	53
g / C, Green / Cycle	0.10	0.20	0.08	0.18	0.57	0.49	0.49	0.57	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.06	0.11	0.19	0.31	0.06	0.09	0.38	0.09
s, saturation flow rate [veh/h]	3138	1376	1590	1466	586	3179	1396	629	3179	1408
c, Capacity [veh/h]	313	269	131	261	291	1544	678	334	1496	662
d1, Uniform Delay [s]	49.49	39.10	50.56	42.63	19.42	21.67	15.84	14.19	25.56	17.40
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.08	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.15	0.57	6.27	1.66	1.90	1.07	0.19	0.17	2.59	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.35	0.75	0.60	0.38	0.64	0.12	0.17	0.81	0.20
d, Delay for Lane Group [s/veh]	52.63	39.66	56.83	44.29	21.32	22.74	16.03	14.37	28.15	17.75
Lane Group LOS	D	D	E	D	C	C	B	B	C	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.48	2.26	2.92	4.13	1.31	9.27	1.14	0.59	13.31	1.94
50th-Percentile Queue Length [ft/ln]	86.90	56.54	73.03	103.24	32.86	231.76	28.47	14.67	332.83	48.42
95th-Percentile Queue Length [veh/ln]	6.26	4.07	5.26	7.43	2.37	14.26	2.05	1.06	19.30	3.49
95th-Percentile Queue Length [ft/ln]	156.42	101.78	131.45	185.82	59.14	356.60	51.25	26.40	482.43	87.16

Movement, Approach, & Intersection Results

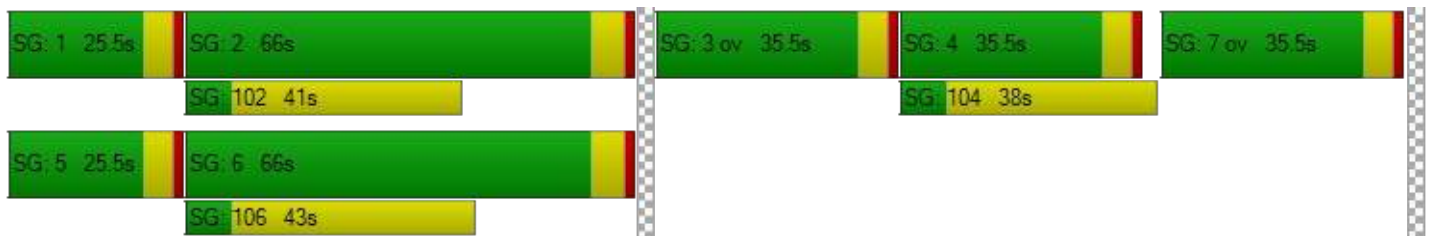
d_M, Delay for Movement [s/veh]	52.63	39.66	39.66	56.83	44.29	44.29	21.32	22.74	16.03	14.37	28.15	17.75
Movement LOS	D	D	D	E	D	D	C	C	B	B	C	B
d_A, Approach Delay [s/veh]	49.05			49.11			22.14			26.63		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	29.13											
Intersection LOS	C											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.289	2.333	3.134	3.078
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1333	1333
d_b, Bicycle Delay [s]	3.33	2.69	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	2.116	1.980	2.539	2.717
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	23	0	39	30	259	0	0	299	11
Total Analysis Volume [veh/h]	0	0	0	93	0	155	119	1034	0	0	1197	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	5	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	5	5	10	0	5	10	0
Maximum Green [s]	0	20	0	0	30	20	20	60	0	20	60	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	4.5	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	2.5	2.5	4.0	0.0	2.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	3.5	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall		No			No	No	No	Yes		No	Yes	
Maximum Recall		No			No	No	No	No		No	No	
Pedestrian Recall		No			No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	68	68	68	68	68	68	68	68	68	68
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	10	10	10	23	46	41	41	46	33	33
g / C, Green / Cycle	0.15	0.15	0.15	0.34	0.68	0.60	0.60	0.68	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.00	0.07	0.00	0.11	0.18	0.31	0.31	0.00	0.38	0.03
s, saturation flow rate [veh/h]	1710	1265	1710	1408	675	1669	1669	584	3179	1454
c, Capacity [veh/h]	308	258	255	476	487	1003	1003	464	1567	716
d1, Uniform Delay [s]	0.00	26.65	0.00	16.75	8.22	7.85	7.85	0.00	14.03	9.02
k, delay calibration	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.08	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.63	0.00	0.29	0.37	0.59	0.59	0.00	1.13	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.36	0.00	0.33	0.24	0.52	0.52	0.00	0.76	0.06
d, Delay for Lane Group [s/veh]	0.00	27.29	0.00	17.04	8.58	8.43	8.43	0.00	15.17	9.07
Lane Group LOS	A	C	A	B	A	A	A	A	B	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	1.37	0.00	1.71	0.45	3.65	3.65	0.00	6.67	0.31
50th-Percentile Queue Length [ft/ln]	0.00	34.26	0.00	42.81	11.32	91.25	91.25	0.00	166.78	7.66
95th-Percentile Queue Length [veh/ln]	0.00	2.47	0.00	3.08	0.82	6.57	6.57	0.00	10.91	0.55
95th-Percentile Queue Length [ft/ln]	0.00	61.66	0.00	77.07	20.38	164.26	164.26	0.00	272.68	13.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	27.29	0.00	17.04	8.58	8.43	8.43	0.00	15.17	9.07
Movement LOS	A	A	A	C	A	B	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	0.00			20.88			8.45			14.96		
Approach LOS	A			C			A			B		
d_I, Intersection Delay [s/veh]	12.67											
Intersection LOS	B											
Intersection V/C	0.540											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.714	2.319	2.788	2.969
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	444	667	1333	1333
d_b, Bicycle Delay [s]	27.22	20.00	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	1.560	1.969	2.511	2.583
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	52.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.098

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	8	1079	2	0	1183
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	278	1	0	305
Total Analysis Volume [veh/h]	8	8	1112	2	0	1220
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	52.30	15.82	0.00	0.00	10.67	0.00
Movement LOS	F	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.38	0.38	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.46	9.46	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	34.06		0.00		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	74.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.216

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	21	8	1048	1135	3
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	2	270	293	1
Total Analysis Volume [veh/h]	13	22	8	1080	1170	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.05	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	74.45	23.02	11.91	0.00	0.00	0.00
Movement LOS	F	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	1.01	1.01	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	25.17	25.17	1.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	42.12		0.09		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.68					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	116.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.045

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔		↕↔		↖	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	291	12	835	234	24	844
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	3	217	61	6	220
Total Analysis Volume [veh/h]	303	13	870	244	25	879
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

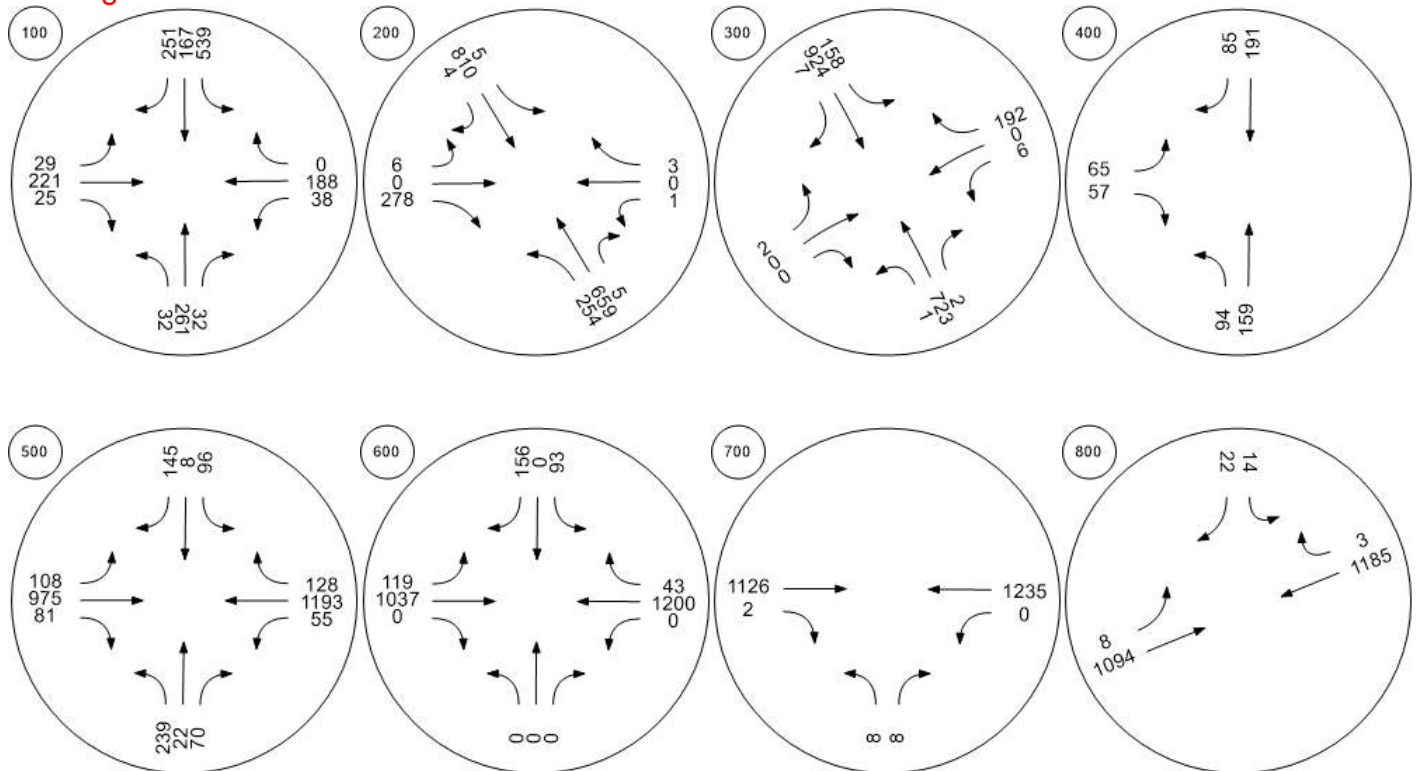
V/C, Movement V/C Ratio	1.05	0.04	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	115.99	114.18	0.00	0.00	9.75	0.00
Movement LOS	F	F	A	A	A	
95th-Percentile Queue Length [veh/ln]	12.51	12.51	0.00	0.00	0.10	0.00
95th-Percentile Queue Length [ft/ln]	312.79	312.79	0.00	0.00	2.47	0.00
d_A, Approach Delay [s/veh]	115.91		0.00		9.75	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	25.34					
Intersection LOS	F					

Appendix D 2022 Background Traffic
Volumes and Analysis

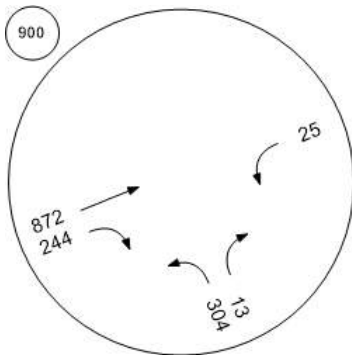
Traffic Volume - Future Total Volume



Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	261	32	539	167	251	29	221	25	38	188	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	65	8	135	42	63	7	55	6	10	47	0
Total Analysis Volume [veh/h]	32	261	32	539	167	251	29	221	25	38	188	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	113	113	113	113	113	113	113
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	27	39	70	2	19	12	28
g / C, Green / Cycle	0.24	0.35	0.62	0.02	0.17	0.11	0.25
(v / s)_i Volume / Saturation Flow Rate	0.22	0.34	0.27	0.02	0.15	0.02	0.11
s, saturation flow rate [veh/h]	1506	1603	1522	1603	1653	1603	1683
c, Capacity [veh/h]	391	558	943	35	278	64	424
d1, Uniform Delay [s]	37.39	29.54	4.45	54.54	42.66	44.40	31.29
k, delay calibration	0.33	0.43	0.20	0.08	0.30	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.03	27.70	0.61	29.02	21.05	8.56	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.97	0.44	0.83	0.88	0.60	0.44
d, Delay for Lane Group [s/veh]	50.41	57.24	5.06	83.56	63.71	52.95	32.02
Lane Group LOS	D	E	A	F	E	D	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.44	16.93	2.12	1.09	7.90	1.09	3.89
50th-Percentile Queue Length [ft/ln]	236.05	423.28	52.99	27.37	197.47	27.25	97.27
95th-Percentile Queue Length [veh/ln]	14.48	23.68	3.82	1.97	12.51	1.96	7.00
95th-Percentile Queue Length [ft/ln]	362.04	591.98	95.38	49.27	312.70	49.06	175.08

Movement, Approach, & Intersection Results

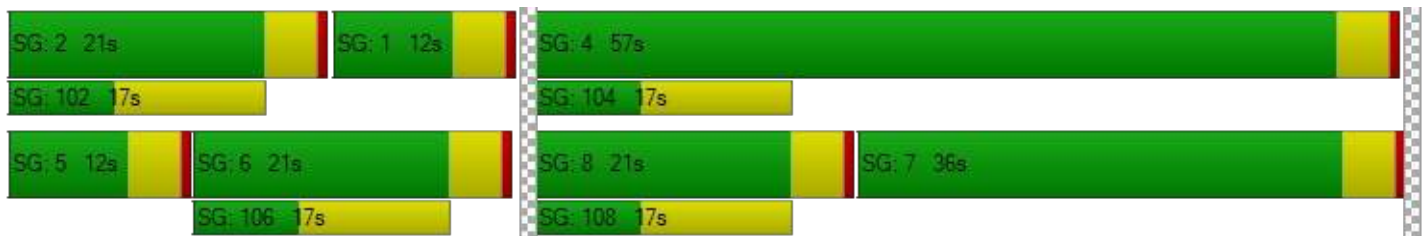
d_M, Delay for Movement [s/veh]	50.41	50.41	50.41	57.24	5.06	5.06	83.56	63.71	63.71	52.95	32.02	0.00
Movement LOS	D	D	D	E	A	A	F	E	E	D	C	
d_A, Approach Delay [s/veh]	50.41			34.45			65.81			35.54		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	42.33											
Intersection LOS	D											
Intersection V/C	0.727											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.985	2.345	2.228	2.379
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.096	3.139	2.013	1.933
Bicycle LOS	B	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Two-way stop	Delay (sec / veh):	1,320.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.334

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔			↔			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	659	5	5	810	4	6	0	278	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	177	1	1	218	1	2	0	75	0	0	1
Total Analysis Volume [veh/h]	273	709	5	5	871	4	6	0	299	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.35	0.01	0.00	0.01	0.01	0.00	0.23	0.00	0.85	0.33	0.00	0.01
d_M, Delay for Movement [s/veh]	12.20	0.00	0.00	9.48	0.00	0.00	246.08	219.59	116.02	1320.74	233.05	127.57
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	1.60	0.00	0.00	0.02	0.00	0.00	12.31	12.31	12.31	0.83	0.83	0.83
95th-Percentile Queue Length [ft/ln]	40.05	0.00	0.00	0.47	0.00	0.00	307.67	307.67	307.67	20.82	20.82	20.82
d_A, Approach Delay [s/veh]	3.37			0.05			118.58			425.86		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	18.96											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.225

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	723	2	158	924	7	2	0	0	6	0	192
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	196	1	43	251	2	1	0	0	2	0	52
Total Analysis Volume [veh/h]	1	786	2	172	1004	8	2	0	0	7	0	209
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			Yes	Yes
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.21	0.01	0.00	0.23	0.00	0.00	0.31	0.00	0.53
d_M, Delay for Movement [s/veh]	10.20	0.00	0.00	10.46	0.00	0.00	10000.0	10000.0	10000.0	210.76	190.20	59.86
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.78	0.78	0.78	1.00	1.00	1.00	6.83	6.83	6.83
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.11	19.38	19.38	19.38	25.00	25.00	25.00	170.64	170.64	170.64
d_A, Approach Delay [s/veh]	0.01			1.52			10000.00			64.75		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	16.34											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	13.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.153

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	159	191	85	65	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	42	50	22	17	15
Total Analysis Volume [veh/h]	99	167	201	89	68	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.15	0.07
d_M, Delay for Movement [s/veh]	8.14	0.00	0.00	0.00	13.86	10.00
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.26	0.13	0.00	0.00	0.54	0.54
95th-Percentile Queue Length [ft/ln]	6.45	3.23	0.00	0.00	13.43	13.43
d_A, Approach Delay [s/veh]	3.03		0.00		12.05	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.43					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	22	70	96	8	145	108	975	81	55	1193	128
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	6	19	26	2	39	29	259	22	15	317	34
Total Analysis Volume [veh/h]	254	23	74	102	9	154	115	1037	86	59	1269	136
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	60	0	20	60	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	117	117	117	117	117	117	117	117	117	117
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	12	23	10	21	67	58	58	67	56	56
g / C, Green / Cycle	0.10	0.20	0.08	0.18	0.57	0.49	0.49	0.57	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.06	0.11	0.20	0.33	0.06	0.10	0.40	0.10
s, saturation flow rate [veh/h]	3138	1376	1590	1466	567	3179	1396	608	3179	1408
c, Capacity [veh/h]	320	272	133	263	276	1558	684	318	1506	667
d1, Uniform Delay [s]	51.56	40.67	52.72	44.50	21.76	22.67	16.27	15.20	27.10	18.02
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.08	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.32	0.58	6.62	1.76	2.36	1.16	0.19	0.21	3.13	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.36	0.76	0.62	0.42	0.67	0.13	0.19	0.84	0.20
d, Delay for Lane Group [s/veh]	54.89	41.26	59.34	46.26	24.12	23.83	16.47	15.40	30.23	18.38
Lane Group LOS	D	D	E	D	C	C	B	B	C	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.80	2.47	3.19	4.51	1.46	10.30	1.23	0.65	15.02	2.11
50th-Percentile Queue Length [ft/ln]	94.92	61.83	79.71	112.67	36.56	257.58	30.84	16.31	375.45	52.82
95th-Percentile Queue Length [veh/ln]	6.83	4.45	5.74	7.99	2.63	15.57	2.22	1.17	21.37	3.80
95th-Percentile Queue Length [ft/ln]	170.86	111.30	143.47	199.71	65.80	389.18	55.51	29.36	534.34	95.07

Movement, Approach, & Intersection Results

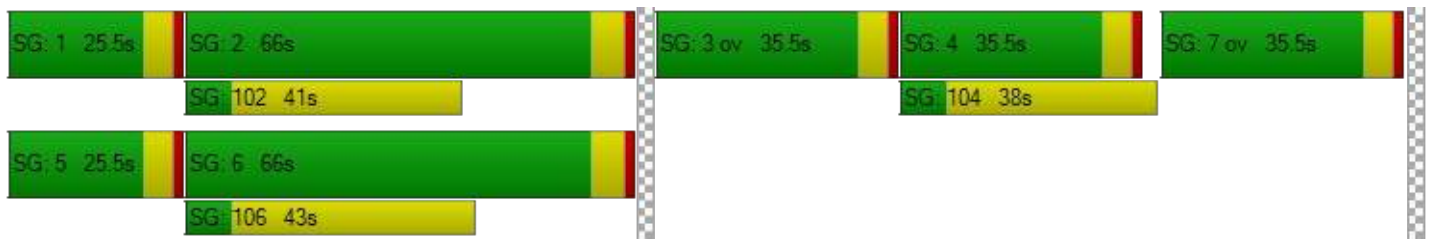
d_M, Delay for Movement [s/veh]	54.89	41.26	41.26	59.34	46.26	46.26	24.12	23.83	16.47	15.40	30.23	18.38
Movement LOS	D	D	D	E	D	D	C	C	B	B	C	B
d_A, Approach Delay [s/veh]	51.12			51.29			23.34			28.53		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	30.80											
Intersection LOS	C											
Intersection V/C	0.701											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.296	2.342	3.163	3.105
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1333	1333
d_b, Bicycle Delay [s]	3.33	2.69	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	2.139	1.997	2.581	2.767
Bicycle LOS	B	A	B	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.561

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	93	0	156	119	1037	0	0	1200	43
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	24	0	41	31	270	0	0	313	11
Total Analysis Volume [veh/h]	0	0	0	97	0	163	124	1080	0	0	1250	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	5	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	5	5	10	0	5	10	0
Maximum Green [s]	0	20	0	0	30	20	20	60	0	20	60	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	4.5	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	2.5	2.5	4.0	0.0	2.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	3.5	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall		No			No	No	No	Yes		No	Yes	
Maximum Recall		No			No	No	No	No		No	No	
Pedestrian Recall		No			No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	73	73	73	73	73	73	73	73	73	73
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	11	11	11	24	51	45	45	51	37	37
g / C, Green / Cycle	0.15	0.15	0.15	0.33	0.70	0.62	0.62	0.70	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.00	0.08	0.00	0.12	0.19	0.32	0.32	0.00	0.39	0.03
s, saturation flow rate [veh/h]	1710	1265	1710	1408	657	1669	1669	557	3179	1454
c, Capacity [veh/h]	298	248	248	471	476	1037	1037	447	1614	738
d1, Uniform Delay [s]	0.00	28.88	0.00	18.24	9.07	7.72	7.72	0.00	14.54	9.11
k, delay calibration	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.08	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.75	0.00	0.32	0.41	0.58	0.58	0.00	1.17	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.00	0.39	0.00	0.35	0.26	0.52	0.52	0.00	0.77	0.06
d, Delay for Lane Group [s/veh]	0.00	29.63	0.00	18.56	9.47	8.29	8.29	0.00	15.71	9.16
Lane Group LOS	A	C	A	B	A	A	A	A	B	A
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.00	1.56	0.00	1.99	0.49	3.98	3.98	0.00	7.54	0.34
50th-Percentile Queue Length [ft/ln]	0.00	39.12	0.00	49.73	12.28	99.40	99.40	0.00	188.47	8.45
95th-Percentile Queue Length [veh/ln]	0.00	2.82	0.00	3.58	0.88	7.16	7.16	0.00	12.04	0.61
95th-Percentile Queue Length [ft/ln]	0.00	70.41	0.00	89.51	22.11	178.92	178.92	0.00	301.04	15.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	29.63	0.00	18.56	9.47	8.29	8.29	0.00	15.71	9.16
Movement LOS	A	A	A	C	A	B	A	A	A	A	B	A
d_A, Approach Delay [s/veh]	0.00			22.69			8.42			15.48		
Approach LOS	A			C			A			B		
d_I, Intersection Delay [s/veh]	13.08											
Intersection LOS	B											
Intersection V/C	0.561											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	1.714			2.330			2.810			2.992		
Crosswalk LOS	A			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	444			667			1333			1333		
d_b, Bicycle Delay [s]	27.22			20.00			5.00			5.00		
I_b,int, Bicycle LOS Score for Intersection	1.560			1.989			2.553			2.628		
Bicycle LOS	A			A			B			B		

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	58.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.110

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	8	1126	2	0	1235
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	290	1	0	318
Total Analysis Volume [veh/h]	8	8	1161	2	0	1273
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	58.52	16.92	0.00	0.00	10.92	0.00
Movement LOS	F	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.42	0.42	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.59	10.59	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	37.72		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	86.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.264

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	22	8	1094	1185	3
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	6	2	282	305	1
Total Analysis Volume [veh/h]	14	23	8	1128	1222	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.26	0.06	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	86.83	27.61	12.26	0.00	0.00	0.00
Movement LOS	F	D	B	A	A	A
95th-Percentile Queue Length [veh/ln]	1.25	1.25	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	31.23	31.23	1.21	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	50.02		0.09		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.81					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	158.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.158

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔		↕↔		↖	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	304	13	872	244	25	922
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	3	227	64	7	240
Total Analysis Volume [veh/h]	317	14	908	254	26	960
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

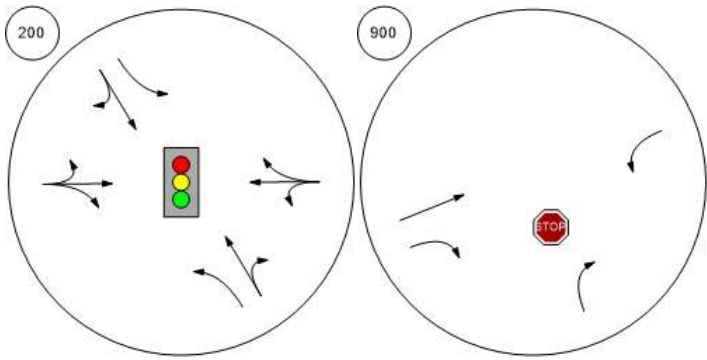
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.16	0.04	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	158.89	156.90	0.00	0.00	9.92	0.00
Movement LOS	F	F	A	A	A	
95th-Percentile Queue Length [veh/ln]	15.13	15.13	0.00	0.00	0.11	0.00
95th-Percentile Queue Length [ft/ln]	378.34	378.34	0.00	0.00	2.66	0.00
d_A, Approach Delay [s/veh]	158.81		0.00		9.92	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	34.77					
Intersection LOS	F					

Appendix E 2022 Mitigated Background Traffic Analysis

Lane Configuration and Traffic Control



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	40.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	659	5	5	810	4	6	0	278	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	177	1	1	218	1	2	0	75	0	0	1
Total Analysis Volume [veh/h]	273	709	5	5	871	4	6	0	299	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	82	82	82	82	82	82
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	54	40	40	19	19
g / C, Green / Cycle	0.67	0.67	0.49	0.49	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.34	0.42	0.01	0.52	0.21	0.00
s, saturation flow rate [veh/h]	808	1681	567	1682	1457	1203
c, Capacity [veh/h]	387	1119	208	821	389	339
d1, Uniform Delay [s]	21.00	7.95	25.73	20.98	30.22	23.96
k, delay calibration	0.50	0.13	0.11	0.50	0.14	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.33	0.73	0.05	50.60	4.38	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.64	0.02	1.07	0.78	0.01
d, Delay for Lane Group [s/veh]	31.33	8.68	25.78	71.58	34.60	23.97
Lane Group LOS	C	A	C	F	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.58	5.77	0.08	25.15	6.06	0.06
50th-Percentile Queue Length [ft/ln]	64.53	144.34	1.93	628.80	151.39	1.48
95th-Percentile Queue Length [veh/ln]	4.65	9.71	0.14	35.04	10.09	0.11
95th-Percentile Queue Length [ft/ln]	116.15	242.85	3.48	876.04	252.28	2.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.33	8.68	8.68	25.78	71.58	71.58	34.60	34.60	34.60	23.97	23.97	23.97
Movement LOS	C	A	A	C	F	E	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.94			71.32			34.60			23.97		
Approach LOS	B			E			C			C		
d_I, Intersection Delay [s/veh]	40.51											
Intersection LOS	D											
Intersection V/C	0.854											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.556			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.188			3.012			2.063			1.566		
Bicycle LOS	C			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	0	0	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	307	13	872	244	25	922
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	80	3	227	64	7	240
Total Analysis Volume [veh/h]	320	14	908	254	26	960
Pedestrian Volume [ped/h]	0		0		0	

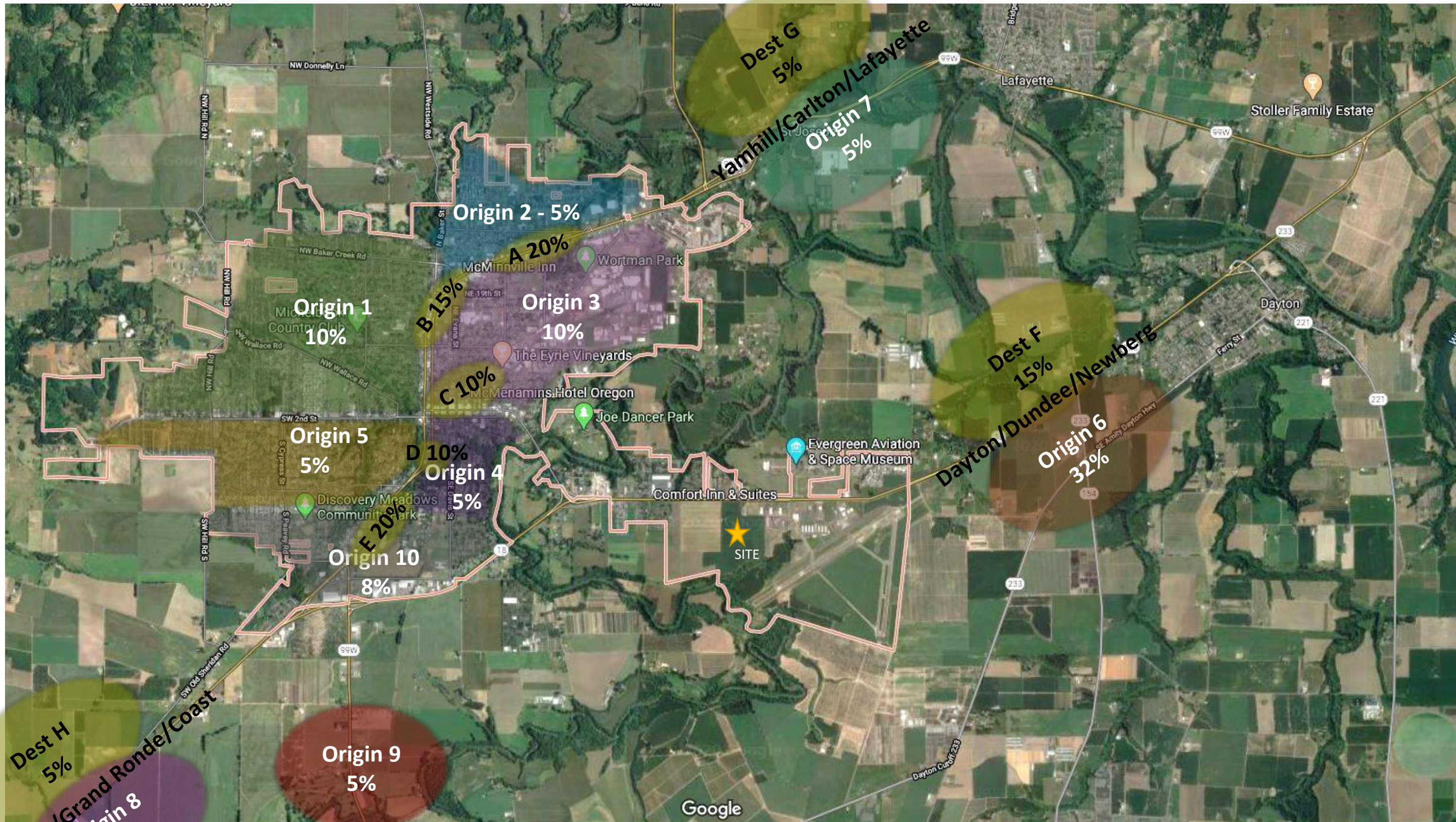
Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.04	0.01	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	16.67	0.00	0.00	9.92	0.00
Movement LOS		C	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.00	0.14	0.00	0.00	0.11	0.00
95th-Percentile Queue Length [ft/ln]	0.00	3.39	0.00	0.00	2.66	0.00
d_A, Approach Delay [s/veh]	16.67		0.00		9.92	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.41					
Intersection LOS	C					

Appendix F 2022 Total Traffic Volumes and Analysis



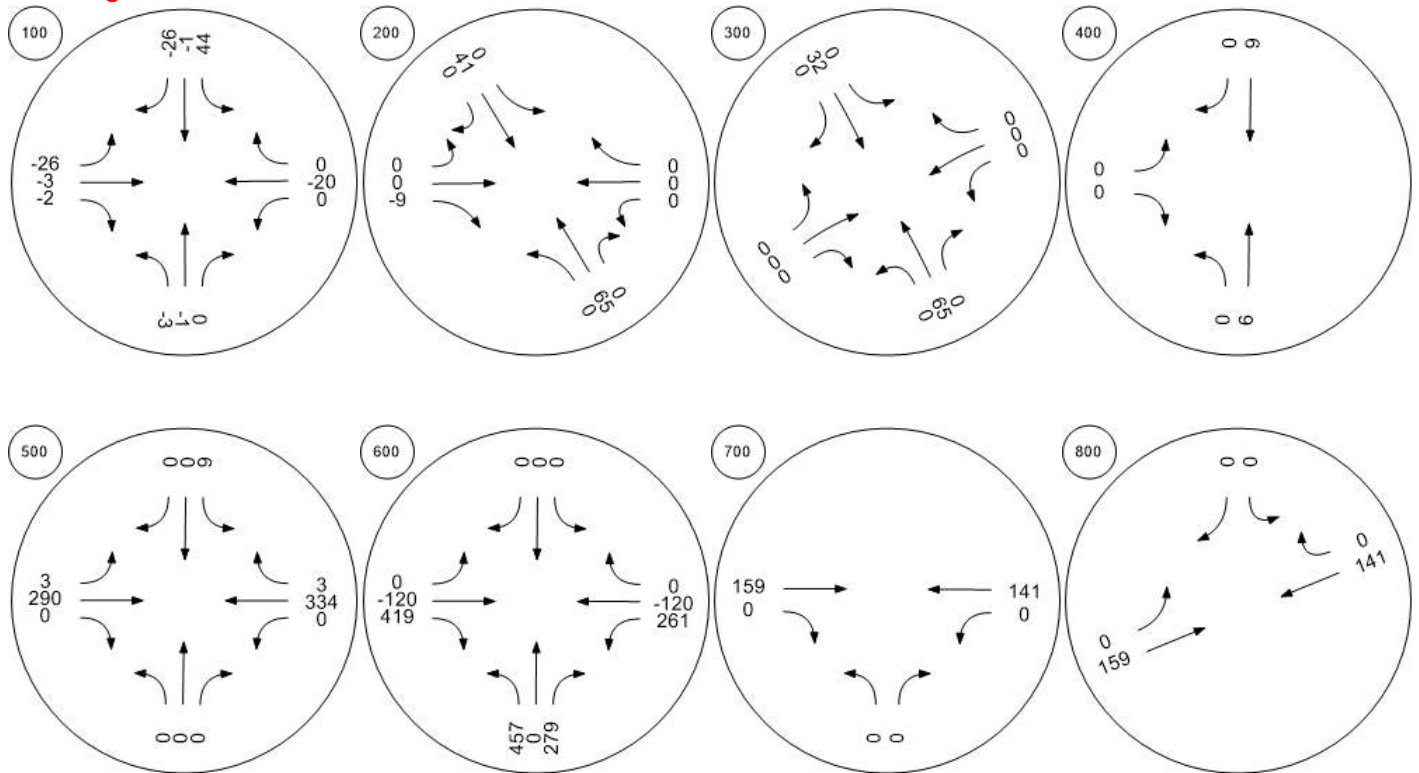
Sheridan/Grand Ronde/Coast
Origin 8
15%

Amity

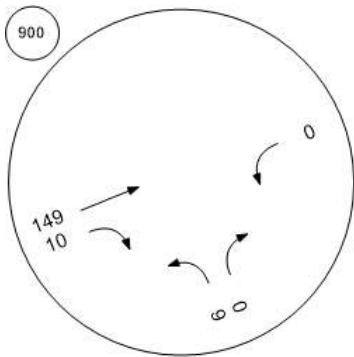
Traffic Volume - Net New Site Trips



Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Net New Site Trips

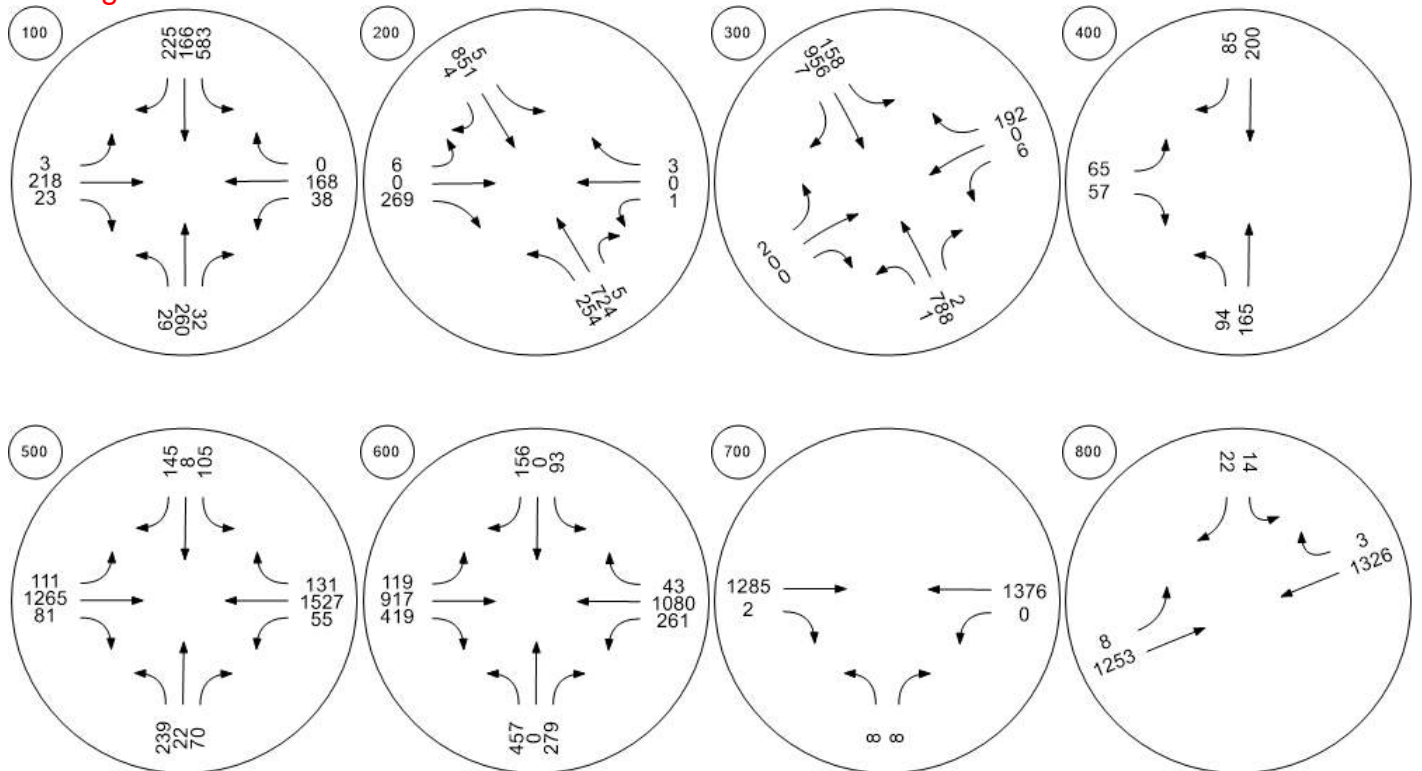


The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Traffic Volume - Future Total Volume



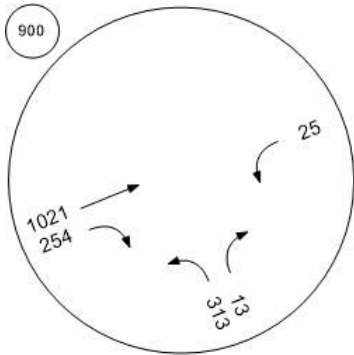
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	45.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-2	-1	0	45	0	-18	-4	17	0	0	-34	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	-1	0	0	-1	-1	-8	-22	-20	-2	0	14	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	260	32	583	166	225	3	218	23	38	168	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	65	8	146	42	56	1	55	6	10	42	0
Total Analysis Volume [veh/h]	29	260	32	583	166	225	3	218	23	38	168	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	111	111	111	111	111	111	111
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	40	69	0	18	12	30
g / C, Green / Cycle	0.23	0.36	0.62	0.00	0.17	0.11	0.27
(v / s)_i Volume / Saturation Flow Rate	0.20	0.36	0.26	0.00	0.15	0.02	0.10
s, saturation flow rate [veh/h]	1577	1603	1528	1603	1655	1603	1683
c, Capacity [veh/h]	392	575	949	4	274	65	452
d1, Uniform Delay [s]	37.43	29.07	4.26	55.48	42.39	43.81	28.83
k, delay calibration	0.30	0.47	0.17	0.08	0.28	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.86	40.06	0.46	87.42	19.86	8.24	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	1.01	0.41	0.68	0.88	0.59	0.37
d, Delay for Lane Group [s/veh]	48.29	69.13	4.72	142.90	62.25	52.05	29.34
Lane Group LOS	D	F	A	F	E	D	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.97	19.93	1.89	0.19	7.57	1.07	3.26
50th-Percentile Queue Length [ft/ln]	224.32	498.31	47.21	4.77	189.36	26.83	81.41
95th-Percentile Queue Length [veh/ln]	13.89	27.52	3.40	0.34	12.09	1.93	5.86
95th-Percentile Queue Length [ft/ln]	347.13	687.92	84.98	8.59	302.20	48.30	146.54

Movement, Approach, & Intersection Results

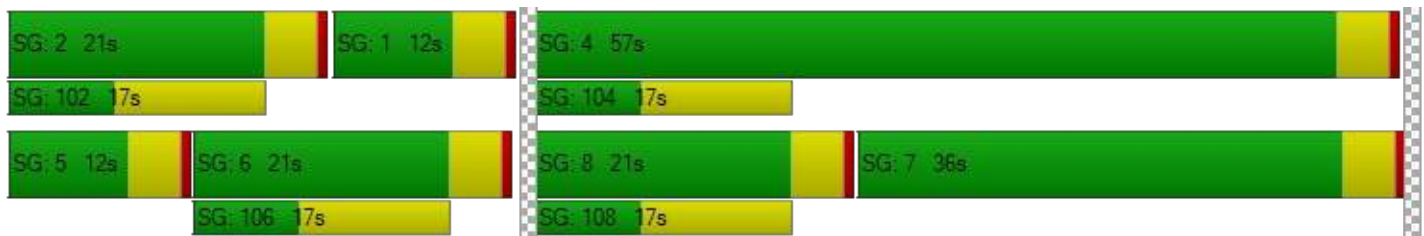
d_M, Delay for Movement [s/veh]	48.29	48.29	48.29	69.13	4.72	4.72	142.90	62.25	62.25	52.05	29.34	0.00
Movement LOS	D	D	D	F	A	A	F	E	E	D	C	
d_A, Approach Delay [s/veh]	48.29			43.27			63.24			33.53		
Approach LOS	D			D			E			C		
d_I, Intersection Delay [s/veh]	45.84											
Intersection LOS	D											
Intersection V/C	0.740											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	1.982	2.342	2.197	2.384
Crosswalk LOS	A	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.089	3.167	1.962	1.900
Bicycle LOS	B	C	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Two-way stop	Delay (sec / veh):	1,917.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.473

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↻			↵↻			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	724	5	5	851	4	6	0	269	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	195	1	1	229	1	2	0	72	0	0	1
Total Analysis Volume [veh/h]	273	778	5	5	915	4	6	0	289	1	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.37	0.01	0.00	0.01	0.01	0.00	0.29	0.00	0.87	0.47	0.00	0.01
d_M, Delay for Movement [s/veh]	12.64	0.00	0.00	9.76	0.00	0.00	305.81	271.20	144.85	1917.03	352.41	224.33
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	1.70	0.00	0.00	0.02	0.00	0.00	13.35	13.35	13.35	0.98	0.98	0.98
95th-Percentile Queue Length [ft/ln]	42.38	0.00	0.00	0.50	0.00	0.00	333.85	333.85	333.85	24.59	24.59	24.59
d_A, Approach Delay [s/veh]	3.27			0.05			148.12			647.50		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	21.85											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	10,000.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.325

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	2	0	0	6	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	-38	0	0	79	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	788	2	158	956	7	2	0	0	6	0	192
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	214	1	43	260	2	1	0	0	2	0	52
Total Analysis Volume [veh/h]	1	857	2	172	1039	8	2	0	0	7	0	209
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			Yes	Yes
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.22	0.01	0.00	0.33	0.00	0.00	0.40	0.00	0.58
d_M, Delay for Movement [s/veh]	10.36	0.00	0.00	10.90	0.00	0.00	10000.0	10000.0	10000.0	291.29	267.42	96.30
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.84	0.84	0.84	1.00	1.00	1.00	8.76	8.76	8.76
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.11	20.91	20.91	20.91	25.00	25.00	25.00	219.07	219.07	219.07
d_A, Approach Delay [s/veh]	0.01			1.54			10000.00			102.62		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	19.18											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.156

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	6	9	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	165	200	85	65	57
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	43	53	22	17	15
Total Analysis Volume [veh/h]	99	174	211	89	68	60
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.16	0.07
d_M, Delay for Movement [s/veh]	8.16	0.00	0.00	0.00	14.06	10.07
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.26	0.13	0.00	0.00	0.55	0.55
95th-Percentile Queue Length [ft/ln]	6.52	3.26	0.00	0.00	13.76	13.76
d_A, Approach Delay [s/veh]	2.96		0.00		12.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.38					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	48.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	199	0	0	65	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	3	0	-3	-1	-3	0	0	-1	1
Pass-by Trips [veh/h]	0	0	0	6	0	3	4	0	0	0	0	2
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	22	70	105	8	145	111	1265	81	55	1527	131
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	6	19	28	2	39	30	336	22	15	406	35
Total Analysis Volume [veh/h]	254	23	74	112	9	154	118	1346	86	59	1624	139
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	60	0	20	60	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	124	124	124	124	124	124	124	124	124	124
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	13	24	11	23	72	62	62	72	60	60
g / C, Green / Cycle	0.10	0.19	0.09	0.18	0.58	0.50	0.50	0.58	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.07	0.11	0.25	0.42	0.06	0.12	0.51	0.10
s, saturation flow rate [veh/h]	3138	1376	1590	1466	467	3179	1396	493	3179	1408
c, Capacity [veh/h]	319	268	143	268	219	1588	697	233	1529	677
d1, Uniform Delay [s]	54.75	43.49	55.58	46.83	27.31	27.11	16.65	22.12	32.37	18.64
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.19	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.39	0.61	6.84	1.65	4.78	3.09	0.19	1.02	35.96	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.36	0.78	0.61	0.54	0.85	0.12	0.25	1.06	0.21
d, Delay for Lane Group [s/veh]	58.14	44.10	62.41	48.48	32.09	30.19	16.84	23.14	68.33	18.99
Lane Group LOS	E	D	E	D	C	C	B	C	F	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.05	2.65	3.72	4.78	1.69	16.69	1.29	0.74	28.76	2.28
50th-Percentile Queue Length [ft/ln]	101.14	66.26	92.93	119.42	42.22	417.34	32.33	18.46	719.07	56.95
95th-Percentile Queue Length [veh/ln]	7.28	4.77	6.69	8.36	3.04	23.39	2.33	1.33	39.34	4.10
95th-Percentile Queue Length [ft/ln]	182.05	119.27	167.27	209.02	76.00	584.86	58.19	33.23	983.61	102.51

Movement, Approach, & Intersection Results

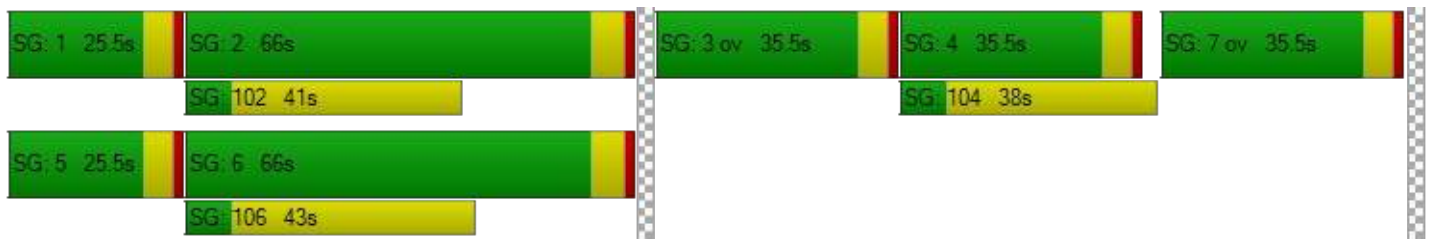
d_M, Delay for Movement [s/veh]	58.14	44.10	44.10	62.41	48.48	48.48	32.09	30.19	16.84	23.14	68.33	18.99
Movement LOS	E	D	D	E	D	D	C	C	B	C	F	B
d_A, Approach Delay [s/veh]	54.26			54.16			29.59			63.11		
Approach LOS	D			D			C			E		
d_I, Intersection Delay [s/veh]	48.72											
Intersection LOS	D											
Intersection V/C	0.819											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.297	2.349	3.325	3.270
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1333	1333
d_b, Bicycle Delay [s]	3.33	2.69	5.00	5.00
I_b,int, Bicycle LOS Score for Intersection	2.139	2.013	2.838	3.063
Bicycle LOS	B	B	C	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	156.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.206

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			← →			← →			← →		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	93	0	156	119	917	419	261	1080	43
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	24	0	41	31	239	109	68	281	11
Total Analysis Volume [veh/h]	476	0	291	97	0	163	124	955	436	272	1125	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	5	5	2	0	1	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	5	5	10	0	5	10	0
Maximum Green [s]	0	20	0	0	30	20	20	60	0	20	60	0
Amber [s]	0.0	4.5	0.0	0.0	4.5	4.5	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	0.0	2.5	0.0	0.0	2.5	2.5	2.5	4.0	0.0	2.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.5	0.0	0.0	3.5	3.5	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall		No			No	No	No	Yes		No	Yes	
Maximum Recall		No			No	No	No	No		No	No	
Pedestrian Recall		No			No	No	No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	R	L	C	C	L	C	R
C, Cycle Length [s]	96	96	96	96	96	96	96	96	96	96
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	20	20	20	36	64	48	48	64	48	48
g / C, Green / Cycle	0.21	0.21	0.21	0.37	0.67	0.51	0.51	0.67	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.63	0.10	0.00	0.12	0.18	0.43	0.45	0.43	0.35	0.03
s, saturation flow rate [veh/h]	1218	971	1710	1408	673	1669	1497	629	3179	1454
c, Capacity [veh/h]	316	75	358	524	442	844	757	389	1613	737
d1, Uniform Delay [s]	40.57	34.18	0.00	21.31	10.46	20.60	21.13	21.68	17.97	11.98
k, delay calibration	0.50	0.08	0.08	0.08	0.15	0.26	0.27	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	653.23	145.29	0.00	0.25	0.49	5.90	8.40	9.97	0.79	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	2.43	1.29	0.00	0.31	0.28	0.86	0.88	0.70	0.70	0.06
d, Delay for Lane Group [s/veh]	693.80	179.47	0.00	21.56	10.94	26.50	29.53	31.65	18.76	12.03
Lane Group LOS	F	F	A	C	B	C	C	C	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	64.73	4.59	0.00	2.57	0.85	14.42	14.15	2.99	9.05	0.48
50th-Percentile Queue Length [ft/ln]	1618.25	114.83	0.00	64.37	21.26	360.43	353.86	74.86	226.36	12.09
95th-Percentile Queue Length [veh/ln]	102.53	8.27	0.00	4.63	1.53	20.64	20.32	5.39	13.99	0.87
95th-Percentile Queue Length [ft/ln]	2563.36	206.69	0.00	115.87	38.28	516.11	508.12	134.75	349.73	21.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	693.80	693.80	693.80	179.47	0.00	21.56	10.94	27.24	29.53	31.65	18.76	12.03
Movement LOS	F	F	F	F	A	C	B	C	C	C	B	B
d_A, Approach Delay [s/veh]	693.80			80.47			26.56			20.98		
Approach LOS	F			F			C			C		
d_I, Intersection Delay [s/veh]	156.52											
Intersection LOS	F											
Intersection V/C	1.206											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.637			2.328			3.616			3.043		
Crosswalk LOS	B			B			D			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	444			667			1333			1333		
d_b, Bicycle Delay [s]	27.22			20.00			5.00			5.00		
I_b,int, Bicycle LOS Score for Intersection	2.825			1.989			2.809			2.749		
Bicycle LOS	C			A			C			B		

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	84.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.158

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	32	0	0	97
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	127	0	0	44
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	8	1285	2	0	1376
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	2	331	1	0	355
Total Analysis Volume [veh/h]	8	8	1325	2	0	1419
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.02	0.01	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	84.73	22.29	0.00	0.00	11.83	0.00
Movement LOS	F	C	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.61	0.61	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	15.23	15.23	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	53.51		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	136.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	32	97	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	22	8	1253	1326	3
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	6	2	323	342	1
Total Analysis Volume [veh/h]	14	23	8	1292	1367	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.39	0.06	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	136.28	46.35	13.33	0.00	0.00	0.00
Movement LOS	F	E	B	A	A	A
95th-Percentile Queue Length [veh/ln]	1.85	1.85	0.06	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	46.17	46.17	1.39	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	80.38		0.08		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	1.14					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	303.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.484

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↔		↕↔		↖	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	6	0	30	2	0	91
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	313	13	1021	254	25	1013
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	3	266	66	7	264
Total Analysis Volume [veh/h]	326	14	1064	265	26	1055
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

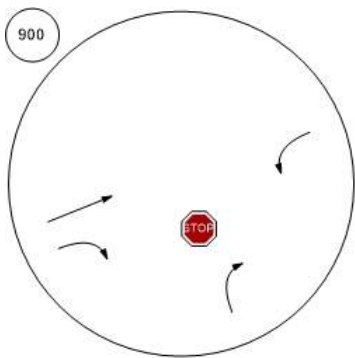
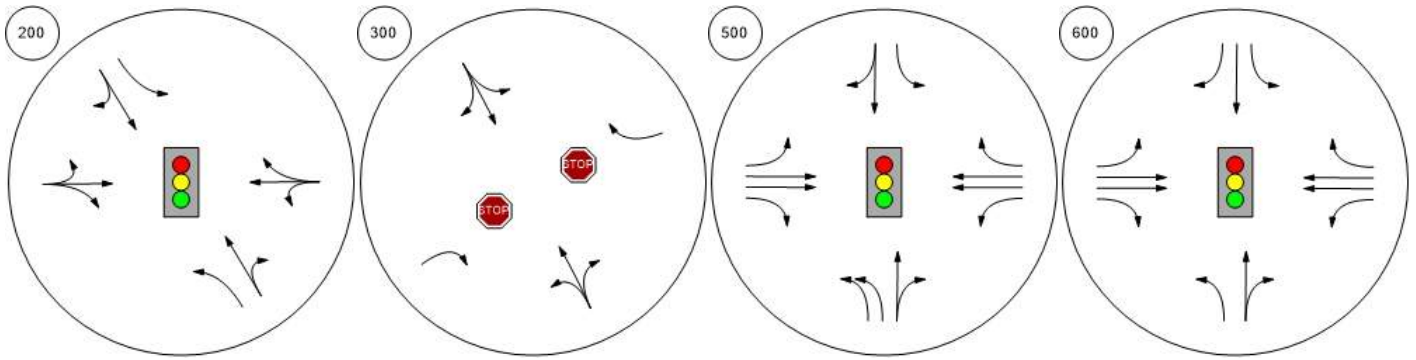
Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.48	0.05	0.01	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	303.20	300.59	0.00	0.00	10.66	0.00
Movement LOS	F	F	A	A	B	
95th-Percentile Queue Length [veh/ln]	20.94	20.94	0.00	0.00	0.12	0.00
95th-Percentile Queue Length [ft/ln]	523.60	523.60	0.00	0.00	3.06	0.00
d_A, Approach Delay [s/veh]	303.09		0.00		10.66	
Approach LOS	F		A		B	
d_I, Intersection Delay [s/veh]	60.96					
Intersection LOS	F					

Appendix G 2022 Mitigated Total Traffic
Analysis

Lane Configuration and Traffic Control



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank

Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	46.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	724	5	5	851	4	6	0	269	1	0	3
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	195	1	1	229	1	2	0	72	0	0	1
Total Analysis Volume [veh/h]	273	778	5	5	915	4	6	0	289	1	0	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	81	81	81	81	81	81
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	54	54	40	40	19	19
g / C, Green / Cycle	0.67	0.67	0.49	0.49	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.35	0.47	0.01	0.55	0.20	0.00
s, saturation flow rate [veh/h]	789	1681	532	1682	1457	1227
c, Capacity [veh/h]	388	1129	182	829	380	338
d1, Uniform Delay [s]	20.87	8.19	27.87	20.56	30.16	24.12
k, delay calibration	0.50	0.16	0.11	0.50	0.12	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.20	1.18	0.06	65.31	3.75	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.69	0.03	1.11	0.78	0.01
d, Delay for Lane Group [s/veh]	31.08	9.37	27.93	85.87	33.91	24.14
Lane Group LOS	C	A	C	F	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	2.50	6.62	0.08	28.56	5.74	0.06
50th-Percentile Queue Length [ft/ln]	62.60	165.56	2.02	713.94	143.42	1.48
95th-Percentile Queue Length [veh/ln]	4.51	10.84	0.15	40.30	9.66	0.11
95th-Percentile Queue Length [ft/ln]	112.68	271.06	3.64	1007.48	241.62	2.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.08	9.37	9.37	27.93	85.87	85.87	33.91	33.91	33.91	24.14	24.14	24.14
Movement LOS	C	A	A	C	F	F	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.98			85.56			33.91			24.14		
Approach LOS	B			F			C			C		
d_I, Intersection Delay [s/veh]	46.06											
Intersection LOS	D											
Intersection V/C	0.874											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.599			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.302			3.084			2.046			1.566		
Bicycle LOS	C			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			└			└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	0	0	0	0	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	-38	0	0	79	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	788	2	158	956	7	0	0	0	0	0	192
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	214	1	43	260	2	0	0	0	0	0	52
Total Analysis Volume [veh/h]	1	857	2	172	1039	8	0	0	0	0	0	209
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.22	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.58
d_M, Delay for Movement [s/veh]	10.36	0.00	0.00	10.90	0.00	0.00	0.00	0.00	17.81	0.00	0.00	28.23
Movement LOS	B	A	A	B	A	A			C			D
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.00	3.54
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.11	20.91	20.91	20.91	0.00	0.00	0.00	0.00	0.00	88.41
d_A, Approach Delay [s/veh]	0.01			1.54			17.81			28.23		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	3.40											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	0	0	0	0	0	0	0	199	0	0	65	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	3	0	-3	-1	-3	0	0	-1	1
Pass-by Trips [veh/h]	0	0	0	6	0	3	4	0	0	0	0	2
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	239	22	70	105	8	145	111	1265	81	55	1527	131
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	6	19	28	2	39	30	336	22	15	406	35
Total Analysis Volume [veh/h]	254	23	74	112	9	154	118	1346	86	59	1624	139
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	80	0	20	80	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	15	28	13	26	93	83	83	93	80	80
g / C, Green / Cycle	0.10	0.18	0.09	0.17	0.62	0.55	0.55	0.62	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.07	0.11	0.27	0.42	0.06	0.13	0.51	0.10
s, saturation flow rate [veh/h]	3138	1376	1590	1466	434	3179	1396	465	3179	1408
c, Capacity [veh/h]	305	253	136	253	199	1749	768	237	1691	749
d1, Uniform Delay [s]	66.59	53.80	67.53	57.88	34.50	26.36	16.20	21.25	33.64	18.26
k, delay calibration	0.08	0.08	0.08	0.08	0.26	0.26	0.26	0.34	0.26	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.43	0.71	8.81	2.05	6.44	1.73	0.15	1.70	8.82	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.38	0.82	0.65	0.59	0.77	0.11	0.25	0.96	0.19
d, Delay for Lane Group [s/veh]	71.01	54.51	76.34	59.93	40.95	28.09	16.35	22.95	42.46	18.53
Lane Group LOS	E	D	E	E	D	C	B	C	D	B
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.99	3.30	4.58	5.94	1.94	18.15	1.42	0.87	28.51	2.51
50th-Percentile Queue Length [ft/ln]	124.72	82.46	114.44	148.55	48.39	453.82	35.61	21.79	712.87	62.87
95th-Percentile Queue Length [veh/ln]	8.65	5.94	8.09	9.94	3.48	25.14	2.56	1.57	37.27	4.53
95th-Percentile Queue Length [ft/ln]	216.30	148.43	202.16	248.49	87.11	628.51	64.10	39.23	931.81	113.16

Movement, Approach, & Intersection Results

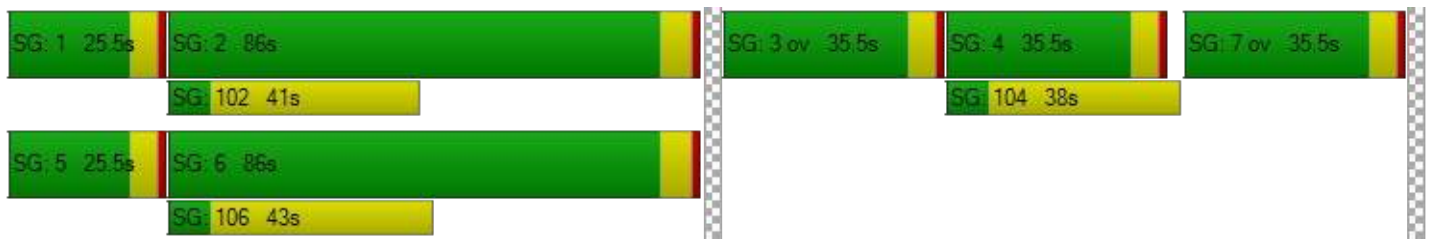
d_M, Delay for Movement [s/veh]	71.01	54.51	54.51	76.34	59.93	59.93	40.95	28.09	16.35	22.95	42.46	18.53
Movement LOS	E	D	D	E	E	E	D	C	B	C	D	B
d_A, Approach Delay [s/veh]	66.45			66.61			28.42			40.00		
Approach LOS	E			E			C			D		
d_I, Intersection Delay [s/veh]	39.67											
Intersection LOS	D											
Intersection V/C	0.804											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.301			2.357			3.325			3.270		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1456			1511			1778			1778		
d_b, Bicycle Delay [s]	3.33			2.69			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.139			2.013			2.838			3.063		
Bicycle LOS	B			B			C			C		

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	93	0	156	119	917	419	261	1080	43
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	24	0	41	31	239	109	68	281	11
Total Analysis Volume [veh/h]	476	0	291	97	0	163	124	955	436	272	1125	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	117	117	117	117	117	117	117	117	117	117	117
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.50	0.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	40	29	40	6	23	66	48	84	66	49	62
g / C, Green / Cycle	0.34	0.24	0.34	0.05	0.19	0.56	0.41	0.72	0.56	0.42	0.53
(v / s)_i Volume / Saturation Flow Rate	0.30	0.20	0.09	0.00	0.12	0.18	0.30	0.30	0.34	0.35	0.03
s, saturation flow rate [veh/h]	1564	1454	1113	1710	1408	689	3179	1454	801	3179	1454
c, Capacity [veh/h]	617	354	279	83	272	338	1306	1042	406	1333	771
d1, Uniform Delay [s]	36.41	42.03	29.82	0.00	43.23	20.38	29.15	6.71	20.52	30.65	13.35
k, delay calibration	0.50	0.25	0.08	0.08	0.08	0.15	0.15	0.15	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.03	10.41	0.55	0.00	1.57	0.95	1.15	0.38	8.49	2.18	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.82	0.35	0.00	0.60	0.37	0.73	0.42	0.67	0.84	0.06
d, Delay for Lane Group [s/veh]	45.44	52.44	30.37	0.00	44.80	21.33	30.30	7.09	29.01	32.83	13.40
Lane Group LOS	D	D	C	A	D	C	C	A	C	C	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	14.13	8.95	1.98	0.00	4.44	1.62	11.36	4.06	4.66	14.38	0.59
50th-Percentile Queue Length [ft/ln]	353.27	223.66	49.38	0.00	110.93	40.39	284.03	101.49	116.43	359.53	14.67
95th-Percentile Queue Length [veh/ln]	20.30	13.85	3.56	0.00	7.89	2.91	16.89	7.31	8.20	20.60	1.06
95th-Percentile Queue Length [ft/ln]	507.39	346.29	88.88	0.00	197.29	72.70	422.23	182.68	204.90	515.01	26.40

Movement, Approach, & Intersection Results

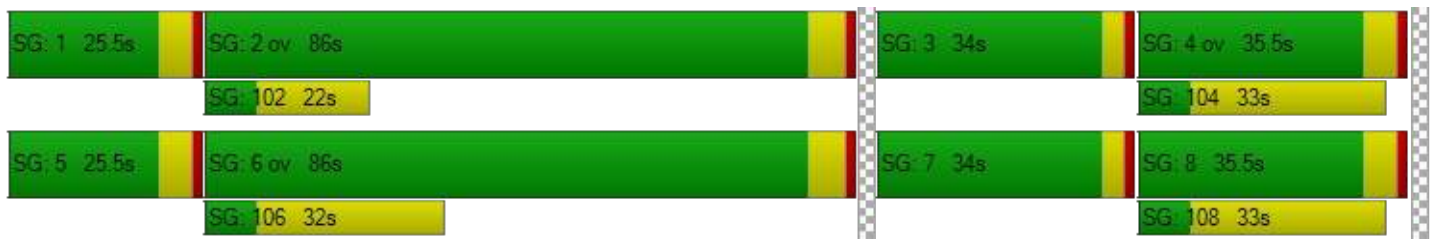
d_M, Delay for Movement [s/veh]	45.44	52.44	52.44	30.37	0.00	44.80	21.33	30.30	7.09	29.01	32.83	13.40
Movement LOS	D	D	D	C	A	D	C	C	A	C	C	B
d_A, Approach Delay [s/veh]	48.10			39.42			22.88			31.50		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	31.94											
Intersection LOS	C											
Intersection V/C	0.794											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.584	2.312	3.029	2.941
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	1778	1778
d_b, Bicycle Delay [s]	20.00	20.00	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.825	1.989	2.809	2.749
Bicycle LOS	C	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.0440	1.0440	1.0440	1.0440	1.0440	1.0440
In-Process Volume [veh/h]	6	0	30	2	0	91
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	313	13	1021	254	25	1013
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	3	266	66	7	264
Total Analysis Volume [veh/h]	326	14	1064	265	26	1055
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

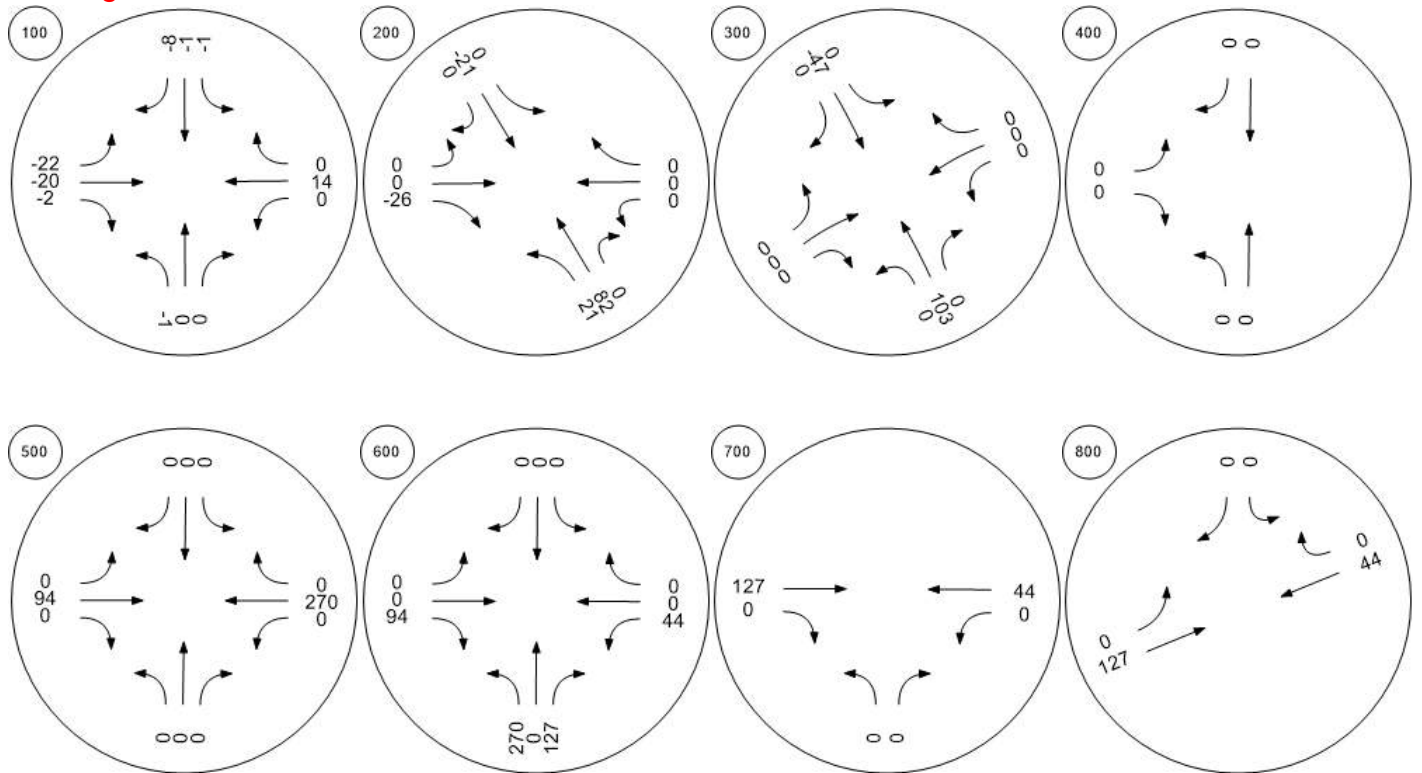
V/C, Movement V/C Ratio	0.00	0.05	0.01	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	19.56	0.00	0.00	10.66	0.00
Movement LOS		C	A	A	B	
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.12	0.00
95th-Percentile Queue Length [ft/ln]	0.00	4.22	0.00	0.00	3.06	0.00
d_A, Approach Delay [s/veh]	19.56		0.00		10.66	
Approach LOS	C		A		B	
d_I, Intersection Delay [s/veh]	0.40					
Intersection LOS	C					

Appendix H 2037 Background Traffic Volumes and Analysis

Traffic Volume - Net New Site Trips



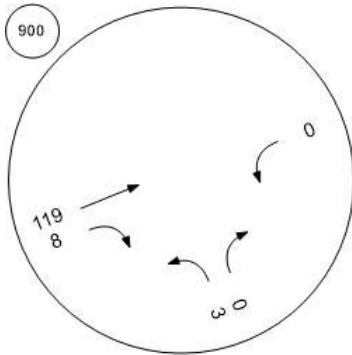
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Net New Site Trips



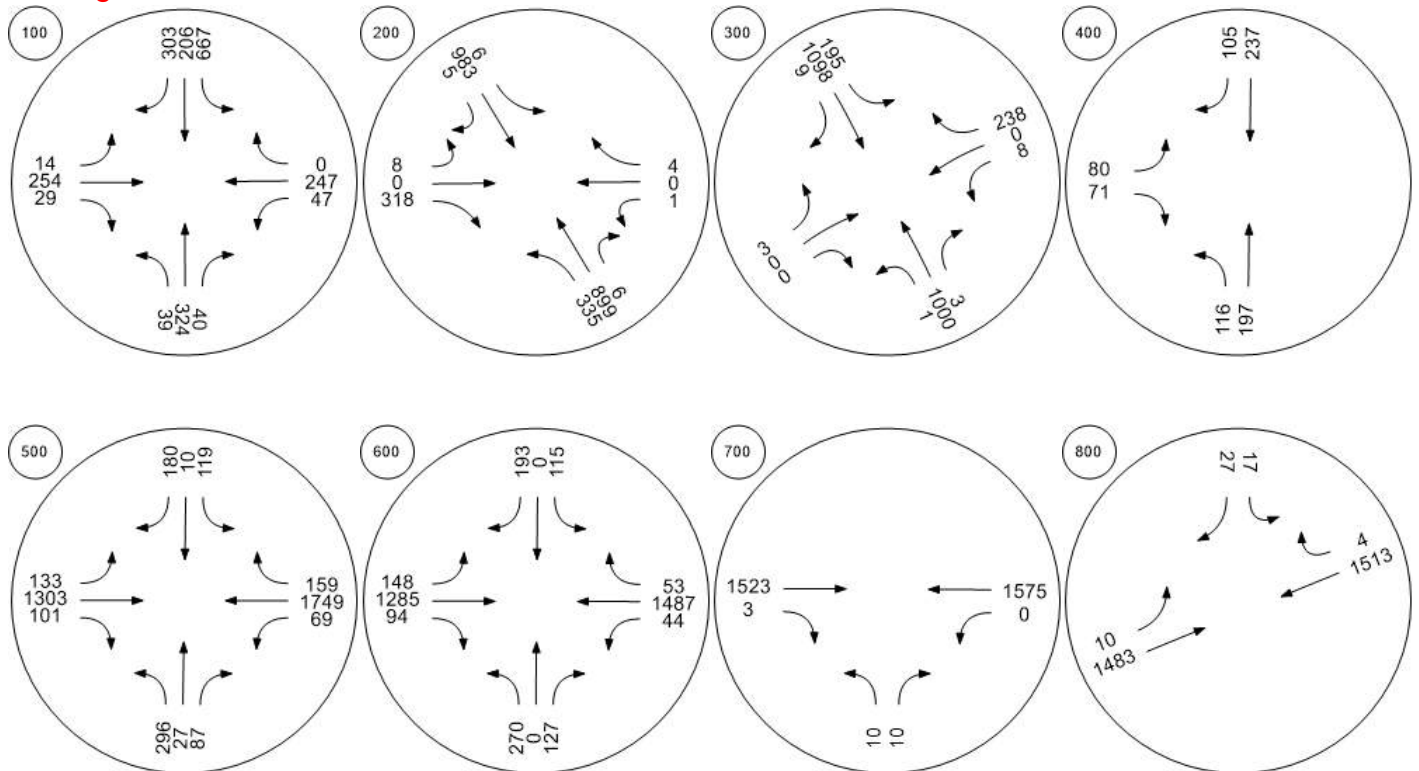
The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Traffic Volume - Future Total Volume



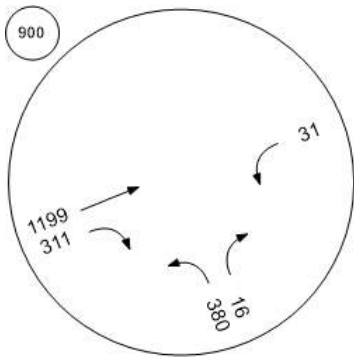
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	105.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.966

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			←↑			←↑			←↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	-1	0	0	-1	-1	-8	-22	-20	-2	0	14	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	324	40	667	206	303	14	254	29	47	247	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	81	10	167	52	76	4	64	7	12	62	0
Total Analysis Volume [veh/h]	39	324	40	667	206	303	14	254	29	47	247	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	123	123	123	123	123	123	123
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	40	74	1	23	14	35
g / C, Green / Cycle	0.24	0.33	0.60	0.01	0.19	0.11	0.29
(v / s)_i Volume / Saturation Flow Rate	0.35	0.42	0.33	0.01	0.17	0.03	0.15
s, saturation flow rate [veh/h]	1162	1603	1523	1603	1653	1603	1683
c, Capacity [veh/h]	317	523	920	16	310	59	485
d1, Uniform Delay [s]	43.13	34.58	6.13	60.39	44.95	47.80	31.06
k, delay calibration	0.50	0.50	0.31	0.08	0.46	0.11	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	145.32	137.88	1.52	65.79	31.16	21.34	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.27	1.27	0.55	0.90	0.91	0.80	0.51
d, Delay for Lane Group [s/veh]	188.45	172.47	7.64	126.17	76.11	69.15	32.25
Lane Group LOS	F	F	A	F	E	E	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	22.29	34.30	3.57	0.72	10.63	1.62	5.41
50th-Percentile Queue Length [ft/ln]	557.24	857.45	89.19	18.00	265.80	40.45	135.24
95th-Percentile Queue Length [veh/ln]	34.02	50.67	6.42	1.30	15.98	2.91	9.22
95th-Percentile Queue Length [ft/ln]	850.38	1266.76	160.55	32.39	399.49	72.82	230.60

Movement, Approach, & Intersection Results

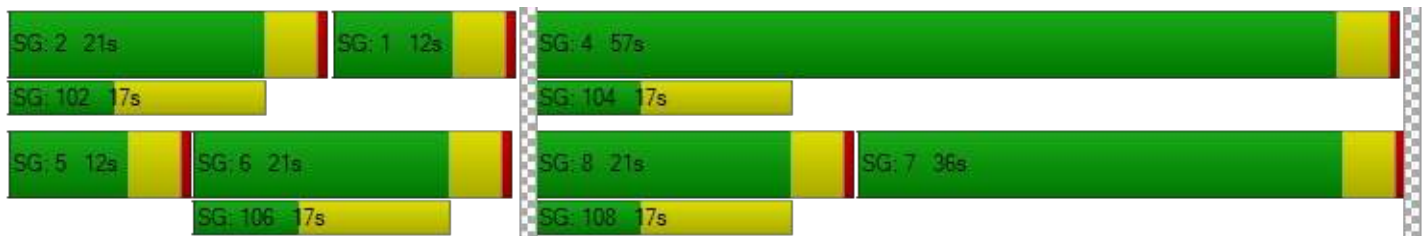
d_M, Delay for Movement [s/veh]	188.45	188.45	188.45	172.47	7.64	7.64	126.17	76.11	76.11	69.15	32.25	0.00
Movement LOS	F	F	F	F	A	A	F	E	E	E	C	
d_A, Approach Delay [s/veh]	188.45			101.13			78.47			38.15		
Approach LOS	F			F			E			D		
d_I, Intersection Delay [s/veh]	105.71											
Intersection LOS	F											
Intersection V/C	0.966											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.048	2.432	2.283	2.436
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.225	3.500	2.050	2.045
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	116.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.041

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	335	899	6	6	983	5	8	0	318	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	242	2	2	264	1	2	0	85	0	0	1
Total Analysis Volume [veh/h]	360	967	6	6	1057	5	9	0	342	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	94	94	94	94	94	94
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	61	61	40	40	25	25
g / C, Green / Cycle	0.65	0.65	0.42	0.42	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.43	0.58	0.01	0.63	0.24	0.00
s, saturation flow rate [veh/h]	835	1681	445	1682	1455	1175
c, Capacity [veh/h]	453	1097	76	713	421	355
d1, Uniform Delay [s]	25.92	13.52	47.17	27.17	33.77	25.73
k, delay calibration	0.50	0.36	0.11	0.50	0.27	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.49	8.10	0.43	227.65	10.24	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.89	0.08	1.49	0.83	0.01
d, Delay for Lane Group [s/veh]	39.41	21.62	47.60	254.81	44.01	25.74
Lane Group LOS	D	C	D	F	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.47	16.27	0.15	59.87	8.79	0.08
50th-Percentile Queue Length [ft/ln]	111.74	406.69	3.69	1496.73	219.70	2.10
95th-Percentile Queue Length [veh/ln]	7.94	22.88	0.27	91.59	13.65	0.15
95th-Percentile Queue Length [ft/ln]	198.42	572.05	6.64	2289.82	341.24	3.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.41	21.62	21.62	47.60	254.81	254.81	44.01	44.01	44.01	25.74	25.74	25.74
Movement LOS	D	C	C	D	F	F	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.43			253.65			44.01			25.74		
Approach LOS	C			F			D			C		
d_I, Intersection Delay [s/veh]	116.69											
Intersection LOS	F											
Intersection V/C	1.041											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	36.45	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.731	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1422	889	667	667
d_b, Bicycle Delay [s]	3.76	13.89	20.00	20.00
I_b,int, Bicycle LOS Score for Intersection	3.759	3.322	2.139	1.568
Bicycle LOS	D	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	92.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.984

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			└			└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	0	0	0	0	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	1000	3	195	1098	9	0	0	0	0	0	238
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	272	1	53	298	2	0	0	0	0	0	65
Total Analysis Volume [veh/h]	1	1087	3	212	1193	10	0	0	0	0	0	259
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.33	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.98
d_M, Delay for Movement [s/veh]	11.14	0.00	0.00	13.38	0.00	0.00	0.00	0.00	20.77	0.00	0.00	92.89
Movement LOS	B	A	A	B	A	A			C			F
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	1.45	1.45	1.45	0.00	0.00	0.00	0.00	0.00	9.59
95th-Percentile Queue Length [ft/ln]	0.13	0.13	0.13	36.16	36.16	36.16	0.00	0.00	0.00	0.00	0.00	239.76
d_A, Approach Delay [s/veh]	0.01			2.01			20.77			92.89		
Approach LOS	A			A			C			F		
d_I, Intersection Delay [s/veh]	9.73											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	16.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.233

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	197	237	105	80	71
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	52	62	28	21	19
Total Analysis Volume [veh/h]	122	207	249	111	84	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.23	0.09
d_M, Delay for Movement [s/veh]	8.42	0.00	0.00	0.00	16.58	11.05
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.35	0.17	0.00	0.00	0.90	0.90
95th-Percentile Queue Length [ft/ln]	8.68	4.34	0.00	0.00	22.47	22.47
d_A, Approach Delay [s/veh]	3.12		0.00		13.97	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.83					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	85.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.930

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	296	27	87	119	10	180	133	1303	101	69	1749	159
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	7	23	32	3	48	35	347	27	18	465	42
Total Analysis Volume [veh/h]	315	29	93	127	11	191	141	1386	107	73	1861	169
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	80	0	20	80	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	165	165	165	165	165	165	165	165	165	165
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	19	35	16	32	97	87	87	97	80	80
g / C, Green / Cycle	0.12	0.21	0.09	0.19	0.59	0.52	0.52	0.59	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.08	0.14	0.32	0.44	0.08	0.16	0.59	0.12
s, saturation flow rate [veh/h]	3138	1376	1590	1465	439	3179	1396	457	3179	1408
c, Capacity [veh/h]	365	294	151	281	214	1665	731	202	1539	682
d1, Uniform Delay [s]	71.73	56.10	73.58	62.58	48.38	33.22	20.29	29.48	42.62	24.98
k, delay calibration	0.08	0.08	0.08	0.23	0.32	0.26	0.26	0.50	0.29	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.66	0.70	9.11	7.15	9.71	2.65	0.22	4.99	97.94	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.42	0.84	0.72	0.66	0.83	0.15	0.36	1.21	0.25
d, Delay for Lane Group [s/veh]	76.38	56.79	82.68	69.73	58.09	35.87	20.51	34.46	140.56	25.43
Lane Group LOS	E	E	F	E	E	D	C	C	F	C
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.82	4.50	5.71	8.56	2.94	23.01	2.16	1.45	50.83	3.93
50th-Percentile Queue Length [ft/ln]	170.59	112.45	142.76	214.05	73.38	575.20	53.89	36.15	1270.63	98.30
95th-Percentile Queue Length [veh/ln]	11.11	7.98	9.63	13.36	5.28	30.87	3.88	2.60	71.76	7.08
95th-Percentile Queue Length [ft/ln]	277.69	199.41	240.74	334.02	132.09	771.86	97.01	65.07	1794.09	176.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	76.38	56.79	56.79	82.68	69.73	69.73	58.09	35.87	20.51	34.46	140.56	25.43
Movement LOS	E	E	E	F	E	E	E	D	C	C	F	C
d_A, Approach Delay [s/veh]	70.91			74.73			36.78			127.62		
Approach LOS	E			E			D			F		
d_I, Intersection Delay [s/veh]	85.29											
Intersection LOS	F											
Intersection V/C	0.930											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.339	2.393	3.428	3.356
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1778	1778
d_b, Bicycle Delay [s]	3.33	2.69	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.281	2.102	2.908	3.295
Bicycle LOS	B	B	C	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	270	0	127	115	0	193	148	1285	94	44	1487	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	0	33	30	0	50	39	335	24	11	387	14
Total Analysis Volume [veh/h]	281	0	132	120	0	201	154	1339	98	46	1549	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	154	154	154	154	154	154	154	154	154	154	154
L, Total Lost Time per Cycle [s]	4.00	5.50	5.50	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.50	0.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	29	27	42	10	31	100	91	125	100	79	97
g / C, Green / Cycle	0.18	0.17	0.27	0.06	0.20	0.65	0.59	0.81	0.65	0.51	0.63
(v / s)_i Volume / Saturation Flow Rate	0.17	0.09	0.09	0.00	0.14	0.29	0.42	0.07	0.10	0.49	0.04
s, saturation flow rate [veh/h]	1629	1454	1272	1710	1408	533	3179	1454	471	3179	1454
c, Capacity [veh/h]	302	253	323	109	284	278	1866	1179	261	1630	910
d1, Uniform Delay [s]	61.91	57.88	44.52	0.00	57.36	37.99	22.72	2.95	17.75	35.73	11.21
k, delay calibration	0.37	0.08	0.08	0.08	0.21	0.18	0.15	0.15	0.20	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	30.29	1.24	0.53	0.00	6.24	2.77	0.75	0.04	0.58	5.27	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.52	0.37	0.00	0.71	0.55	0.72	0.08	0.18	0.95	0.06
d, Delay for Lane Group [s/veh]	92.20	59.12	45.04	0.00	63.60	40.76	23.47	2.99	18.33	41.01	11.25
Lane Group LOS	F	E	D	A	E	D	C	A	B	D	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	13.41	4.80	3.71	0.00	7.83	2.28	17.30	0.56	0.61	28.34	0.76
50th-Percentile Queue Length [ft/ln]	335.18	120.05	92.63	0.00	195.79	56.89	432.48	14.01	15.33	708.50	19.00
95th-Percentile Queue Length [veh/ln]	19.41	8.40	6.67	0.00	12.42	4.10	24.12	1.01	1.10	37.07	1.37
95th-Percentile Queue Length [ft/ln]	485.31	209.89	166.73	0.00	310.52	102.40	603.01	25.22	27.59	926.77	34.19

Movement, Approach, & Intersection Results

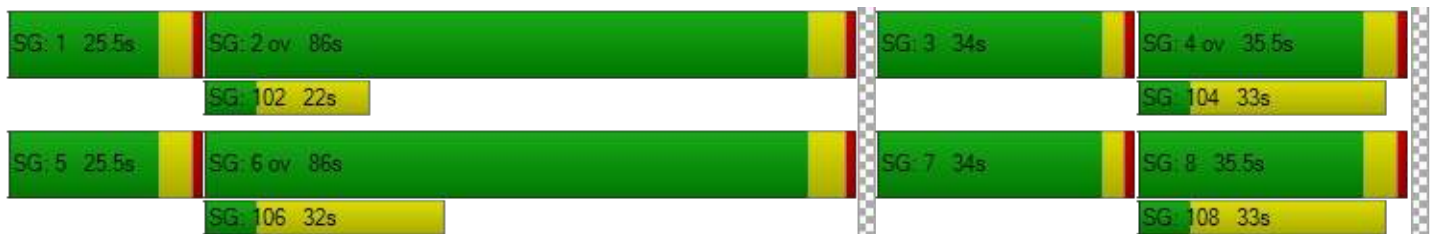
d_M, Delay for Movement [s/veh]	92.20	59.12	59.12	45.04	0.00	63.60	40.76	23.47	2.99	18.33	41.01	11.25
Movement LOS	F	E	E	D	A	E	D	C	A	B	D	B
d_A, Approach Delay [s/veh]	81.63			56.66			23.88			39.38		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	38.96											
Intersection LOS	D											
Intersection V/C	0.828											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.160			2.375			3.041			3.011		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			667			1778			1778		
d_b, Bicycle Delay [s]	20.00			20.00			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.241			2.089			2.872			2.921		
Bicycle LOS	B			B			C			C		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	162.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.341

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	127	0	0	44
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	10	1523	3	0	1575
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	393	1	0	406
Total Analysis Volume [veh/h]	10	10	1570	3	0	1624
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.03	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	162.81	50.60	0.00	0.00	13.48	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	1.34	1.34	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	33.56	33.56	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	106.70		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.66					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	343.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.860

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1483	1513	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	382	390	1
Total Analysis Volume [veh/h]	18	28	10	1529	1560	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.86	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	343.17	182.55	15.09	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	4.00	4.00	0.08	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	99.90	99.90	2.10	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	245.40		0.10		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	3.63					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	24.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	380	16	1199	311	31	1133
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	99	4	312	81	8	295
Total Analysis Volume [veh/h]	396	17	1249	324	32	1180
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

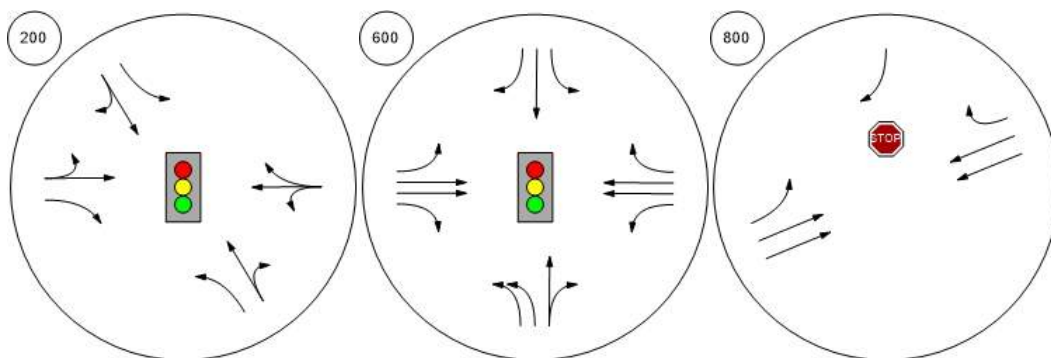
Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.08	0.01	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	0.00	24.35	0.00	0.00	11.77	0.00
Movement LOS		C	A	A	B	
95th-Percentile Queue Length [veh/ln]	0.00	0.27	0.00	0.00	0.18	0.00
95th-Percentile Queue Length [ft/ln]	0.00	6.78	0.00	0.00	4.50	0.00
d_A, Approach Delay [s/veh]	24.35		0.00		11.77	
Approach LOS	C		A		B	
d_I, Intersection Delay [s/veh]	0.49					
Intersection LOS	C					

Appendix I 2037 Mitigated Background Traffic Analysis

Lane Configuration and Traffic Control



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	90.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.977

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	335	899	6	6	983	5	8	0	318	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	242	2	2	264	1	2	0	85	0	0	1
Total Analysis Volume [veh/h]	360	967	6	6	1057	5	9	0	342	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street		0			0			0			0	
v_di, Inbound Pedestrian Volume crossing major street		0			0			0			0	
v_co, Outbound Pedestrian Volume crossing minor street		0			0			0			0	
v_ci, Inbound Pedestrian Volume crossing minor street		0			0			0			0	
v_ab, Corner Pedestrian Volume [ped/h]		0			0			0			0	
Bicycle Volume [bicycles/h]		0			0			0			0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Overla	Permis	Permis	Permis
Signal Group	1	6	0	0	2	0	0	8	1	0	4	0
Auxiliary Signal Groups									1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	5	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	20	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No	No		No	
Maximum Recall	No	No			No			No	No		No	
Pedestrian Recall	No	No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	R	C
C, Cycle Length [s]	88	88	88	88	88	88	88
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	62	62	40	40	18	40	18
g / C, Green / Cycle	0.70	0.70	0.46	0.46	0.20	0.45	0.20
(v / s)_i Volume / Saturation Flow Rate	0.43	0.58	0.01	0.63	0.01	0.24	0.00
s, saturation flow rate [veh/h]	837	1681	445	1682	1324	1442	1450
c, Capacity [veh/h]	490	1184	90	767	353	652	346
d1, Uniform Delay [s]	23.00	9.11	42.91	23.83	27.88	17.23	27.82
k, delay calibration	0.50	0.32	0.11	0.50	0.11	0.46	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.43	4.25	0.31	180.87	0.03	2.74	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.82	0.07	1.38	0.03	0.52	0.01
d, Delay for Lane Group [s/veh]	32.43	13.36	43.22	204.70	27.91	19.97	27.84
Lane Group LOS	C	B	D	F	C	B	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.17	10.79	0.13	52.79	0.15	5.18	0.08
50th-Percentile Queue Length [ft/ln]	79.29	269.82	3.35	1319.85	3.80	129.54	2.11
95th-Percentile Queue Length [veh/ln]	5.71	16.18	0.24	79.48	0.27	8.91	0.15
95th-Percentile Queue Length [ft/ln]	142.72	404.51	6.04	1986.92	6.84	222.87	3.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.43	13.36	13.36	43.22	204.70	204.70	27.91	27.91	19.97	27.84	27.84	27.84
Movement LOS	C	B	B	D	F	F	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	18.51			203.79			20.17			27.84		
Approach LOS	B			F			C			C		
d_I, Intersection Delay [s/veh]	90.51											
Intersection LOS	F											
Intersection V/C	0.977											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.731			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.759			3.322			2.139			1.568		
Bicycle LOS	D			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.765

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	270	0	127	115	0	193	148	1285	94	44	1487	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	0	33	30	0	50	39	335	24	11	387	14
Total Analysis Volume [veh/h]	281	0	132	120	0	201	154	1339	98	46	1549	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Overla	ProtPer	Permis	Overla	ProtPer	Permis	Overla
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	144	144	144	144	144	144	144	144	144	144	144
L, Total Lost Time per Cycle [s]	4.00	5.50	4.00	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.50	2.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	16	15	13	12	36	101	91	112	101	77	96
g / C, Green / Cycle	0.11	0.10	0.09	0.09	0.25	0.70	0.63	0.78	0.70	0.53	0.67
(v / s)_i Volume / Saturation Flow Rate	0.09	0.09	0.08	0.00	0.14	0.27	0.42	0.07	0.10	0.49	0.04
s, saturation flow rate [veh/h]	3163	1454	1590	1710	1408	563	3179	1454	470	3179	1454
c, Capacity [veh/h]	344	152	144	147	353	335	2003	1134	300	1695	967
d1, Uniform Delay [s]	62.88	63.62	64.52	0.00	47.23	28.96	17.03	3.72	12.73	30.64	8.39
k, delay calibration	0.11	0.08	0.11	0.08	0.18	0.15	0.15	0.15	0.17	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.80	10.76	11.73	0.00	2.36	1.40	0.56	0.05	0.36	3.21	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.87	0.83	0.00	0.57	0.46	0.67	0.09	0.15	0.91	0.06
d, Delay for Lane Group [s/veh]	67.68	74.38	76.25	0.00	49.59	30.36	17.59	3.77	13.09	33.85	8.43
Lane Group LOS	E	E	E	A	D	C	B	A	B	C	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.29	5.24	4.82	0.00	6.59	1.71	13.94	0.63	0.47	24.61	0.61
50th-Percentile Queue Length [ft/ln]	132.15	130.98	120.49	0.00	164.71	42.66	348.42	15.87	11.65	615.31	15.25
95th-Percentile Queue Length [veh/ln]	9.06	8.99	8.42	0.00	10.80	3.07	20.06	1.14	0.84	32.75	1.10
95th-Percentile Queue Length [ft/ln]	226.41	224.83	210.50	0.00	269.95	76.78	501.48	28.56	20.98	818.71	27.44

Movement, Approach, & Intersection Results

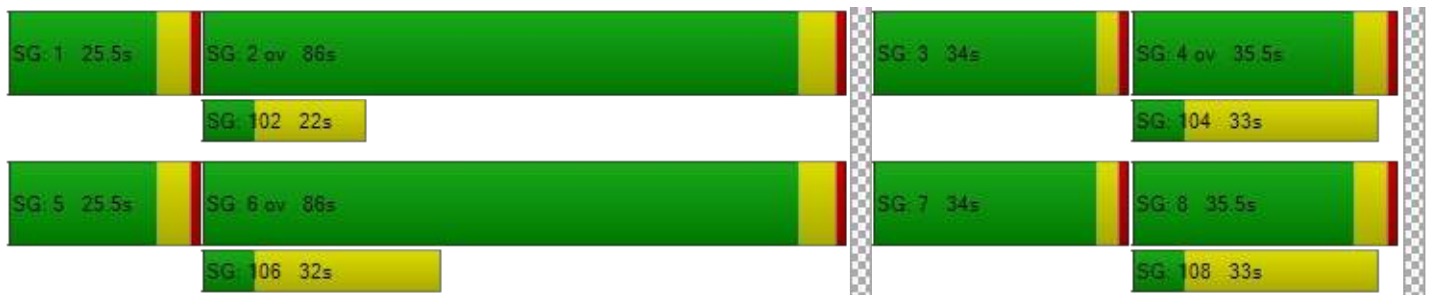
d_M, Delay for Movement [s/veh]	67.68	74.38	74.38	76.25	0.00	49.59	30.36	17.59	3.77	13.09	33.85	8.43
Movement LOS	E	E	E	E	A	D	C	B	A	B	C	A
d_A, Approach Delay [s/veh]	69.82			59.55			17.97			32.42		
Approach LOS	E			E			B			C		
d_I, Intersection Delay [s/veh]	32.72											
Intersection LOS	C											
Intersection V/C	0.765											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.309			2.380			3.041			2.979		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			667			1778			1778		
d_b, Bicycle Delay [s]	20.00			20.00			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.241			2.089			2.872			2.921		
Bicycle LOS	B			B			C			C		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.088

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↻	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1483	1513	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	382	390	1
Total Analysis Volume [veh/h]	18	28	10	1529	1560	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	17.36	15.09	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.29	0.08	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	7.15	2.10	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	17.36		0.10		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	C					

Appendix J Oregon Highway Plan Policy
Intent Statements



Oregon


John A. Kitzhaber, MD, Governor

Department of Transportation

Office of the Director
1158 Chemeketa St. NE
Salem, OR 97301-2528

DATE: May 25, 2011

TO: Joint Subcommittee on the TPR and OHP
Mike McArthur, AOC Executive Director
Mike McCauley, LOC Executive Director
ODOT Region Managers

FROM: Matthew L. Garrett 
Director

SUBJECT: Oregon Highway Plan - Policy Intent Statements

Introduction

The Oregon Transportation Commission (OTC) and the Land Conservation and Development Commission (LCDC) established a Joint Subcommittee in response to concerns on the Transportation Planning Rule (TPR) and Oregon Highway Plan (OHP) mobility standards. This joint subcommittee held three meetings to gather information on TPR and OHP issues, and to develop recommendations for further work. Transportation Commissioners Mary Olson and David Lohman represent the OTC.

The joint subcommittee heard considerable stakeholder concern that the combination of TPR Section 0060 and OHP mobility standards is leading to unintended consequences. In particular, there are concerns that economic development objectives should be balanced better with transportation performance, but in practice the TPR and OHP may be giving precedence to transportation. Also there are concerns that Section 0060 of the TPR and OHP mobility standards are making it more difficult to increase development intensities, hindering implementation of other statewide planning goals.

The joint subcommittee agreed that, changes to the TPR and OHP are warranted in light of the concerns and it developed recommendations to address several issues in initial phases of this work. The subcommittee also recommended that the tasks be conducted through coordinated processes to ensure that Department of Land Conservation and Development (DLCD) and Oregon Department of Transportation (ODOT) tasks jointly address the issues. The joint subcommittee's final recommendations were presented to the OTC and LCDC in April 2011. Both commissions concurred with the recommendations and directed the two agencies to move forward with the necessary tasks.

Additional information on the joint subcommittee process, including the final recommendations report is available at: http://www.oregon.gov/LCD/Rulemaking_TPR_2011.shtml.



The joint subcommittee recommended that ODOT tasks consider potential exemptions for proposals with small increases in traffic, average trip generation and average case land use assumptions; and to improve current alternate mobility standard processes; and expand mobility standard options. While many of these issues will require in-depth work over the next several months, the work below represents actions we can do right away to make progress on several key tasks. As a result, the department has developed three policy intent statements that seek to clarify its commitment to find flexibility and to provide relief under existing conditions. These are a starting point in our efforts; and it is my expectation that ODOT staff will use this information as it works with communities and development interests from this day forward.

OHP Policy Intent Statements

Alternate Mobility Standards

The development of alternate mobility standards provides one primary area for flexibility in existing OHP policy. While the department will explore ways to streamline the alternate mobility standard development process to make it a more effective tool, it is important that ODOT's intent to work with local governments on these matters is clear to all those involved.

Policy Intent Statement 1:

ODOT affirms its commitment to work collaboratively with local governments to develop alternate mobility standards for state highway facilities through TSP update processes and through the development of ODOT facility plans. Establishment of alternate mobility standards will be based upon mutual agreement about likely funding, transportation system constraints, growth expectations, community values, and commitment to reduce demand on state highways through the use of transportation demand management measures, system and service improvements for alternative modes of travel, and development of more complete and connected local transportation system networks.

“Avoid Further Degradation” (OHP Action 1F.6)

The joint subcommittee heard testimony and criticism that the increase of a single trip is enough to trigger a significant effect determination in some cases, and perhaps more important, the associated analysis and mitigation requirements for a plan amendment. This is most applicable for facilities that are already operating over standard, for which the proposal must be able to at least “avoid further degradation” of the impacted facility. In many cases the mitigation associated with a facility already in a “failing” condition can be very significant and may not be feasible for the development to implement, especially for a small increase in trips. In order to help reduce this concern, the following policy intent statement provides thresholds to define a small increase in traffic. These are for situations for which the operational risk to the transportation facility is small, and the resulting plan amendment is unlikely to cause further degradation of the facility. These thresholds are consistent with proposed changes in ODOT's Access Management Program related to requirements for Traffic Impact Analyses.

Policy Intent Statement 2:

In applying the "Avoid Further Degradation" standard established in OHP Action 1F.6 for state highway facilities already operating above the existing standard when evaluating amendments to transportation system plans, acknowledged comprehensive plans, and land use regulations subject to OAR 660-12-0060, a small increase in traffic does not cause "further degradation" of the facility.

The threshold for a small increase in traffic between the existing plan and the proposed amendment is defined in terms of the increase in average daily trip volumes as follows:

- *Any proposed amendment that does not increase the average daily trips by more than 400.*
- *Any proposed amendment that increases the average daily trips by more than 400 but less than 1001 for state facilities where:*
 - *The annual average daily traffic is less than 5,000 for a two-lane highway*
 - *The annual average daily traffic is less than 15,000 for a three-lane highway*
 - *The annual average daily traffic is less than 10,000 for a four-lane highway*
 - *The annual average daily traffic is less than 25,000 for a five-lane highway*
- *If the increase in traffic between the existing plan and the proposed amendment is more than 1000 average daily trips, then it is not considered a small increase in traffic and the amendment causes further degradation of the facility and would follow existing processes for resolution.*

Precision of Volume-to-Capacity Ratios in Analyzing Mitigation

While volume-to-capacity (v/c) ratios provide a high level of precision in traffic analysis, it is difficult to forecast actual traffic conditions and the effects of mitigation, especially over a long period (e.g. 20 years). While the department will not compromise the integrity of the OHP mobility standards in determining a significant affect under the TPR, there are situations for which reasonable levels of mitigation have already been determined and the resulting v/c measure may be within the typical range of uncertainty of fully meeting standards. In these cases, it may be prudent to allow for the plan amendment to proceed with the identified reasonable level of mitigation.

The range provided in Policy Intent Statement 3 allows flexibility within 0.03 in terms of v/c ratios when considering reasonable levels of mitigation. While the impact/scale of a 0.03 v/c ratio change can vary significantly depending on a number of facility characteristics, it typically represents an increase of approximately 750 daily trips on a three-lane highway, and approximately 1,500 daily trips on a five-lane highway that is functioning near current mobility standard levels. In terms of land use types, this increase in the v/c ratio is roughly similar to the traffic impact characteristics of a gas station or fast food restaurant.

Policy Intent Statement 3:

In applying OHP mobility standards to analyze mitigation, ODOT recognizes that there are many variables and levels of uncertainty in calculating volume-to-capacity ratios, particularly over the planning horizon. In applying the standards after negotiating reasonable levels of mitigation for actions required under OAR 660-012-0060, ODOT considers calculated values for volume-to-capacity ratios that are within 0.03 of the adopted standard in the OHP to be considered in compliance with the standard. It is not the intent of the agency to consider variation within modest levels of uncertainty in violation of OHP mobility standards for reasonable mitigation. The specific OHP mobility standard still applies for determining significant affect under OAR 660-012-0060.

Next Steps

Effective immediately, ODOT will begin carrying out the policy intent statements described above. ODOT will also begin the more significant work to address the full recommendations of the joint subcommittee and applicable legislative direction through a more thorough review of policies, procedures and guidance related to the TPR and OHP mobility standards.

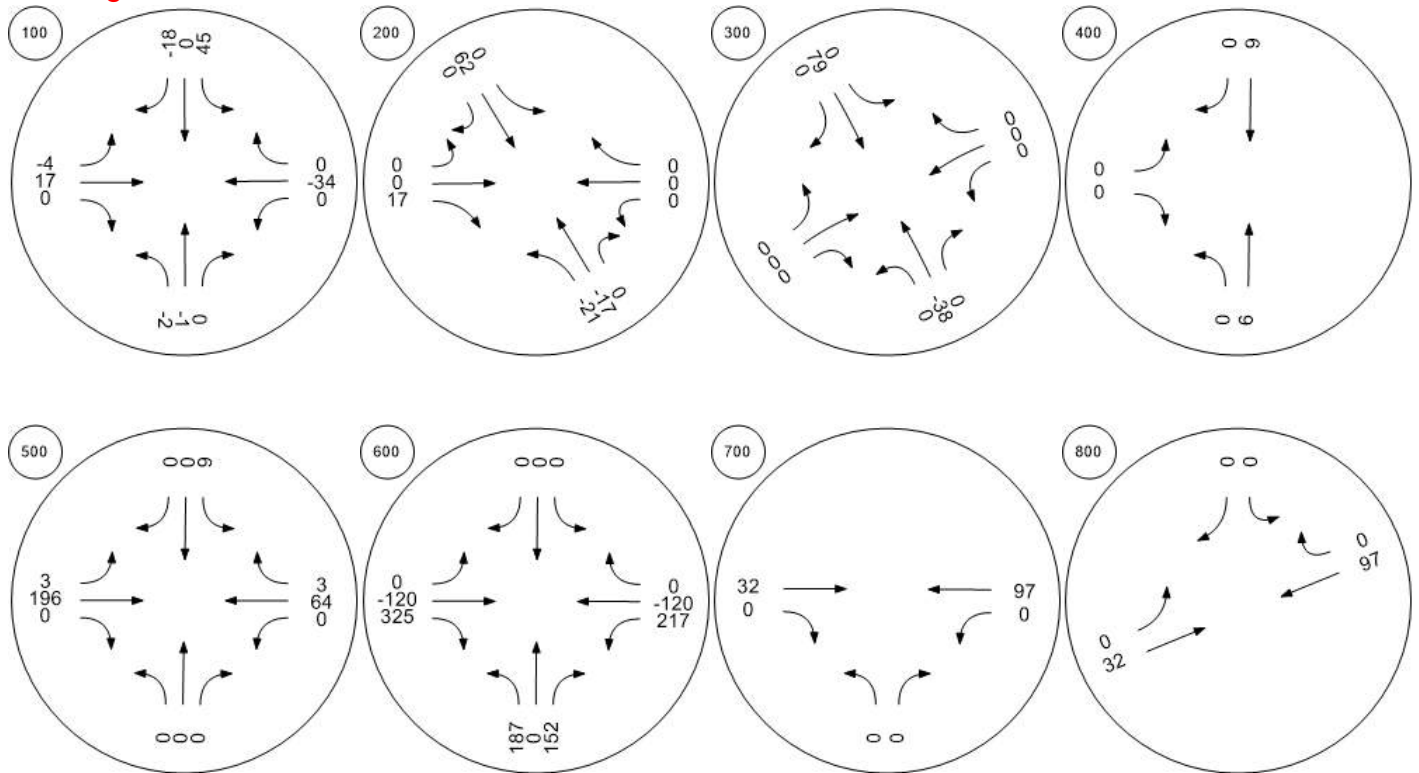
Cc: Jerry Lidz, DLCD Acting Director
Rob Hallyburton, DLCD Planning Services
Matt Crall, DLCD TGM Program
Jerri Bohard, ODOT Director's Office
ODOT Region Planning Managers
Erik Havig, ODOT Planning Section
Michael Rock, ODOT Planning Section
TPR Rulemaking Advisory Committee

Appendix K 2037 Total Traffic Volumes and Analysis

Traffic Volume - Net New Site Trips - Proposed Rezone



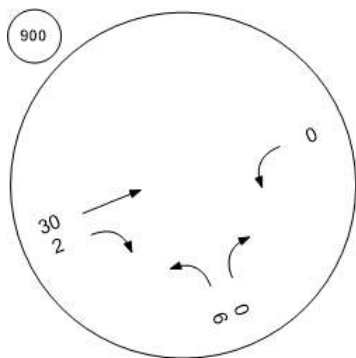
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Net New Site Trips - Proposed Rezone



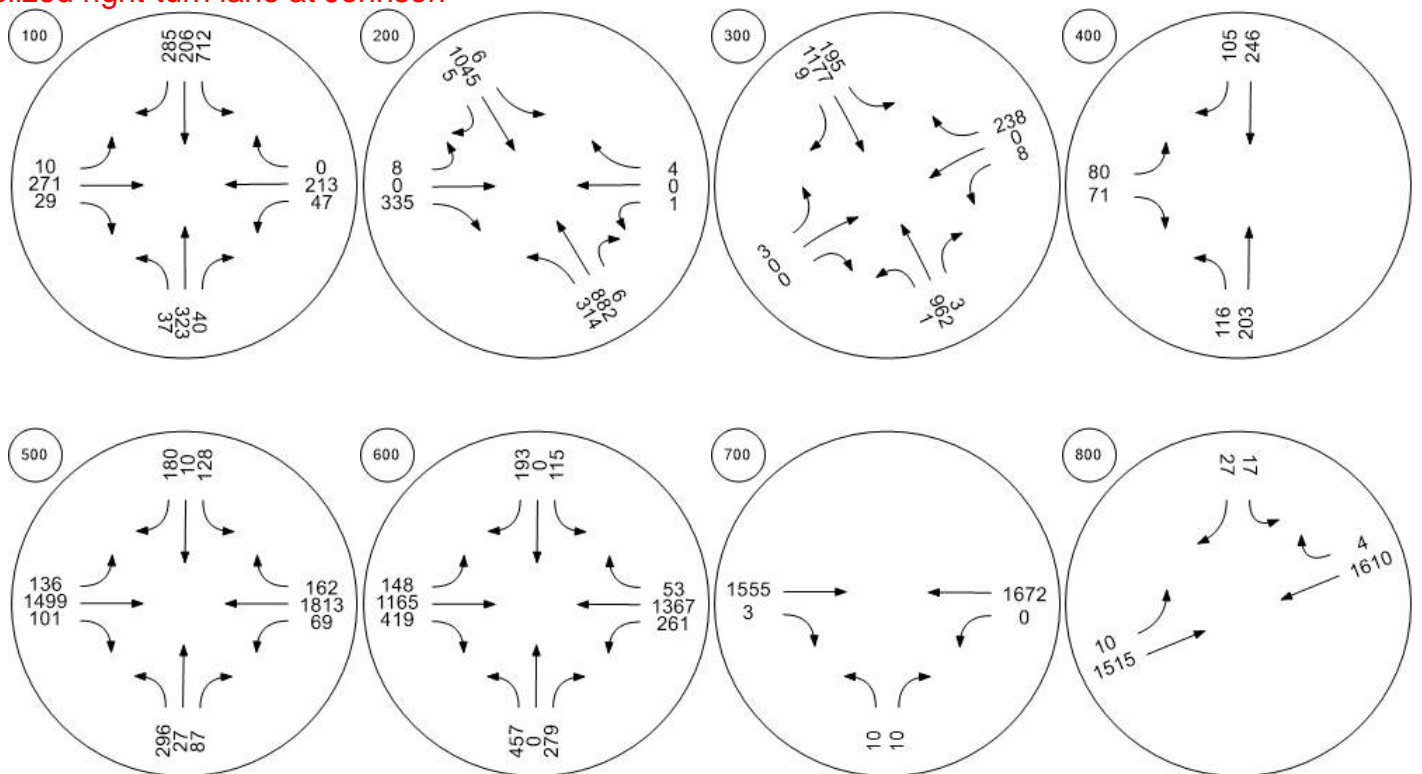
The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Traffic Volume - Future Total Volume



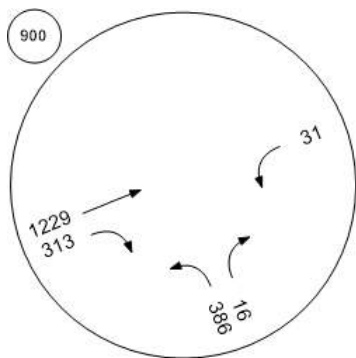
Westbound right-turn volumes were omitted from analysis due to the presence of the channelized right-turn lane at Johnson



Traffic Volume - Future Total Volume



The westbound through lane/volumes were omitted from the Vistro analysis as the lane is channelized and does not conflict with other movements at Cruickshank



Intersection Level Of Service Report
Intersection 100: NE Johnson St/NE 3rd St

Control Type:	Signalized	Delay (sec / veh):	122.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.995

Intersection Setup

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	200.00	100.00	100.00	225.00	100.00	100.00	120.00	100.00	120.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Johnson St			NE Johnson St			NE 3rd St			NE 3rd St		
Base Volume Input [veh/h]	31	250	31	516	160	240	28	212	24	36	180	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-2	-1	0	45	0	-18	-4	17	0	0	-34	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	-1	0	0	-1	-1	-8	-22	-20	-2	0	14	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	323	40	712	206	285	10	271	29	47	213	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	81	10	178	52	71	3	68	7	12	53	0
Total Analysis Volume [veh/h]	37	323	40	712	206	285	10	271	29	47	213	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Version 2020 (SP 0-5)

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Overlap	Permiss	ProtPer	Overlap	Unsigna
Signal Group	8	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		8			4			2			6	
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	8	8	0	7	7	0	3	5	0	3	5	0
Maximum Green [s]	30	30	0	40	55	0	20	30	0	20	30	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0	3.5	3.5	0.0
All red [s]	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0
Split [s]	21	21	0	36	57	0	12	21	0	12	21	0
Vehicle Extension [s]	4.0	4.0	0.0	3.5	4.3	0.0	2.5	3.0	0.0	2.5	3.0	0.0
Walk [s]	7	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	10	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No		No	No		No	No		No	No	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C
C, Cycle Length [s]	124	124	124	124	124	124	124
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	40	74	1	24	14	37
g / C, Green / Cycle	0.24	0.32	0.60	0.01	0.20	0.11	0.30
(v / s)_i Volume / Saturation Flow Rate	0.34	0.44	0.32	0.01	0.18	0.03	0.13
s, saturation flow rate [veh/h]	1187	1603	1527	1603	1655	1603	1683
c, Capacity [veh/h]	319	517	911	12	326	58	504
d1, Uniform Delay [s]	43.82	35.35	6.59	61.33	44.77	48.50	29.50
k, delay calibration	0.50	0.50	0.30	0.08	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	138.01	181.75	1.39	69.33	33.11	22.54	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.26	1.38	0.54	0.85	0.92	0.81	0.42
d, Delay for Lane Group [s/veh]	181.82	217.10	7.98	130.66	77.88	71.04	30.06
Lane Group LOS	F	F	A	F	E	E	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	21.92	40.43	3.64	0.54	11.53	1.65	4.43
50th-Percentile Queue Length [ft/ln]	548.02	1010.71	90.95	13.51	288.20	41.31	110.77
95th-Percentile Queue Length [veh/ln]	33.31	60.82	6.55	0.97	17.10	2.97	7.88
95th-Percentile Queue Length [ft/ln]	832.64	1520.48	163.71	24.33	427.40	74.36	197.07

Movement, Approach, & Intersection Results

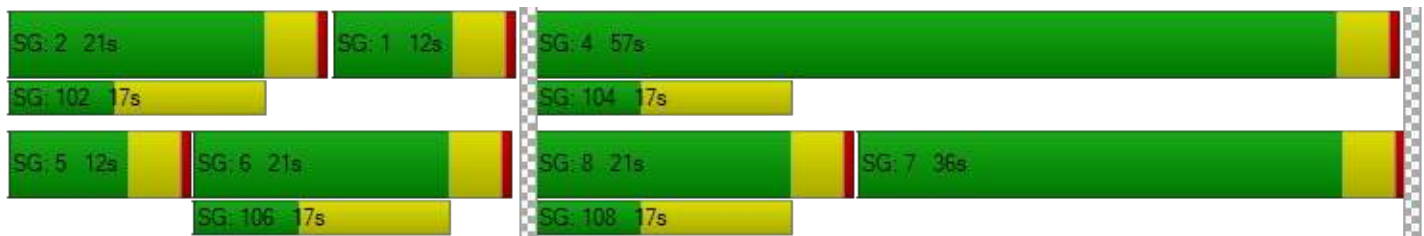
d_M, Delay for Movement [s/veh]	181.82	181.82	181.82	217.10	7.98	7.98	130.66	77.88	77.88	71.04	30.06	0.00
Movement LOS	F	F	F	F	A	A	F	E	E	E	C	
d_A, Approach Delay [s/veh]	181.82			131.74			79.58			37.47		
Approach LOS	F			F			E			D		
d_I, Intersection Delay [s/veh]	122.24											
Intersection LOS	F											
Intersection V/C	0.995											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.047	2.439	2.267	2.443
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	378	1178	378	378
d_b, Bicycle Delay [s]	29.61	7.61	29.61	29.61
I_b,int, Bicycle LOS Score for Intersection	2.220	3.545	2.071	1.989
Bicycle LOS	B	D	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	-	7	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	137.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.088

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	314	882	6	6	1045	5	8	0	335	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	237	2	2	281	1	2	0	90	0	0	1
Total Analysis Volume [veh/h]	338	948	6	6	1124	5	9	0	360	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	0	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	C
C, Cycle Length [s]	94	94	94	94	94	94
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	60	60	40	40	26	26
g / C, Green / Cycle	0.64	0.64	0.43	0.43	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.42	0.57	0.01	0.67	0.25	0.00
s, saturation flow rate [veh/h]	800	1681	453	1682	1455	1146
c, Capacity [veh/h]	432	1077	76	714	439	360
d1, Uniform Delay [s]	25.73	14.07	47.12	27.12	33.21	24.89
k, delay calibration	0.50	0.35	0.11	0.50	0.30	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.14	7.90	0.43	268.52	11.33	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.89	0.08	1.58	0.84	0.01
d, Delay for Lane Group [s/veh]	38.87	21.97	47.56	295.64	44.54	24.90
Lane Group LOS	D	C	D	F	D	C
Critical Lane Group	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	4.27	16.20	0.15	68.01	9.33	0.08
50th-Percentile Queue Length [ft/ln]	106.66	405.08	3.68	1700.22	233.25	2.06
95th-Percentile Queue Length [veh/ln]	7.65	22.80	0.27	105.36	14.34	0.15
95th-Percentile Queue Length [ft/ln]	191.35	570.12	6.63	2634.01	358.49	3.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.87	21.97	21.97	47.56	295.64	295.64	44.54	44.54	44.54	24.90	24.90	24.90
Movement LOS	D	C	C	D	F	F	D	D	D	C	C	C
d_A, Approach Delay [s/veh]	26.39			294.33			44.54			24.90		
Approach LOS	C			F			D			C		
d_I, Intersection Delay [s/veh]	137.35											
Intersection LOS	F											
Intersection V/C	1.088											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	36.45	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.749	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1422	889	667	667
d_b, Bicycle Delay [s]	3.76	13.89	20.00	20.00
I_b,int, Bicycle LOS Score for Intersection	3.691	3.432	2.168	1.568
Bicycle LOS	D	C	B	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 300: NE Three Mile Ln/SE Nehemiah Ln

Control Type:	Two-way stop	Delay (sec / veh):	77.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.931

Intersection Setup

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			└			└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	NE Three Mile Ln			NE Three Mile Ln			SE Nehemiah Ln			SE Nehemiah Ln		
Base Volume Input [veh/h]	1	693	2	151	885	7	0	0	0	0	0	184
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	-38	0	0	79	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	103	0	0	-47	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	962	3	195	1177	9	0	0	0	0	0	238
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	261	1	53	320	2	0	0	0	0	0	65
Total Analysis Volume [veh/h]	1	1046	3	212	1279	10	0	0	0	0	0	259
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane				
Storage Area [veh]	0	0	2	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.32	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.93
d_M, Delay for Movement [s/veh]	11.62	0.00	0.00	12.95	0.00	0.00	0.00	0.00	22.70	0.00	0.00	77.70
Movement LOS	B	A	A	B	A	A			C			F
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	1.38	1.38	1.38	0.00	0.00	0.00	0.00	0.00	8.73
95th-Percentile Queue Length [ft/ln]	0.14	0.14	0.14	34.39	34.39	34.39	0.00	0.00	0.00	0.00	0.00	218.26
d_A, Approach Delay [s/veh]	0.01			1.83			22.70			77.70		
Approach LOS	A			A			C			F		
d_I, Intersection Delay [s/veh]	8.14											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 400: NE Cumulus Ave/ NE Norton Ln

Control Type:	Two-way stop	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.238

Intersection Setup

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	⇄		⇄		⇄	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	NE Norton Ln		NE Norton Ln		NE Cumulus Ave	
Base Volume Input [veh/h]	90	152	183	81	62	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	3.00	3.00	1.00	0.00	10.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	6	9	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	116	203	246	105	80	71
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	53	65	28	21	19
Total Analysis Volume [veh/h]	122	214	259	111	84	75
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			Yes
Storage Area [veh]	0	0	2
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.00	0.00	0.00	0.24	0.09
d_M, Delay for Movement [s/veh]	8.46	0.00	0.00	0.00	16.87	11.17
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.35	0.18	0.00	0.00	0.92	0.92
95th-Percentile Queue Length [ft/ln]	8.76	4.38	0.00	0.00	23.07	23.07
d_A, Approach Delay [s/veh]	3.07		0.00		14.18	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.80					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 500: NE Norton Ln/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	99.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.958

Intersection Setup

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NE Norton Ln			NE Norton Ln			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	229	21	67	92	8	139	103	934	78	53	1143	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	11.00	2.00	3.00	0.00	2.00	2.00	3.00	5.00	4.00	3.00	4.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	199	0	0	65	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	3	0	-3	-1	-3	0	0	-1	1
Pass-by Trips [veh/h]	0	0	0	6	0	3	4	0	0	0	0	2
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	94	0	0	270	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	296	27	87	128	10	180	136	1499	101	69	1813	162
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	7	23	34	3	48	36	399	27	18	482	43
Total Analysis Volume [veh/h]	315	29	93	136	11	191	145	1595	107	73	1929	172
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protecte	Overlap	Permiss	Protecte	Overlap	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	4	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups		3,4			4,7							
Lead / Lag	Lead	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	20	80	0	20	80	0
Amber [s]	4.5	4.5	0.0	4.5	4.5	0.0	4.5	5.0	0.0	4.5	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.5	5.2	0.0	2.5	5.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	31	0	0	31	0	0	34	0	0	36	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.5	4.0	0.0	3.5	4.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	167	167	167	167	167	167	167	167	167	167
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	0.00	3.50	0.00	0.00	4.00	4.00	0.00	4.00	4.00
g_i, Effective Green Time [s]	19	35	17	33	98	87	87	98	80	80
g / C, Green / Cycle	0.12	0.21	0.10	0.20	0.59	0.52	0.52	0.59	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.09	0.14	0.33	0.50	0.08	0.18	0.61	0.12
s, saturation flow rate [veh/h]	3138	1376	1590	1465	434	3179	1396	400	3179	1408
c, Capacity [veh/h]	364	292	159	288	217	1656	727	157	1521	674
d1, Uniform Delay [s]	72.60	56.89	74.00	62.58	49.55	38.51	20.78	38.18	43.57	25.88
k, delay calibration	0.08	0.08	0.08	0.24	0.34	0.26	0.26	0.50	0.31	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.73	0.71	9.27	6.65	10.43	9.32	0.22	9.52	123.91	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.42	0.85	0.70	0.67	0.96	0.15	0.46	1.27	0.26
d, Delay for Lane Group [s/veh]	77.32	57.59	83.27	69.23	59.99	47.83	21.00	47.70	167.48	26.35
Lane Group LOS	E	E	F	E	E	D	C	D	F	C
Critical Lane Group	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	6.91	4.56	6.19	8.59	3.12	31.94	2.20	1.61	56.19	4.12
50th-Percentile Queue Length [ft/ln]	172.78	114.02	154.68	214.65	77.98	798.53	55.03	40.29	1404.81	102.95
95th-Percentile Queue Length [veh/ln]	11.22	8.06	10.27	13.39	5.61	41.21	3.96	2.90	80.84	7.41
95th-Percentile Queue Length [ft/ln]	280.56	201.58	256.66	334.79	140.37	1030.25	99.05	72.52	2021.07	185.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	77.32	57.59	57.59	83.27	69.23	69.23	59.99	47.83	21.00	47.70	167.48	26.35
Movement LOS	E	E	E	F	E	E	E	D	C	D	F	C
d_A, Approach Delay [s/veh]	71.81			74.88			47.23			152.29		
Approach LOS	E			E			D			F		
d_I, Intersection Delay [s/veh]	99.04											
Intersection LOS	F											
Intersection V/C	0.958											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.339	2.399	3.496	3.427
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1456	1511	1778	1778
d_b, Bicycle Delay [s]	3.33	2.69	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.281	2.117	3.083	3.353
Bicycle LOS	B	B	C	C

Sequence

Ring 1	1	2	3	4	7	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	45.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.846

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	115	0	193	148	1165	419	261	1367	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	30	0	50	39	303	109	68	356	14
Total Analysis Volume [veh/h]	476	0	291	120	0	201	154	1214	436	272	1424	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap	ProtPer	Permiss	Overlap
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	155	155	155	155	155	155	155	155	155	155	155
L, Total Lost Time per Cycle [s]	5.50	5.50	5.50	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.50	0.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	45	30	45	11	34	99	79	115	99	76	93
g / C, Green / Cycle	0.29	0.19	0.29	0.07	0.22	0.63	0.51	0.74	0.63	0.49	0.60
(v / s)_i Volume / Saturation Flow Rate	0.31	0.20	0.10	0.00	0.14	0.26	0.38	0.30	0.43	0.45	0.04
s, saturation flow rate [veh/h]	1531	1454	1153	1710	1408	585	3179	1453	639	3179	1454
c, Capacity [veh/h]	513	280	215	124	308	301	1611	1073	344	1553	872
d1, Uniform Delay [s]	55.59	62.78	45.44	0.00	55.37	31.02	30.60	7.61	29.29	36.83	12.93
k, delay calibration	0.50	0.44	0.08	0.08	0.22	0.15	0.15	0.19	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.28	60.71	1.67	0.00	4.63	1.91	1.04	0.44	16.70	3.58	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	1.04	0.56	0.00	0.65	0.51	0.75	0.41	0.79	0.92	0.06
d, Delay for Lane Group [s/veh]	80.87	123.49	47.11	0.00	60.00	32.93	31.64	8.05	45.99	40.42	12.97
Lane Group LOS	F	F	D	A	E	C	C	A	D	D	B
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	22.24	15.83	3.70	0.00	7.63	2.36	18.30	5.36	5.81	25.53	0.83
50th-Percentile Queue Length [ft/ln]	556.06	395.70	92.42	0.00	190.79	59.11	457.49	134.02	145.19	638.22	20.82
95th-Percentile Queue Length [veh/ln]	29.98	22.81	6.65	0.00	12.16	4.26	25.32	9.16	9.76	33.82	1.50
95th-Percentile Queue Length [ft/ln]	749.43	570.21	166.36	0.00	304.05	106.40	632.88	228.95	244.00	845.38	37.48

Movement, Approach, & Intersection Results

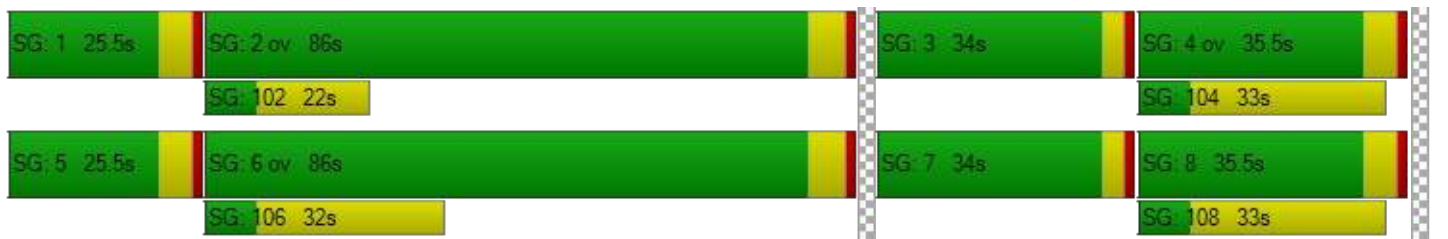
d_M, Delay for Movement [s/veh]	80.87	123.49	123.49	47.11	0.00	60.00	32.93	31.64	8.05	45.99	40.42	12.97
Movement LOS	F	F	F	D	A	E	C	C	A	D	D	B
d_A, Approach Delay [s/veh]	97.04			55.18			26.05			40.42		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	45.21											
Intersection LOS	D											
Intersection V/C	0.846											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.67	34.67	34.67	34.67
I_p,int, Pedestrian LOS Score for Intersection	2.620	2.370	3.258	3.036
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	1778	1778
d_b, Bicycle Delay [s]	20.00	20.00	0.56	0.56
I_b,int, Bicycle LOS Score for Intersection	2.825	2.089	3.048	3.004
Bicycle LOS	C	B	C	C

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 700: NE Three Mile Ln/SE Armory Way

Control Type:	Two-way stop	Delay (sec / veh):	191.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.389

Intersection Setup

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Armory Way		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	8	8	1079	2	0	1183
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	3.00	0.00	0.00	2.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	32	0	0	97
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	127	0	0	44
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	10	1555	3	0	1672
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	3	401	1	0	431
Total Analysis Volume [veh/h]	10	10	1603	3	0	1724
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.39	0.03	0.02	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	191.28	62.15	0.00	0.00	13.73	0.00
Movement LOS	F	F	A	A	B	A
95th-Percentile Queue Length [veh/ln]	1.51	1.51	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	37.71	37.71	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	126.72		0.00		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd

Control Type:	Two-way stop	Delay (sec / veh):	466.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.052

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	32	97	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1515	1610	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	390	415	1
Total Analysis Volume [veh/h]	18	28	10	1562	1660	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.05	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	466.49	268.18	16.12	0.00	0.00	0.00
Movement LOS	F	F	C	A	A	A
95th-Percentile Queue Length [veh/ln]	4.54	4.54	0.09	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	113.47	113.47	2.31	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	345.78		0.10		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	4.90					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 900: NE Three Mile Ln/SE Cruickshank Rd

Control Type:	Two-way stop	Delay (sec / veh):	25.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↻		↻		↶	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Cruickshank Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	291	12	835	234	24	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	10.00	3.00	4.00	0.00	3.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	6	0	30	2	0	91
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	3	0	119	8	0	41
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	386	16	1229	313	31	1224
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	4	320	82	8	319
Total Analysis Volume [veh/h]	402	17	1280	326	32	1275
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

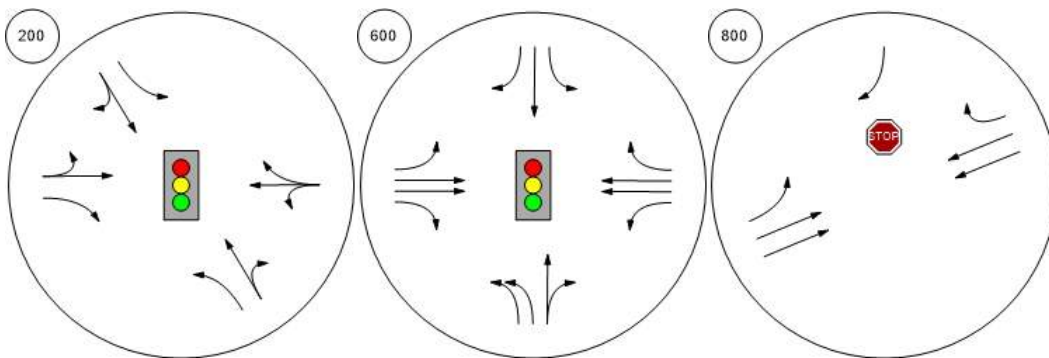
Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.09	0.01	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	0.00	25.27	0.00	0.00	11.96	0.00
Movement LOS		D	A	A	B	
95th-Percentile Queue Length [veh/ln]	0.00	0.28	0.00	0.00	0.19	0.00
95th-Percentile Queue Length [ft/ln]	0.00	7.09	0.00	0.00	4.63	0.00
d_A, Approach Delay [s/veh]	25.27		0.00		11.96	
Approach LOS	D		A		B	
d_I, Intersection Delay [s/veh]	0.49					
Intersection LOS	D					

Appendix L 2037 Mitigated Total Traffic
Analysis

Lane Configuration and Traffic Control



Intersection Level Of Service Report
Intersection 200: NE Three Mile Ln/SE 1st St

Control Type:	Signalized	Delay (sec / veh):	114.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.021

Intersection Setup

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←↑→			←↑→			←↑→			↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name	NE Three Mile Ln			NE 3rd St			SE 1st St			SE 1st St		
Base Volume Input [veh/h]	243	631	5	5	776	4	6	0	266	1	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	0.00	20.00	2.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	-21	-17	0	0	62	0	0	0	17	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	21	82	0	0	-21	0	0	0	-26	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	314	882	6	6	1045	5	8	0	335	1	0	4
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	84	237	2	2	281	1	2	0	90	0	0	1
Total Analysis Volume [veh/h]	338	948	6	6	1124	5	9	0	360	1	0	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing in	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	1	0	4	0
Auxiliary Signal Groups									1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	0	5	0	0	5	5	0	5	0
Maximum Green [s]	20	64	0	0	40	0	0	30	20	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	Yes			Yes			No	No		No	
Maximum Recall	No	No			No			No	No		No	
Pedestrian Recall	No	No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	C	R	C
C, Cycle Length [s]	89	89	89	89	89	89	89
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	62	62	40	40	19	41	19
g / C, Green / Cycle	0.70	0.70	0.45	0.45	0.21	0.46	0.21
(v / s)_i Volume / Saturation Flow Rate	0.41	0.57	0.01	0.67	0.01	0.25	0.00
s, saturation flow rate [veh/h]	827	1681	453	1682	1322	1442	1448
c, Capacity [veh/h]	493	1174	89	752	361	669	356
d1, Uniform Delay [s]	22.39	9.41	43.57	24.75	27.92	17.15	27.86
k, delay calibration	0.50	0.32	0.11	0.50	0.11	0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.54	4.05	0.31	232.90	0.03	3.09	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.81	0.07	1.50	0.02	0.54	0.01
d, Delay for Lane Group [s/veh]	29.92	13.46	43.88	257.65	27.95	20.25	27.88
Lane Group LOS	C	B	D	F	C	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.90	10.94	0.14	63.05	0.15	5.59	0.09
50th-Percentile Queue Length [ft/ln]	72.54	273.62	3.42	1576.14	3.85	139.70	2.13
95th-Percentile Queue Length [veh/ln]	5.22	16.37	0.25	96.77	0.28	9.46	0.15
95th-Percentile Queue Length [ft/ln]	130.58	409.25	6.16	2419.20	6.92	236.62	3.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.92	13.46	13.46	43.88	257.65	257.65	27.95	27.95	20.25	27.88	27.88	27.88
Movement LOS	C	B	B	D	F	F	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.77			256.52			20.44			27.88		
Approach LOS	B			F			C			C		
d_I, Intersection Delay [s/veh]	114.88											
Intersection LOS	F											
Intersection V/C	1.021											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			9.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			36.45			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000			2.749			0.000			0.000		
Crosswalk LOS	F			B			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1422			889			667			667		
d_b, Bicycle Delay [s]	3.76			13.89			20.00			20.00		
I_b,int, Bicycle LOS Score for Intersection	3.691			3.432			2.168			1.568		
Bicycle LOS	D			C			B			A		

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 600: Cumulus Ave/NE Three Mile Ln

Control Type:	Signalized	Delay (sec / veh):	49.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	125.00	100.00	125.00	125.00	100.00	100.00	125.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Cumulus Ave			Cumulus Ave			NE Three Mile Ln			NE Three Mile Ln		
Base Volume Input [veh/h]	0	0	0	89	0	149	114	993	0	0	1149	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	3.00	0.00	4.00	6.00	3.00	0.00	0.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	67	0	32	0	0	0	0	0	205	97	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	120	0	120	0	0	0	0	-120	120	120	-120	0
Existing Site Adjustment Volume [veh/h]	270	0	127	0	0	0	0	0	94	44	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	457	0	279	115	0	193	148	1165	419	261	1367	53
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	0	73	30	0	50	39	303	109	68	356	14
Total Analysis Volume [veh/h]	476	0	291	120	0	201	154	1214	436	272	1424	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Overla	ProtPer	Permis	Overla	ProtPer	Permis	Overla
Signal Group	3	8	0	7	4	5	5	2	3	1	6	7
Auxiliary Signal Groups						4,5			2,3			6,7
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	5	5	10	5	5	10	5
Maximum Green [s]	30	30	0	30	30	20	20	80	30	20	80	30
Amber [s]	3.0	4.5	0.0	3.0	4.5	4.5	4.5	5.0	3.0	4.5	5.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	3.0	2.5	0.0	3.0	2.5	2.5	2.5	4.0	3.0	2.5	4.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	26	0	0	26	0	0	15	0	0	25	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	3.5	0.0	2.0	3.5	3.5	3.5	4.0	2.0	3.5	4.0	2.0
Minimum Recall	No	No		No	No	No	No	Yes	No	No	Yes	No
Maximum Recall	No	No		No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No		No	No	No	No	No	No	No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	163	163	163	163	163	163	163	163	163	163	163
L, Total Lost Time per Cycle [s]	4.00	5.50	4.00	5.50	5.50	6.00	6.00	4.00	6.00	6.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	3.50	2.00	3.50	0.00	0.00	4.00	0.00	0.00	4.00	0.00
g_i, Effective Green Time [s]	28	30	14	17	42	103	83	116	103	78	98
g / C, Green / Cycle	0.17	0.18	0.09	0.10	0.26	0.63	0.50	0.71	0.63	0.48	0.60
(v / s)_i Volume / Saturation Flow Rate	0.15	0.20	0.08	0.00	0.14	0.25	0.38	0.30	0.42	0.45	0.04
s, saturation flow rate [veh/h]	3163	1454	1590	1710	1408	606	3179	1454	642	3179	1453
c, Capacity [veh/h]	534	267	141	177	365	307	1603	1032	341	1516	875
d1, Uniform Delay [s]	66.47	66.71	73.40	0.00	52.26	35.47	32.47	9.83	31.93	40.51	13.43
k, delay calibration	0.11	0.48	0.11	0.08	0.25	0.15	0.15	0.21	0.50	0.15	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.41	80.38	13.14	0.00	2.91	1.80	1.07	0.54	17.49	4.82	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.89	1.09	0.85	0.00	0.55	0.50	0.76	0.42	0.80	0.94	0.06
d, Delay for Lane Group [s/veh]	71.88	147.09	86.54	0.00	55.17	37.27	33.54	10.37	49.43	45.34	13.48
Lane Group LOS	E	F	F	A	E	D	C	B	D	D	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	10.17	17.13	5.51	0.00	7.50	2.51	19.48	6.55	6.16	27.93	0.88
50th-Percentile Queue Length [ft/ln]	254.14	428.16	137.75	0.00	187.52	62.74	486.89	163.67	153.91	698.18	21.94
95th-Percentile Queue Length [veh/ln]	15.39	25.01	9.36	0.00	11.99	4.52	26.71	10.74	10.23	36.59	1.58
95th-Percentile Queue Length [ft/ln]	384.86	625.25	233.99	0.00	299.80	112.94	667.82	268.57	255.65	914.85	39.49

Movement, Approach, & Intersection Results

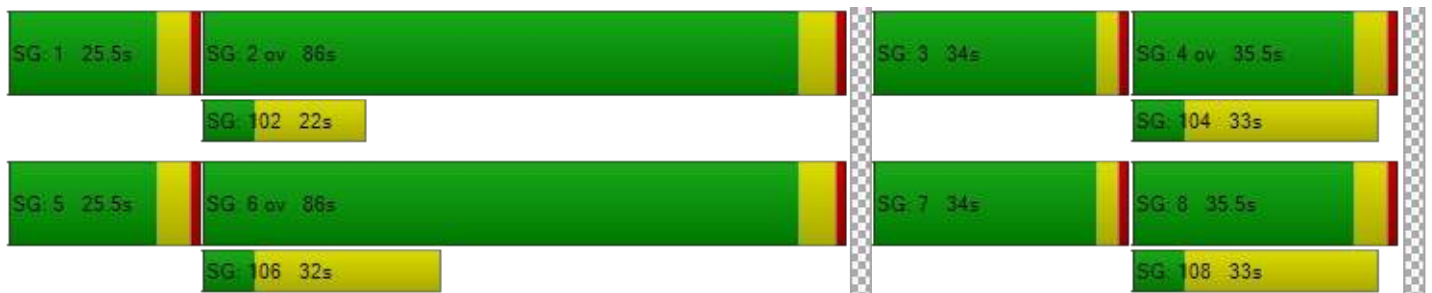
d_M, Delay for Movement [s/veh]	71.88	147.09	147.09	86.54	0.00	55.17	37.27	33.54	10.37	49.43	45.34	13.48
Movement LOS	E	F	F	F	A	E	D	C	B	D	D	B
d_A, Approach Delay [s/veh]	100.42			66.90			28.26			44.97		
Approach LOS	F			E			C			D		
d_I, Intersection Delay [s/veh]	49.15											
Intersection LOS	D											
Intersection V/C	0.794											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	34.67			34.67			34.67			34.67		
I_p,int, Pedestrian LOS Score for Intersection	2.690			2.367			3.087			3.001		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	667			667			1778			1778		
d_b, Bicycle Delay [s]	20.00			20.00			0.56			0.56		
I_b,int, Bicycle LOS Score for Intersection	2.825			2.089			3.048			3.004		
Bicycle LOS	C			B			C			C		

Sequence




Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report
Intersection 800: NE Three Mile Ln/SE Loop Rd**

Control Type:	Two-way stop	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.095

Intersection Setup

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	150.00	100.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	SE Loop Rd		NE Three Mile Ln		NE Three Mile Ln	
Base Volume Input [veh/h]	13	21	8	1048	1135	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	27.00	11.00	14.00	2.00	3.00	0.00
Growth Factor	1.2940	1.2940	1.2940	1.2940	1.2940	1.2940
In-Process Volume [veh/h]	0	0	0	32	97	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	127	44	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	27	10	1515	1610	4
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	7	3	390	415	1
Total Analysis Volume [veh/h]	18	28	10	1562	1660	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.09	0.03	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	18.47	16.12	0.00	0.00	0.00
Movement LOS		C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.31	0.09	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	7.78	2.31	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.47		0.10		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	C					



Memorandum

Date January 10, 2020
To Alan Roodhouse, RPS Development
Michael Strahs, Kimco Realty
From Sam Brookham, Leland Consulting Group
Chris Zahas, AICP, Leland Consulting Group
Subject EOA Land Supply Update
Project McMinnville Three Mile Lane

Kimco and RPS Development are in the process of preparing a zone change application for its property on Three Mile Lane in McMinnville. As part of this application, the applicant is required to refer to the industrial and commercial land supply in McMinnville, as noted in the City's Economic Opportunities Analysis (EOA). Since the EOA was adopted in 2013, several zone changes elsewhere in the city have rendered the numbers in the EOA incorrect. In order for the applicant to provide the City with accurate information, Leland Consulting Group was engaged to prepare a supplementary memorandum that updates the land supply numbers in the 2013 EOA to reflect these zone changes. This technical memorandum, therefore, documents all zone changes since the 2013 EOA and reconciles the corresponding commercial land supply numbers.

ZONE CHANGES SINCE 2013

The following table shows all of the commercial rezones in McMinnville since 2012 and provides information about the development status for each associated parcel. This information is a critical and foundational component of updating the commercial land demand and supply numbers.

Table 1. Zone Changes to/from Commercial Lands (2012-2019)

Year	Old Zone	New Zone	Site Address	Tax Lot Number	Lot Acres	Ord. No.	Development Status	Notes
2012	R-4 PD	O-R PD	500 NW Hill Road	R4419AC04700	3.39	4957	Partially Developed	Approximately 1/3 developed
2013	R-4	C-3 PD	304 NE Logan St	R4421AC03100	0.44	4968	Developed	Subaru car dealership, built 2013
			337 NE Macy St	R4421AC03200				
2017	R-1, EF-40	C-3	2121 NE 27th St	R4416AA05002	0.72	5020	Developed	Built pre-2013
2018	R-4 PD	O-R	600 SE Baker Street	R4420DD00100	2.86	5061	Undeveloped	Linfield College, vacant
				R4420DD00200				
2019	County	C-3 PD	1755 NW Baker Creek	R4418 00100	6.62		Undeveloped	Vacant

C-3	(4.56)
O-R	3.13
Total Comm.	(1.44)

Source: LCG, City of McMinnville

The following information provides a brief explanation of the preceding table and the resulting numbers.

- There were three instances of a zone change from a residential zone to an office/residential zone (O/R), totaling 6.25 acres. The O-R Zone (Office/Residential) is both commercial and residential and, thus, the total new acreage is split 50/50 between residential and commercial needs for the purpose of the buildable lands inventory. This equates to a gross increase of 3.125 acres of commercially designated land.
- The 2019 rezone resulted in a reduction of the site’s 12.34 acres of commercially designated land by 5.72 acres for a new total of 6.62 acres.
- The addition of the 2013 and 2017 C-3 rezones (totaling an increase of 1.16 acres) less the 2019 reduction equals an overall 4.56-acre reduction of General Commercial C-3 land.
- The gross reduction of 4.56 acres of C-3 zoned land and an increase of 3.13 of O-R zoned land results in a net loss of 1.44 acres of commercial land inventory.

EOA UPDATE

The following table was reproduced from the 2013 OEA. It is reproduced here to provide contextual information about the need for commercial, industrial, and institutional land based on the 20-year employment forecast (as of 2013). In 2013, the EOA forecasted a 20-year need for 165 acres of commercial land, 145 acres of industrial land, and 10 acres for institutional uses, totaling 320 acres.

Table 2. Forecast Demand for Vacant Employment Land (2013-2033)

Land Use Type	Forecast Job Growth	Added Jobs on C/I Land	Employees per Acre	Acreage Need	% of Total
Commercial	4,898	4,065	26.0	164.6	51.5%
Industrial	1,826	1,516	11.0	145.1	45.4%
Institutional	660	340	35.0	10.2	3.2%
Total All Uses	7,385	5,921	19.5	319.9	100%

Source: ECONorthwest, 2001 EOA and E. D. Hovee & Company, LLC.

The table below shows the original 2012 buildable land inventory summary and the adjustments based on the aforementioned zone changes between 2012 and 2019. Key takeaways are as follows.

- The commercial buildable land inventory decreased by 1.44 acres, largely because of the aforementioned reduction of 5.72 acres of vacant commercial land.
- Most of the “added” commercial land is considered *unavailable* because of the presence of buildings.
- The buildable industrial land inventory was not affected by commercial zone changes between 2012 and 2019.

Table 3. McMinnville Commercial & Industrial BLI (2012 + 2013-2019 Zone Changes)

BLI Category	# of Parcels	Land Area (in acres)		Total
		Unavailable	Available	
Commercial Inventory				
Developed	793	464.4	0.0	464.4
Recent Zone Change	3	1.2	0.0	1.2
Partially Developed	18	84.1	22.5	106.6
Recent Zone Change	1	0.6	1.1	1.7
Vacant	43	14.3	108.5	122.7
Recent Zone Change	3	0.0	(4.3)	-4.3
2013 Subtotal	861	562.8	130.9	693.7
Recent Zone Change	7	1.7	(3.2)	(1.4)
Rev. 2019 Subtotal	868	564.5	127.8	692.3
Industrial Inventory				
Developed	174	1,154.6	0.0	1,154.6
Partially Developed	6	4.5	12.4	16.9
Vacant	49	20.5	376.7	397.2
Subtotal Industrial	229	1,179.7	389.7	1,569.4
Commercial + Industrial	1,097.0	1,744.2	517.5	2,261.6

Source: E. D. Hovee & Company, LLC., City of McMinnville Planning Department

Table 4, below, is a reproduction of the table in the 2013 EOA—with the original comments—but includes an update for 2019 using the information presented thus far in this memorandum. Given the reduction in *available* commercial land, from 130.9 acres in the 2013 EOA to 127.8 acres after computing the impacts of recent zone changes, the commercial land deficit has also increased by 3.1 acres, from 35.9 to 39.0.

Any rezoning efforts of industrial-zoned to commercial-zoned land will, therefore, reduce the forecasted deficit in commercial land supply (as of the 2033 forecast year).

Table 4. Comparison of Land Demand to Supply (2013/2019-2033)

Acres by Plan Designation				Comments
	Commercial	Industrial	Total	
Vacant Land Demand				Based on 2013-33 jobs forecast
Commercial	164.6	0.0	164.6	Commercial retail & service need
Industrial	0.0	145.1	145.1	Manufacturing & related sectors
Institutional	2.2	8.0	10.2	62% of need w/ per job method
Totals	166.8	153.2	319.9	Employment land demand
Available Land Supply				Fully & partially vacant sites
2013 BLI Update	130.9	389.7	520.0	Revised per BLI update 7/13
2013 Surplus/(Deficit)	(35.9)	235.9	200.1	As of 2033 forecast year
2019 Revision	127.8	389.7		With 2013-2019 zone changes
2019 Surplus/(Deficit)	(39.0)	236.5	197.5	As of 2033 forecast year

Source: E. D. Hovee & Company, LLC.

City of McMinnville Economic Opportunities Analysis

January-February 2020

Prepared for:
City of McMinnville

DRAFT REPORT

ECONorthwest
ECONOMICS • FINANCE • PLANNING

KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503.222.6060

This page intentionally blank

Draft

Acknowledgments

ECONorthwest prepared this report for the City of McMinnville. ECONorthwest and the City thank the many people who helped to develop the McMinnville Economic Opportunities Analysis.

<p>Project Advisory Committee Kellie Menke Roger Lizut Susan Dirks Sid Friedman Mark Davis Paul Davis Andrew Burton Beth Caster Michael Jester Robert J. Banagay Amanda Perron Matt Deppe</p>	<p>Patty O’Leary Doug Hurl Scott Cooper Alan Amerson Kelly McDonald Mike Morris Jeff Knapp Gioia Goodrum Ed Gormley Kyle Faulk Jody Christensen</p>
<p>Public/Semi-Public Lands Work Group <i>PAC Members:</i> Paul Davis, Chemeketa Susan Muir, Parks Mike Bisset, City Infrastructure John Dietz, MWL Other Interested PAC Members</p>	<p><i>Additional Representatives:</i> Mary Ann Rodriguez, Linfield Matt Johnson, Churches Laura Syring, SD, Parks Peter Keenan, SD Ryan McIrvin, SD/Athletics Steve Ganzer, Parks Justin Hogue, County</p>
<p>Technical Advisory Committee (TAC): Tom Schauer - Lead Heather Richards Chuck Darnell Jamie Fleckenstein</p>	<p>Mike Bisset Susan Muir (Parks Director) Angela Carnahan (DLCD) Stephanie Armstrong (Yamhill County)</p>
<p>ECONorthwest Consulting Staff Bob Parker, Project Director</p>	<p>Margaret Raimann, Technical Manager</p>

For over 40 years ECONorthwest has helped its clients make sound decisions based on rigorous economic, planning, and financial analysis. For more information about ECONorthwest: www.econw.com. For more information about this report, please contact:

Tom Schauer
 Senior Planner
 230 NE Second Street
 McMinnville, OR 97128
 503-4745108
tom.schauer@mcminnvilleoregon.gov

Bob Parker
 ECONorthwest
 222 SW Columbia, Suite 1600
 Portland, OR 97201
 503-222-6060
parker@econw.com

Table of Contents

1. INTRODUCTION	1
CONTENTS, FORMAT, AND GUIDING REQUIREMENTS	1
BACKGROUND	2
STATEWIDE PLANNING GUIDANCE	7
PUBLIC PROCESS	8
ORGANIZATION OF THIS REPORT	9
2. THE MCMINNVILLE ECONOMY	10
3. NATIONAL, STATE, AND REGIONAL OUTLOOK	19
NATIONAL TRENDS	19
STATE TRENDS	27
REGIONAL AND LOCAL TRENDS	31
4. ECONOMIC DEVELOPMENT POTENTIAL	44
FACTORS AFFECTING COMMUNITY ECONOMIC DEVELOPMENT POTENTIAL	45
TARGET INDUSTRIES	59
5. FORECAST EMPLOYMENT AND LAND NEEDS	67
EOA UPDATE PROCESS	67
BUILDABLE LANDS INVENTORY	67
FORECAST OF EMPLOYMENT GROWTH AND COMMERCIAL AND INDUSTRIAL LAND DEMAND	75
ESTIMATE OF DEMAND FOR COMMERCIAL AND INDUSTRIAL LAND	82
SUMMARY OF LAND SUFFICIENCY FOR EMPLOYMENT LAND IN MCMINNVILLE	104
6. COMPREHENSIVE PLAN POLICIES	107
ECONOMIC DEVELOPMENT GOALS AND POLICIES	107
APPENDIX A. BUILDABLE LANDS INVENTORY	115
STUDY AREA	115
METHODS FOR INVENTORY OF COMMERCIAL AND INDUSTRIAL LANDS	115
APPENDIX B. EMPLOYMENT ON OTHER LAND AND EMPLOYMENT DENSITY	119
EMPLOYMENT ON OTHER (NON-VACANT) LAND	119
EMPLOYMENT DENSITY	124

This page intentionally blank

Draft

1. Introduction

This report presents an update to the 2013 Economic Opportunities Analysis (EOA) for the City of McMinnville. The purpose of an EOA is to develop information as a basis for policies that capitalize on McMinnville's opportunities and help address the City's challenges. In 2019, the City adopted the *MAC-Town 2032 Economic Development Strategic Plan*. This EOA Update is intended to:

- Provide the analysis and land use foundation necessary to achieve the City's economic development strategy.
- Identify policy issues that will need to be reflected in the Comprehensive Plan to achieve the economic development strategy.
- Update the trend data and forecasting, the buildable land inventory, and employment land needs to a common planning period with the City's housing needs analysis and other land needs. This update is part of an urbanization report to inform the strategy and identify land needs for a 20-year planning period to determine sufficiency of buildable lands and land use policies to meet identified needs consistent with the City's vision. Additional long-term and short-term planning periods are also analyzed consistent with planning for Urban Reserves and to ensure adequate short-term supply of needed sites.

This version of the EOA is intended to provide an update to the previous 2013 EOA, and thus retains portions of the content and narrative throughout. Where necessary, this update uses updated data on employment trends and commercial and industrial land needs, as well as refined approaches to methods for forecasting employment growth. The competitive advantages (i.e., advantages and disadvantages) for economic development in McMinnville did not change substantially since evaluation of these factors in the 2013 EOA or the *MAC-Town 2032 Economic Development Strategic Plan* adopted in 2019. This 2020 EOA updates the information included in the 2013 EOA to include the new information on competitive advantages and the target industries identified in the Strategic Plan, with consideration for any outdated information.

Contents, Format, and Guiding Requirements

The EOA includes technical analysis to address a range of questions that McMinnville faces in managing its commercial and industrial land. For example, the EOA includes an employment forecast that describes how much growth McMinnville should plan for over the planning period and identifies the amount and type of employment land necessary to accommodate growth in McMinnville over that period. The EOA also includes an inventory of commercial and industrial land within McMinnville's urban growth boundary (UGB) to provide information about the amount of land available to accommodate employment growth.

This EOA complies with the requirements of statewide planning Goal 9, the Goal 9 administrative rules (OAR 660 Division 9), and the court decisions that have interpreted them. Goal 9 requires cities to identify the characteristics of sites needed to accommodate industrial and other employment uses (OAR 660-009-0025(1)) over the 2021-2041 20-year planning period. This approach could be characterized as a *site-based* approach that projects land need based on the forecast for employment growth, the City's economic development objectives, and the specific needs of target industries. This updated analysis is more comprehensive than the State requires, as it looks at the employment needs for a 5-, 10-, and 46-year period, in addition to the 20-year period. The shorter-term analyses are intended to identify immediate employment land needs and strategies given current land-need deficiencies, and the 46-year analysis can provide a basis for the establishment of urban reserve areas (URAs).

Background

The City adopted an updated EOA in 2013. It provided the following history of work prior to the 2013 EOA update:

McMinnville's Comprehensive Plan, as adopted in 1981, consists of three interrelated volumes:

- Volume I – covering background information for the plan process
- Volume II – listing adopted goals and policies
- Volume III – consisting of implementation ordinances and measures including the comprehensive plan and zoning maps, annexation, zoning and land division ordinances, and planned development overlays on areas of special significance

In 2001, the City of McMinnville completed an Economic Opportunities Analysis (EOA) aimed to "inventory all non-residential lands and conduct an analysis of its future commercial and industrial land needs, consistent with the requirements of current Statewide Planning Goals, laws, and administrative rules." The EOA identified a potential surplus of industrial land and a deficit of commercial land over what was then a 20-year forecast horizon of 2000-2020. The EOA was approved by the City Council in February 2002 and subsequently acknowledged by the State Land Conservation and Development Commission (LCDC).

In 2003, a McMinnville Growth Management and Urbanization Plan (MGMUP) was adopted as an element of the Comprehensive Plan. This document provided guiding principles and a development concept for future growth, including a proposed expansion of McMinnville's Urban Growth Boundary (UGB).

In conjunction with this process, the City also updated the work of the 2001 EOA with respect to a revised Population and Employment Justification and a Revised Buildable Land Analysis, to bring these analyses current to the January 1, 2003 starting benchmark of the UGB review process. In effect, the 20-year planning horizon was shifted from 2000-2020 by three years to 2003-2023. In addition, the buildable lands analysis was updated to reflect changes that occurred between 2001 and 2003, and land need projections were adjusted accordingly.

The MGMUP documented the need for UGB expansion approaching 1,125 buildable acres (to meet needs for 2003-2023), with more than 90% of the need accounted by proposed expansion of land for residential, parks and related public uses. The remaining 9% represented land documented as needed for commercial development. The MGMUP was approved by LCDC, but then appealed by private parties to the Oregon Court of Appeals for issues related to prioritization of the types of agricultural land that can be added to the UGB. The Court eventually reversed and remanded LCDC's approval; LCDC subsequently reversed and remanded their action to the City of McMinnville.

2013 EOA Update

The City of McMinnville last conducted a Goal 9-compliant analysis and evaluation of economic trends in the 2013 EOA update, which was based on 2010 Census and other employment data. The 2019 Economic Development Strategic Plan also included a Demographic and Economic profile of McMinnville.

The 2013 EOA acknowledged that due to the prior Court of Appeals decision, "a previously determined 106-acre deficiency of commercial land for McMinnville's 20-year need has not been fully remedied. While the City of McMinnville is not pursuing any proposal to increase its UGB at this time, the need to address the potential imbalance of commercial and industrial land requirements has become more apparent due to the effects of a changing global, regional and local economy..."

The 2013 EOA stated, "As noted, while always an option for potential consideration, this EOA update assumes that McMinnville's UGB will not be expanded during the updated 20-year forecast period for purposes of providing non-residential (or employment) land need; rather, any needs for added forecast employment growth are anticipated to be accommodated through efficiency or other measures as available to avoid UGB expansion." The 2013 EOA found a 36-acre shortfall of commercial land for the 2013-2033 planning period, and a surplus of industrial land. This resulted in findings that led to subsequent rezoning of some of the surplus industrially-zoned acreage to commercially-zoned acreage in response to identified commercial land deficits.

Planning Area Definition

The EOA provides the data and analysis necessary to evaluate the sufficiency of McMinnville's UGB to meet needs for the identified planning period. As such, it includes an evaluation of the buildable lands within McMinnville's current UGB (as illustrated by the Comprehensive Plan map on the following page). This EOA also provides discussion of the Yamhill County, regional, statewide and national context within which local economic development opportunities are appropriately framed. The report provides information that will be needed to address UGB and Urban Reserve needs for any deficit of lands that isn't met within the current UGB. It also provides information about site needs and characteristics that will assist with UGB an Urban Reserve alternatives analysis. The analysis area for alternatives analysis is articulated in state law and will be addressed in a separate step in this review.

Community Economic Development Objectives

Current community objectives for economic development can be found as part of the following City documents:

MAC-Town 2032 Strategic Plan (adopted 2019)

In 2019, McMinnville adopted the *MAC-Town 2032 Strategic Plan*, which includes new vision, mission, and values statements. It also includes goals for seven strategic priorities, and for each goal, there are identified objectives and priority actions. Additional actions are also identified.

Vision, Mission, Values

Vision

A collaborative and caring city inspiring an exceptional quality of life.

Mission

The City of McMinnville delivers high-quality services in collaboration with partners for a prosperous, safe, and livable community.

Values

- **Stewardship.** We are responsible caretakers of our shared public assets and resources. We do this to preserve the strong sense of community pride which is a McMinnville trademark.
- **Equity.** We are a compassionate and welcoming community for all – different points of view will be respected. Because not all members of our community are equally able to access our services or participate in public process, we commit ourselves to lowering these barriers.
- **Courage.** We are future-oriented, proactively embracing and planning for change that is good for our community and consistent with our values.
- **Accountability.** We believe healthy civil discourse is fostered through responsive service and clear, accurate, useful information.

Strategic Priorities. To move McMinnville toward its vision, the City believes it will need to make disproportionate investment in time and resources in these areas.

One of these strategic priorities is Economic Prosperity, with the following goal and objectives. Each objective also has associated priority actions.

- Goal: Provide economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors.
- Objectives:
 - Accelerate growth in living wage jobs across a balanced array of industry sectors

- Improve systems for economic mobility and inclusion
- Foster opportunity in technology and entrepreneurship
- Be a leader in hospitality and place-based tourism
- Locate higher job density activities in McMinnville
- Encourage connections to the local food system and cultivate a community of exceptional restaurants

MAC-Town 2032 Economic Development Strategic Plan (adopted 2019)

In 2019, McMinnville adopted the *MAC-Town 2032 Economic Development Strategic Plan*, which updated the City's mission and goals related to economic development, as a supplement to the goals and policies in the Strategic Plan and Comprehensive Plan. The mission in the Plan states:

“McMinnville provides economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors, from steel manufacturing to technology. Economic growth is collaborative, and inclusive of individuals from diverse backgrounds. Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville’s high quality of life. Our strong downtown serves residents and visitors alike, featuring unique shops and world-class restaurants that offer locally-produced food products and globally-renowned wine. As we evolve, we prize our small-town roots and we maintain McMinnville’s character.”

The “foundational goals and strategies” defined in the plan are:

1. Accelerate growth in living-wage jobs across a balanced array of industry sectors
2. Improve systems for economic mobility and inclusion
3. Maintain and enhance our high quality of life

The “target sector goals and strategies” defined in the plan are:

4. Sustain and innovate within traditional industry and advanced manufacturing
5. Foster opportunity in technology and entrepreneurship
6. Be a leader in hospitality and place-based tourism
7. Align and cultivate opportunities in craft beverages and food systems
8. Proactively assist growth in education, medicine, and other sciences

Economic Opportunities Analysis (2013)

McMinnville last completed an EOA in 2013, as an update to the 2001/2003 EOA process. Section 6 of the EOA provided discussion and findings for each relevant goal in the Comprehensive Plan for community economic development objectives. Chapter 6 provides updated discussion of these Goals. The 2013 EOA also recommended updates to the list of cluster target industries to include Advanced Manufacturing and Healthcare/Traded Sector Services. A full discussion of these sectors is included in Chapter 4 of this EOA.

Comprehensive Plan (Adopted 1981, and subsequently amended).

McMinnville's Comprehensive Plan consists of three interrelated volumes.

- Volume I – covering background information for the plan process
- Volume II – listing adopted goals and policies
- Volume III – consisting of implementation ordinances and measures including the comprehensive plan and zoning maps, annexation, zoning and land division ordinances, and planned development overlays on areas of special significance

A more detailed statement of economic development goals is embodied by the Comprehensive Plan (Volume II Goals and Policies), Chapter IV – Economy of McMinnville (as amended)

General:

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Commercial Development:

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future neighborhood and community serving commercial lands and discouraging strip development.

Goal IV 4: To promote the downtown as a cultural, administrative service, and retail center of McMinnville.

Industrial Development:

Goal IV 5: To continue the growth and diversification of McMinnville's industrial base through the provision of an adequate amount of properly designated lands.

Goal IV 6: To insure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

Each goal has associated policies and proposals. The Comprehensive Plan includes a series of general, locational and design policies as “more precise and limited statements intended to further define the goals.” Also included as part of the Economic Development element of the existing adopted plan are three proposals as “possible courses of action” to further implement the goals and policies.

The 2020 EOA draws on information from numerous data sources, such as the Oregon Employment Department, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, and the U.S. Census. In addition to retaining all relevant information from the 2013 EOA, the EOA update also uses information from the Three Mile Lane market analysis, completed in March 2019.

Statewide Planning Guidance

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The analysis in this report is designed to conform to the requirements for an Economic Opportunities Analysis in OAR 660-009 as amended.

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends; identify the number of sites by type reasonably expected to be needed to accommodate projected employment growth based on the site characteristics typical of expected uses; include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use; and estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input-based process in conjunction with state agencies.
2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that commit the city or county to designate an adequate number of employment sites of suitable sizes, types and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area.

3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025).* Cities and counties must adopt measures to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementation measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage and characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

Public Process

At the broadest level, the purpose of the project was to understand how McMinnville's employment has changed since the completion of the 2013 EOA, as well as update the city's employment land needs to align with planning periods used in the 2019 HNA. In 2019, the city adopted an economic development strategy that provided a framework for policies and implementation actions for economic development. The update to the EOA requires a broad range of assumptions that influence the outcomes. Public engagement during the project was accomplished through facilitation of a Project Advisory Committee as described below.¹

Project Advisory Committee Meetings

The City of McMinnville and ECONorthwest solicited public input from an ad-hoc Project Advisory Committee. The Project Advisory Committee met 5 times² to discuss project assumptions, results, and implications. The project relied on the Project Advisory Committee to:

- Review work products, advise on public involvement, and consider public input when making recommendations.
- Advise the project team on matters regarding employment needs and the buildable lands inventory in McMinnville.
- Work collaboratively with, and provide guidance to, the staff and consultant project team in the preparation for the McMinnville Economic Opportunities Analysis.

A public lands work group was also established to review and make recommendation regarding unique land needs associated with employment and land uses for public and semi-public organizations.

¹ In addition to Project Advisory Committee meetings, the City of McMinnville also maintained a project website and social media presence.

² Project Advisory Committee meeting dates: July 10, 2019; September 5, 2019; October 10, 2019; November 13, 2019; and January 21, 2020.

Organization of this Report

This report is organized as follows:³

- **Chapter 2. The McMinnville Economy** – as a review of pertinent population, demographic and economic trends for McMinnville in the context of what is occurring throughout Yamhill County, a larger economic region, statewide and nationally.
- **Chapter 3. National, State & Regional Outlook** – covering recent economic experience and forecasts external to the community that could influence employment uses reasonably expected to locate or expand in the McMinnville UGB over the 5-, 10-, 20-, and 46-year planning horizons of this EOA.
- **Chapter 4. Economic Development Potential** – focused on factors that currently and prospectively affect economic development in McMinnville.
- **Chapter 5. Forecast Employment & Land Needs** – detailing an updated UGB employment forecast together with industrial/commercial buildable lands inventory and determination of long- and short- term needs, parcel size evaluation, site characteristics, and commercial/industrial policy options necessary to provide the land use foundation for the City's economic development strategy.

This report also includes two appendices:

- **Appendix A, Buildable Lands Inventory Methodology**
- **Appendix B, Employment on Other Land and Employment Density**

³ The organization of the report is intended to align as closely as possible to the 2013 EOA. Some subsections may differ due to changes in methodology or alternative data sources.

2. The McMinnville Economy

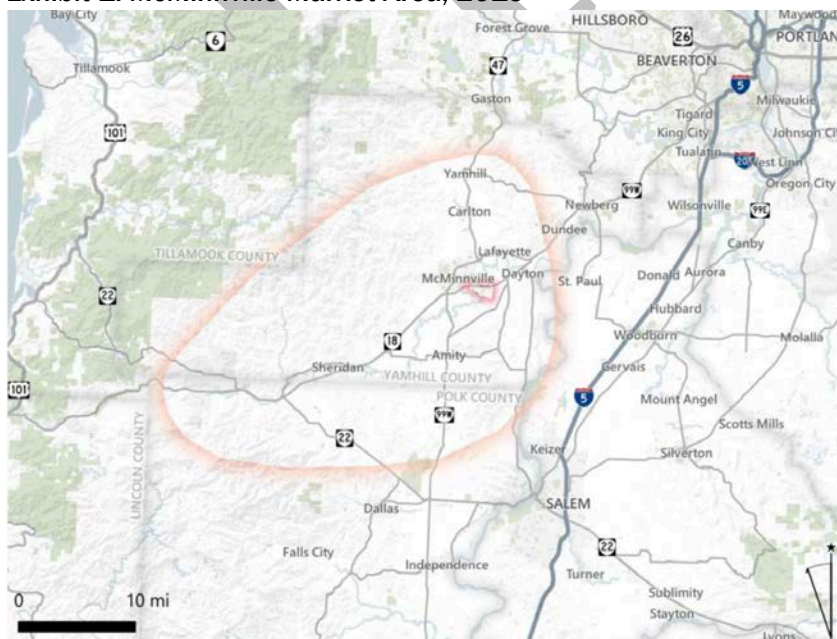
This chapter describes the factors affecting economic growth in McMinnville within the context of national and regional economic trends. The analysis presents the City's competitive advantages for growing and attracting businesses, which forms the basis for identifying potential growth industries in McMinnville.

McMinnville exists within the context of the county, market area, region, state, national, and international context and economies. OAR 660-009-0015 (1) requires a review of national, state, regional, county and local trends.

Regions are defined differently for different purposes. McMinnville exists as part of the economy of the following regions. Also included, as available, are pertinent comparable data for Yamhill County, the state of Oregon and United States.

- 10-County Economic Region. (used for 2013 EOA)
- 7-County Portland MSA (US Census Bureau-defined economically integrated region)
- 6-County North Valley Region (used in 2001/03 EOA, which also used "Willamette valley with three additional counties for some indicators)
- 4-County Mid-Valley Region (defined by the Oregon Employment Department and used in their reporting): Linn, Marion, Polk, Yamhill
- Market Area (relates predominantly to retail trade) (Exhibit 1). Market area will vary depending on the type of attractor. Larger regional shopping may have a larger market areas while neighborhood retail will have a smaller market area).

Exhibit 1. McMinnville Market Area, 2019



Source: McMinnville Three Mile Lane Area Plan: Market Analysis; TIGER, Leland Consulting Group.

Employment Trends in McMinnville and Yamhill County

The economy of the nation changed substantially between 1980 and 2018. These changes affected the composition of Oregon’s economy, including McMinnville’s economy. At the national level, the most striking change was the shift from manufacturing employment to service-sector employment. The most important shift in Oregon during this period has been the shift from a timber-based economy to a more diverse economy, with the greatest employment in services. This section focuses on changes in the economy in Yamhill County since 2001 and in McMinnville since 2007.

Exhibit 2 shows covered employment⁴ in Yamhill County for 2001 and 2018. Employment increased by 8,202 jobs, or 29%, over this period, which included the Great Recession and subsequent recovery. The sectors with the largest increases in numbers of employees were Arts, entertainment, and recreation; Healthcare and social assistance; Other services; Accommodation and food services; and Professional and business services.

The average wage for employment in Yamhill County in 2018 was about \$42,321. Employment in higher wage industries, such as Information and Transportation, Warehousing, and Utilities, decreased by 204 jobs over the 2001 to 2018 time period.

Exhibit 2. Covered Employment by Industry, Yamhill County, 2001-2018

Sector	2001	2018	Change 2001 to 2018		
			Difference	Percent	AAGR
Natural Resources and Mining	2,824	3,668	844	30%	1.6%
Construction	1,492	1,977	485	33%	1.7%
Manufacturing	5,584	6,901	1,317	24%	1.3%
Wholesale trade	560	629	69	12%	0.7%
Retail trade	3,157	3,728	571	18%	1.0%
Transportation, Warehousing and Utilities	645	468	-177	-27%	-1.9%
Information	269	242	-27	-10%	-0.6%
Financial Activities	972	1,007	35	4%	0.2%
Professional and Business Services	1,371	1,936	565	41%	2.1%
Educational Services	1,166	1,512	346	30%	1.5%
Health care and social assistance	2,792	4,881	2,089	75%	3.3%
Arts, entertainment, and recreation	172	350	178	103%	4.3%
Accommodation and food services	2,145	3,441	1,296	60%	2.8%
Other Services	852	1,378	526	62%	2.9%
Unclassified	19	10	-9	-47%	-3.7%
Government	4,090	4,184	94	2%	0.1%
Total	28,110	36,312	8,202	29%	1.5%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001-2018.

Exhibit 3 shows covered employment and average wage for the 10 largest employment industries in Yamhill County in 2018. Jobs in manufacturing account for about 19% of the

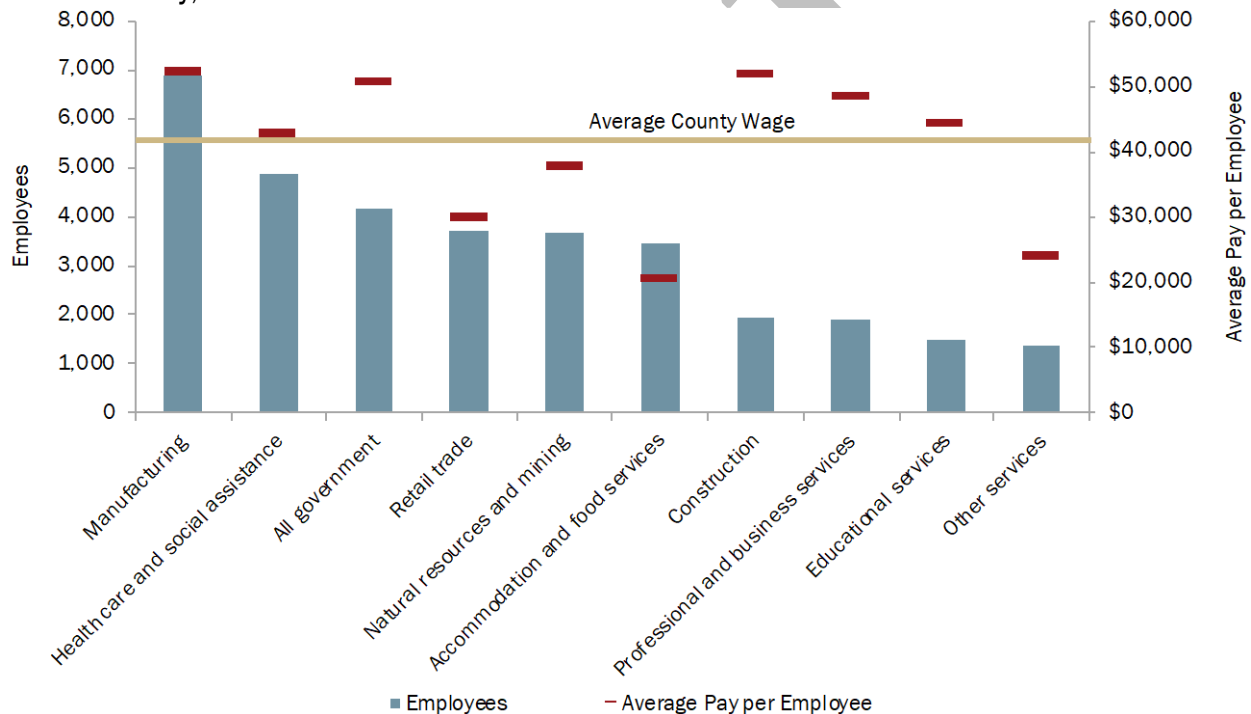
⁴ **Covered** employment includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as “1099 employees”), or some railroad workers. Covered employment data is from the Oregon Employment Department.

county's covered employment and these jobs pay approximately 24% more than the county average wage (\$52,303 compared to \$42,321). Healthcare and social assistance jobs are the next largest employment sector, making up about 13% of Yamhill County's covered employment. Wages in this industry are closer to the county average, paying employees an average of \$42,952. Government jobs account for 12% of the county's covered employment. These jobs pay roughly 20% more than the county average (\$50,765 compared to \$42,321).

Though not shown in Exhibit 3 due to relatively low employment levels, wholesale trade, on average, pays employees \$62,411, 47% above the county average wage. This sector only makes up about 2% of Yamhill County's total covered employment, though it pays the highest wages.

Additionally, jobs in construction (\$51,947), professional and business services (\$48,497), and educational services (\$44,398), pay more per year than the county average. However, these three sectors make up a smaller employment base than Retail trade, Natural resources and mining, and Accommodation and food services, which pay below the average county wage.

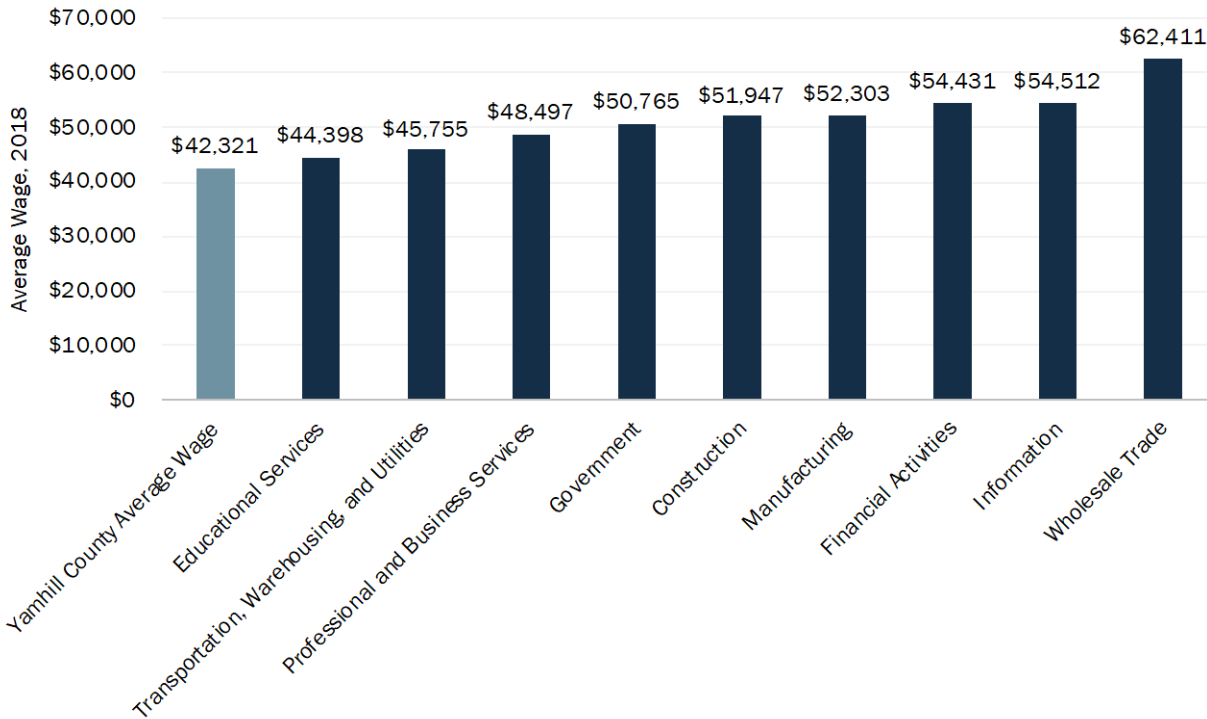
Exhibit 3. Covered Employment and Average Pay by Sector, 10 Largest Employment Sectors Yamhill County, 2018



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2018.

Exhibit 4 shows the sectors in Yamhill County that pay an annual average wage above the countywide average wage. Some of these sectors, such as wholesale trade and construction, are shown in Exhibit 3; however, other higher paying sectors include information (\$54,512), financial activities (\$54,431), and manufacturing (\$52,303).

Exhibit 4. Highest Paying Sectors in Yamhill County, 2018



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2018.

Between 2007 and 2017, employment in McMinnville increased by about 1,123 employees (8%) at an annual average growth rate of 0.8%. Employment in Accommodation and food services and Retail trade increased by 372 employees and 309 employees respectively, while employment in Transportation and warehousing and Utilities decreased by about 229 (Exhibit 5).

Exhibit 5. Change in Covered Employment, McMinnville UGB, 2007-2017

Sector	Employment		Change in Employment	Percent	AAGR
	2007	2017			
Agriculture, Forestry, and Mining	244	356	112	46%	3.8%
Construction	634	585	(49)	-8%	-0.8%
Manufacturing	2,300	2,277	(23)	-1%	-0.1%
Wholesale Trade	264	127	(137)	-52%	-7.1%
Retail Trade	1,861	2,170	309	17%	1.5%
Transportation and Warehousing and Utilities	369	140	(229)	-62%	-9.2%
Information	136	127	(9)	-7%	-0.7%
Finance and Insurance	511	459	(52)	-10%	-1.1%
Real Estate and Rental and Leasing	138	113	(25)	-18%	-2.0%
Professional and Technical Services	265	367	102	38%	3.3%
Management of Companies	221	117	(104)	-47%	-6.2%
Admin. and Support/Waste Mgmt/Remediation Serv.	494	584	90	18%	1.7%
Health Care and Social Assistance; Private Education Serv.	2,564	3,159	595	23%	2.1%
Arts, Entertainment, and Recreation	134	168	34	25%	2.3%
Accommodation and Food Services	1,131	1,503	372	33%	2.9%
Other Services	417	630	213	51%	4.2%
Government	2,158	2,082	(76)	-4%	-0.4%
Total	13,841	14,964	1,123	8%	0.8%

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2007 and 2017.

Exhibit 6 shows a summary of covered employment data for the McMinnville UGB in 2017. The sectors with the greatest number of employees were Health care and social assistance and Private education (21%); Manufacturing (15%); and Retail trade (15%). Exhibit 7 shows employment in McMinnville in 2017 for detailed industries in the manufacturing sector. Employment in Food manufacturing and Beverage and tobacco product manufacturing accounted for about one quarter of McMinnville’s manufacturing employment overall.

Exhibit 6. Covered Employment and Average Pay by Sector, McMinnville UGB, 2017

Sector	Establishments	Employees	Payroll	Average pay per employee
Agriculture, Forestry, and Mining	24	356	\$ 11,188,173	\$ 31,427
Construction	104	585	\$ 27,931,863	\$ 47,747
Manufacturing	71	2,277	\$ 113,267,986	\$ 49,744
Wholesale Trade	41	127	\$ 7,778,100	\$ 61,245
Retail Trade	141	2,170	\$ 62,991,136	\$ 29,028
Transportation and Warehousing and Utilities	20	140	\$ 4,582,386	\$ 32,731
Information	19	127	\$ 5,010,927	\$ 39,456
Finance and Insurance	51	459	\$ 29,183,634	\$ 63,581
Real Estate and Rental and Leasing	38	113	\$ 3,815,372	\$ 33,764
Professional and Technical Services	100	367	\$ 21,852,471	\$ 59,544
Management of Companies	9	117	\$ 7,033,600	\$ 60,116
Admin. and Support/Waste Mgmt./Remediation Serv.	49	584	\$ 14,681,454	\$ 25,139
Health Care and Social Assistance; Private Education :	173	3,159	\$ 144,631,456	\$ 45,784
Arts, Entertainment, and Recreation	9	168	\$ 3,128,546	\$ 18,622
Accommodation and Food Services	99	1,503	\$ 27,941,666	\$ 18,591
Other Services	218	630	\$ 13,857,430	\$ 21,996
Government	42	2,082	\$ 101,259,952	\$ 48,636
Total	1,208	14,964	\$ 600,136,152	\$ 40,105

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 7. Covered Employment in Manufacturing Industries, McMinnville UGB, 2017

Sector	Establishments	Employees
Food Manufacturing	14	448
Beverage and Tobacco Product Manufacturing	18	134
Wood, Plastic, and Chemical Product Manufacturing	18	536
Metal, Electronic, and Other Product Manufacturing	21	1,159
Total	71	2,277

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

The average size for a private business in McMinnville is 12 employees per business, compared to the State average of 11 employees per private business. Businesses with 50 or fewer employees account for 55% of private employment and 10 or fewer account for 19% of private employment. Exhibit 8 shows the distribution of establishments by size class (i.e., number of employees). Over 75% of the private (i.e., non-government) establishments are businesses with fewer than 10 employees.

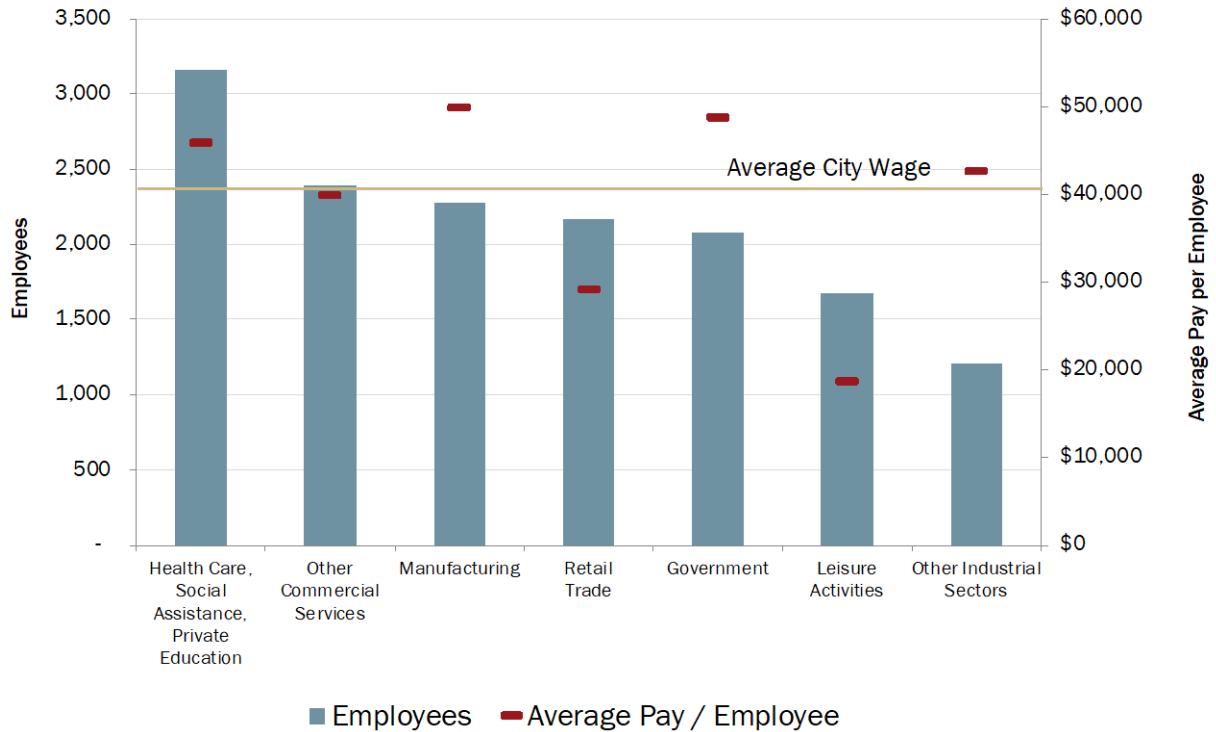
Exhibit 8. Covered Private Employment by Size Class, McMinnville UGB, 2017

Establishment size (number of employees)	Number of establishments
0 to 4	682
5 to 9	211
10 to 19	141
20 to 49	87
50 to 99	27
100+	18
Total	1,166

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 9 shows the employment and average pay per employee for sectors in McMinnville. Average pay for all employees (\$40,105) is shown as a light brown line across the graph and average pay for individual sectors as short red lines. The figure shows that Health care, social assistance, and Private education; Manufacturing; Government; and Other industrial sectors had above average wages. The lowest wages were in Retail trade and Leisure activities, which includes arts, entertainment, and recreation and accommodation and food services.

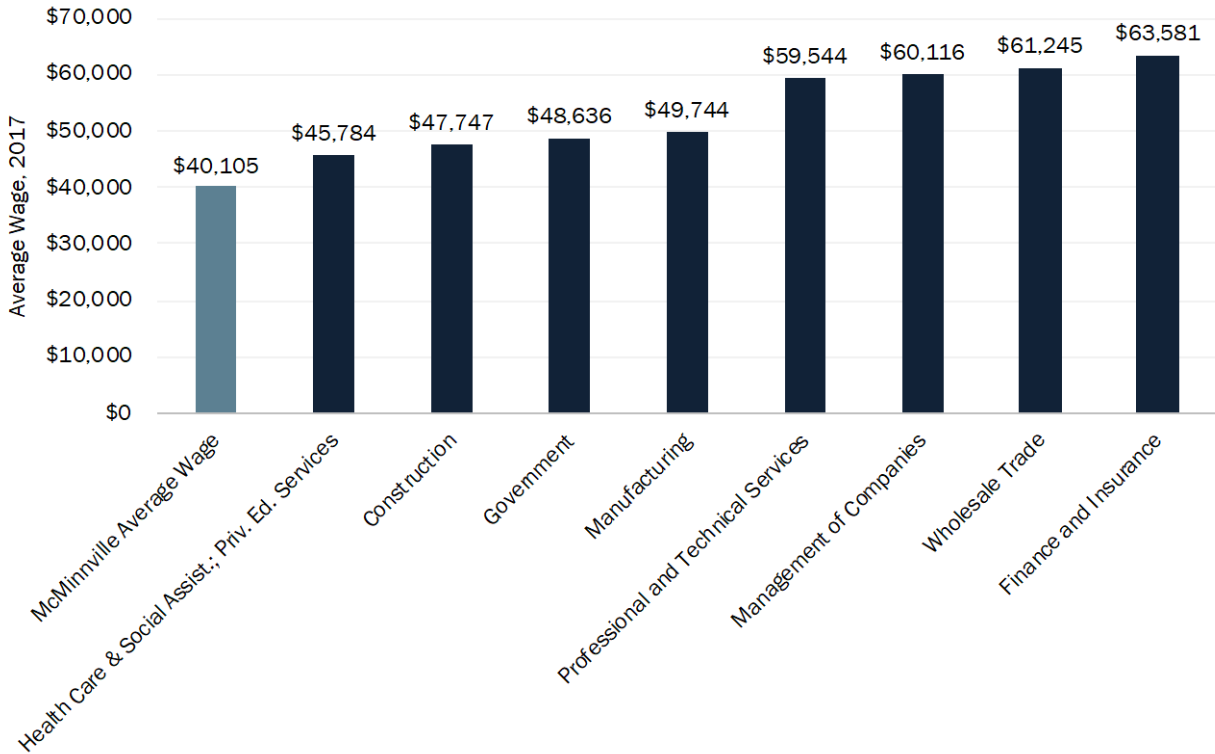
Exhibit 9. Covered Employment and Average Pay by Sector, McMinnville UGB, 2017



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 10 shows the sectors with average annual wages that exceed the McMinnville City average. The three highest paying sectors, finance and insurance, wholesale trade, and management of companies, all paid over \$60,000 in 2017. Other higher paying sectors include professional and technical services, manufacturing, government, and construction.

Exhibit 10. Highest Paying Sectors Exceeding Average Wage in McMinnville UGB, 2017



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

DRAFT

Outlook for growth in Yamhill County

Exhibit 11 shows the Oregon Employment Department's forecast for employment growth by industry for the Mid-Valley Region (Linn, Marion, Polk, and Yamhill Counties) over the 2017 to 2027 period. Employment in the region is forecasted to grow at an average annual growth rate of 1.1%.

The sectors that will lead employment in the region for the 10-year period are: Private educational and health services (adding 8,100 jobs), Trade, transportation, and utilities (5,100), Government (3,500), Construction (3,000), Leisure and hospitality (3,000), and Manufacturing and Natural resources and mining (2,400 each). In sum, these sectors are expected to add 27,500 new jobs or about 88% of employment growth in the Mid-Valley Region. Yamhill County accounts for about 14% of employment in these four counties, and McMinnville accounts for about 42% of the County's employment.

Exhibit 11. Regional Employment Projections, 2017-2027, Mid-Valley Region (Linn, Marion, Polk, and Yamhill Counties)

Industry Sector	2017	2027	Change 2017 - 2027		
			Number	Percent	AAGR
Total private	208,800	236,400	27,600	13%	1.2%
Natural resources and mining	17,700	20,100	2,400	14%	1.3%
Mining and logging	1,200	1,300	100	8%	0.8%
Construction	14,700	17,700	3,000	20%	1.9%
Manufacturing	27,700	30,100	2,400	9%	0.8%
Durable goods	16,300	17,700	1,400	9%	0.8%
Nondurable goods	11,400	12,400	1,000	9%	0.8%
Trade, transportation, and utilities	42,500	47,600	5,100	12%	1.1%
Wholesale trade	6,200	6,900	700	11%	1.1%
Retail trade	27,800	30,200	2,400	9%	0.8%
Transportation, warehousing, and utilities	8,500	10,500	2,000	24%	2.1%
Information	1,800	1,900	100	6%	0.5%
Financial activities	9,200	9,700	500	5%	0.5%
Professional and business services	19,000	21,000	2,000	11%	1.0%
Private educational and health services	43,700	51,800	8,100	19%	1.7%
Health care and social assistance	35,300	42,500	7,200	20%	1.9%
Leisure and hospitality	22,400	25,400	3,000	13%	1.3%
Accommodation and food services	19,900	22,600	2,700	14%	1.3%
Other services and private households	10,100	11,100	1,000	10%	0.9%
Government	52,200	55,700	3,500	7%	0.7%
Federal government	2,100	2,100	0	0%	0.0%
State government	21,900	23,900	2,000	9%	0.9%
Local government	28,200	29,700	1,500	5%	0.5%
Local education	16,000	16,900	900	6%	0.5%
Total payroll employment	261,000	292,100	31,100	12%	1.1%

Source: Oregon Employment Department. Employment Projections by Industry 2017-2027.

3. National, State, and Regional Outlook

Consistent with Oregon Administrative Rules (OAR 660), McMinnville's Economic Opportunities Analysis is set within the context of broader nationwide, state, and regional trends. Recent trends and conditions at a national and state level are considered first, followed by detailed information at a regional and local level.

National Trends

Economic development in McMinnville over the next 20 years will occur in the context of long-run national trends. The most important of these trends include:

- **Economic growth will continue at a moderate pace.** Analysis from the Congressional Budget Office (CBO) estimates after the 3.1% real GDP growth in 2018, real GDP will grow by approximately 2.3% in 2019. After 2019, the CBO forecasts the annual average growth of real GDP to slow and stabilize around 1.7% across the 2020 to 2029 period. The primary reason they provide for this slowing growth is that they expect the labor force to grow at a slower rate than historical trends.⁵

The unemployment rate is forecasted to decrease to 3.5% in the second-half of 2019, which is the rate's lowest point since the 1960s. After this year, the CBO predicts the unemployment rate will rise between 2020 and 2023 due to slower growth in economic output.⁶

- **The aging of the Baby Boomer generation, accompanied by increases in life expectancy.** As the Baby Boomer generation continues to retire, the number of Social Security recipients is expected to increase from 62.5 million in 2018 to over 87.0 million in 2040, a 39% increase. However, due to lower-birth rate replacement generations, the number of covered workers is only expected to increase 12% over the same time period, from 176.0 million to 196.4 million in 2040. Currently, there are 35 Social Security beneficiaries per 100 covered workers in 2018 but by 2040 there will be 44 beneficiaries per 100 covered workers. This will increase the percent of the federal budget dedicated to Social Security and Medicare.⁷

Baby Boomers are expecting to work longer than previous generations. An increasing proportion of people in their early- to mid-50s expect to work full-time after age 65. In 2004, about 40% of these workers expect to work full-time after age 65, compared with

⁵ Congressional Budget Office. *The Budget and Economic Outlook: 2019 to 2029. January 2019.* Retrieved from: <https://www.cbo.gov/system/files/2019-03/54918-Outlook-3.pdf>.

⁶ *Ibid.*

⁷ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, *The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, April 25, 2019. Retrieved from: <https://www.ssa.gov/OACT/TR/2019/tr2019.pdf>.

about 30% in 1992.⁸ This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2.9% of the workforce in 2000 to 4.1% of the workforce in 2010. In 2017, this share reached 5.5%. Over the same eighteen-year period, the share of workers 45 to 64 years increased from 35% of all employed Oregonians in 2000 to 37% in 2017.⁹

- **Need for replacement workers.** The need for workers to replace retiring Baby Boomers will outpace job growth. According to the Bureau of Labor Statistics, total employment in the United States will grow by about 11.5 million jobs over 2016 to 2026. Annually, they estimate there will be 18.7 million occupational openings over the same period. This exhibits the need for employees over the next decade as the quantity of openings per year is large relative to expected employment growth. About 71% of annual job openings are in occupations that do not require postsecondary education.¹⁰
- **The importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average, they will yield higher incomes than occupations that do not require an academic degree. The fastest-growing occupations requiring an academic degree will be registered nurses, software developers, general and operations managers, accountants and auditors, market research analysts and marketing specialists, and management analysts. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for approximately 71% of all new jobs by 2026. These occupations typically have lower pay than occupations requiring an academic degree.¹¹

The national median income for people over the age of 25 in 2018 was about \$48,464. Workers without a high school diploma earned \$19,708 less than the median income, and workers with a high school diploma earned \$10,504 less than the median income. Workers with some college earned \$6,760 less than median income, and workers with a bachelor's degree earned \$13,832 more than median. Workers in Oregon experience the same patterns as the nation but pay is generally lower in Oregon than the national average.¹²

- **Increases in labor productivity.** Productivity, as measured by output per hour of labor input, increased in most sectors between 2000 and 2010, peaking in 2007. However, productivity increases were interrupted by the recession. After productivity decreases from 2007 to 2009, many industries saw large productivity increases from 2009 to 2010.

⁸ "The Health and Retirement Study," 2007, National Institute of Aging, National Institutes of Health, U.S. Department of Health and Human Services.

⁹ Analysis of 2000 Decennial Census data, 2010 U.S. Census American Community Survey, 1-Year Estimates, and 2017 U.S. Census American Community Survey, 1-Year Estimates, for the table Sex by Age by Employment Status for the Population 16 Years and Over.

¹⁰ "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

¹¹ "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

¹² Bureau of Labor Statistics, Employment Projections, March 2019. <http://www.bls.gov/emp/epchart001.htm>.

Industries with the fastest productivity growth were Information Technology-related industries. These include wireless telecommunications carriers, computer and peripheral equipment manufacturing, electronics and appliance stores, and commercial equipment manufacturing wholesalers.¹³

Since the end of the recession (2010), labor productivity has increased across a handful of large sectors but has also decreased in others. In wholesale trade, productivity—measured in output per hour—increased by 19% over 2009 to 2017. Retail trade gained even more productivity over this period at 25%. Food services, however, have remained stagnant since 2009, fluctuating over the nine-year period and shrinking by 0.01% over this time frame. Additionally, the Bureau of Labor Statistics reports multifactor productivity in manufacturing has been slowing down 0.3% per year over the 2004 to 2016 period. Much of this, they note, is due to slowdown in semiconductors, other electrical component manufacturing, and computer and peripheral equipment manufacturing.¹⁴

- **The importance of entrepreneurship and growth in small businesses.** According to the U.S. Small Business Office of Advocacy, small businesses are those that have fewer than 500 employees. However, the Oregon Office of Small Business Advocacy defines small businesses as those with fewer than 100 employees. For consistency in our small business data comparisons, we will maintain the definition of small businesses to be those with fewer than 100 employees.

The U.S. Census Bureau's Statistics of U.S. Businesses (SUSB) shows in 2016 that about 98% of all firms in the United States had fewer than 100 employees. Their employees accounted for approximately 33% of American workers.¹⁵ The National League of Cities suggests ways that local governments can attract entrepreneurs and increase the number of small businesses including strong leadership from elected officials; better communication with entrepreneurs, especially about the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, businesses groups, and financial institutions.¹⁶

- **Increases in automation across sectors.** Automation is a long-running trend in employment, with increases in automation (and corresponding increases in productivity) over the last century and longer. The pace of automation is increasing, and the types of jobs likely to be automated over the next 20 years (or longer) is broadening.

¹³ Brill, Michael R. and Samuel T. Rowe, "Industry Labor Productivity Trends from 2000 to 2010." Bureau of Labor Statistics, *Spotlight on Statistics*, March 2013.

¹⁴ Michael Brill, Brian Chanksy, and Jennifer Kim. "Multifactor productivity slowdown in U.S. manufacturing," *Monthly Labor Review*, U.S. Bureau of Labor Statistics, July 2018. Retrieved from: <https://www.bls.gov/opub/mlr/2018/article/multifactor-productivity-slowdown-in-us-manufacturing.htm>.

¹⁵ U.S. Census Bureau, Statistics of U.S. Businesses. Data by Enterprise Employment Size, 2016. Retrieved from: <https://www.census.gov/data/tables/2016/econ/susb/2016-susb-annual.html>

¹⁶ National League of Cities "Supporting Entrepreneurs and Small Businesses" (2012). <https://www.nlc.org/supporting-entrepreneurs-and-small-business>.

Lower paying jobs are more likely to be automated, with potential for automation of more than 80% of jobs paying less than \$20 per hour over the next 20 years. About 30% of jobs paying \$20 to \$40 per hour and 4% of jobs paying \$40 or more are at risk of being automated over the next 20 years.¹⁷

Low- to middle-skilled jobs that require interpersonal interaction, flexibility, adaptability, and problem solving will likely persist into the future as will occupations in technologically lagging sectors (e.g. production of restaurant meals, cleaning services, hair care, security/protective services, and personal fitness).¹⁸ This includes occupations such as (1) recreational therapists, (2) first-line supervisors of mechanics, installers, and repairers, (3) emergency management directors, (4) mental health and substance abuse social workers, (5) audiologists, (6) occupational therapists, (7) orthotists and prosthetists, (8) healthcare social workers, (9) oral and maxillofacial surgeons, and (10) first-line supervisors of firefighting and prevention workers. Occupations in the service and agricultural or manufacturing industry are most at-risk of automation because of the manual-task nature of the work.^{19,20,21} This includes occupations such as (1) telemarketers, (2) title examiners, abstractors, and searchers, (3) hand sewers, (4) mathematical technicians, (5) insurance underwriters, (6) watch repairers, (7) cargo and freight agents, (8) tax preparers, (9) photographic process workers and processing machine operators, and (10) accounts clerks.²²

- **Consolidation Transformation of retail.** Historical shift in retail businesses, starting in the early 1960s, was the movement from one-off, ‘mom and pop shops’ toward superstores and the clustering of retail into centers or hubs. Notably, we still see this trend persist; for example, in 1997, the 50 largest retail firms accounted for about 26% of retail sales and by 2007, they accounted for about 33%.²³ The more recent shift began in the late 1990s, where technological advances have provided consumers the option to buy goods through e-commerce channels. The trend toward e-commerce has become increasingly preferential to millennials and Generation X, who are easier to reach online and are more responsive to digital ads than older generations.²⁴ Since 2000, e-commerce

¹⁷ Executive Office of the President. (2016). Artificial Intelligence, Automation, and the Economy.

¹⁸ Autor, David H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *Journal of Economic Perspectives*, Volume 29, Number 3, Summer 2015, Pages 3–30.

¹⁹ Frey, Carl Benedikt and Osborne, Michael A. (2013). *The Future of Employment: How Susceptible Are Jobs to Computerisation?* Oxford Martin School, University of Oxford.

²⁰ Otekhile, Cathy-Austin and Zeleny, Milan. (2016). Self Service Technologies: A Cause of Unemployment. *International Journal of Entrepreneurial Knowledge*. Issue 1, Volume 4. DOI: 10.1515/ijek-2016-0005.

²¹ PwC. (n.d.). Will robots really steal our jobs? An international analysis of the potential long-term impact of automation.

²² Frey, Carl Benedikt and Osborne, Michael A. (2013). *The Future of Employment: How Susceptible Are Jobs to Computerisation?* Oxford Martin School, University of Oxford.

²³ Hortaçsu, Ali and Syverson, Chad. (2015). The Ongoing Evolution of US Retail: A Format Tug-of-War. *Journal of Economic Perspectives*, Volume 29, Number 4, Fall 2015, Pages 89-112.

²⁴ Pew Research Center (2010b). *Generations 2010*. Retrieved Online at: <http://www.pewinternet.org/Reports/2010/Generations-2010.aspx>

sales grew from 0.9% of total retail sales to 9.7% (2018). Over 2000 to 2018, e-commerce retail sales have grown at a rate 18% per year.²⁵ It is reasonable to expect this trend to continue. While it is unclear what impact e-commerce will have on employment and brick and mortar retail, it seems probable that e-commerce sales will continue to grow, shifting business away from some types of retail. Over the next decades, communities must begin considering how to redevelop and reuse retail buildings in shopping centers, along corridors, and in urban centers.

- ~~▪ With it has come closures of retail stores. By 2027 for example, an estimated 15% of about 1,050 U.S. malls in smaller markets will close, impacting local employment levels, local government revenue streams (tax dollars), and neighborhood character.~~

~~While it is unclear what impact e-commerce will have on employment and brick and mortar retail, it seems probable that e-commerce sales will continue to grow, shifting business away from some types of retail. Over the next decades, communities must begin considering how to redevelop and reuse retail buildings in shopping centers, along corridors, and in urban centers.~~

The types of retail and related services that remain will likely be sales of goods that people prefer to purchase in person or that are difficult to ship and return (e.g., large furniture), specialty goods, groceries and personal goods that maybe needed immediately, restaurants, and experiences (e.g., entertainment or social experiences). According to the Urban Land Institute, in the post-disruption era of retail, new trends in this sector are beginning to emerge. These changes include the convergence of technology and shopping, as businesses focus on brand awareness and customer engagement via digital channels in the physical retail space.²⁶

In addition to dynamics with e-commerce, other factors influencing changes in retail include the growth of big box stores, income inequality, and changing preferences. The New York Times reported that while Amazon had \$38 billion in sales between 2000 and 2013, Costco had about \$50 billion and Sam's Club had about \$32 billion.²⁷ The other factors influencing traditional retail—income inequality and emphasis on services over goods—result in either less consumer spending overall or changes in preferences of consumers who increasingly spend more on services or experiences.

This shift in the retail industry is also described in the *Three-Mile Lane Area Plan: Market Analysis*, which documents proactive steps to adapt to the changing retail landscape by "commissioning studies of the marketplace and developing new strategies to maintain

²⁵ U.S. Census Bureau, Monthly Retail Trade, Latest Quarterly E-Commerce Report. Retrieved online at: <https://www.census.gov/retail/index.html#ecommerce>

²⁶ Diane Hoskins. "Three Trends Shaping Retail's Great Transformation." *Urban Land Institute*, September 3, 2019. Retrieved from: <https://urbanland.uli.org/economy-markets-trends/three-trends-shaping-retails-great-transformation/>

²⁷ Austan Goolsbee. "Never Mind the internet. Here's What's Killing Malls." *The New York Times*. February 14, 2020 <https://www.nytimes.com/2020/02/13/business/not-internet-really-killing-malls.html>

and foster better retail environments.”²⁸ It specifically describes the difference between “experiential consumerism” and other types of retail that are more likely to directly compete with e-commerce. Examples of “experiential consumerism” include dining, grocery, health and fitness clubs, etc.²⁹ These types of retail are typically located on main streets and neighborhood or commercial centers.

- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some states, especially in the Western U.S. Increases in the population and in households’ incomes, plus changes in tastes and preferences have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region’s quality of life and play an important role in attracting both households and firms.³⁰
- **Continued increase in demand for energy.** Energy prices are forecasted to increase over the planning period. While energy use per capita is expected to decrease through 2050, total energy consumption will increase with rising population. Energy consumption is expected to grow primarily from industrial (0.7%) and, to a lesser extent, commercial users (0.2%). Residential and transportation consumption are forecasted to decrease (-0.2% for both). This decrease in energy consumption for transportation is primarily due to increased federal standards and increased technology for energy efficiency in vehicles. The unspecified sector, which is made up of consumption not attributed to residential, commercial, industrial, or transportation, is forecasted to increase consumption by 1.4% through 2050. Going forward through the projection period, potential changes in federal laws (such as decreases in car emissions) leave energy demand somewhat uncertain.

Energy consumption by type of fuel is expected to change over the planning period. By 2050, the U.S. will continue to shift from crude oil towards natural gas and renewables. For example, from 2018 to 2050, the Energy Information Administration projects that U.S. energy consumption of motor gasoline will average a 0.9% annual decrease, while consumption of renewable sources will grow at 1.6% per year and natural gases liquefied for exporting will grow 5.0% per year through 2050. With increases in energy efficiency, strong domestic production of energy, and relatively flat demand for energy by some industries, the U.S. will be able to be a net exporter of energy over the 2018 to

²⁸ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

²⁹ Ibid. pg 36.

³⁰ For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. “Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes.” *Growth and Change* 36 (2): 273-297.

2050 period. Demand for electricity is expected to increase 0.2% per year annually over 2018 to 2050 as the population grows and economic activity increases.³¹

- **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, energy consumption for transportation will decrease. These increasing energy prices may decrease willingness to commute long distances, though with expected increases in fuel economy, it could be that people commute further while consuming less energy.³² Over 2018 to 2038, the U.S. Energy Information Administration estimates in its forecast that the decline in transportation energy consumption is a result of increasing fuel economy offsetting the total growth in vehicle miles traveled (VMT). VMT for passenger vehicles is forecasted to increase through 2050.
- **Potential impacts of global climate change.** The consensus among the scientific community that global climate change is occurring expounds important ecological, social, and economic consequences over the next decades and beyond.³³ Extensive research shows that Oregon and other western states already have experienced noticeable changes in climate and predicts that more change will occur in the future.³⁴

In the Pacific Northwest, climate change is likely to (1) increase average annual temperatures, (2) increase the number and duration of heat waves, (3) increase the amount of precipitation falling as rain during the year, (4) increase the intensity of rainfall events, and 5) increase sea level. These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.³⁵

³¹ Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019. <https://www.eia.gov/outlooks/aeo/pdf/AEO2019.pdf>. Note, the cited growth rates are shown in the Executive Summary and can be viewed here: <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=1-AEO2019&cases=ref2019&sid=&sourcekey=0>.

³² Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019.

³³ Karl, T.R., J.M. Melillo, and T.C. Peterson, eds. 2009. *Global Climate Change Impacts in the United States*. U.S. Global Change Research Program. June. Retrieved June 16, 2009, from www.globalchange.gov/usimpacts; and Pachauri, R.K. and A. Reisinger, eds. 2007. *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

³⁴ Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Upper Willamette River Basin of Western Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009, from <http://climlead.uoregon.edu/pdfs/willamettereport3.11FINAL.pdf> and Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Rogue River Basin of Southwest Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009 from <http://climlead.uoregon.edu/pdfs/ROGUE%20WSFINAL.pdf>

³⁵ Mote, P., E. Salathe, V. Duliere, and E. Jump. 2008. *Scenarios of Future Climate for the Pacific Northwest*. Climate Impacts Group, University of Washington. March. Retrieved June 16, 2009, from <http://cses.washington.edu/db/pdf/moteetal2008scenarios628.pdf>; Littell, J.S., M. McGuire Elsner, L.C. Whitely Binder, and A.K. Snover (eds). 2009. "The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate - Executive Summary." *In The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate*, Climate Impacts Group, University of Washington. Retrieved June 16, 2009, from www.cses.washington.edu/db/pdf/

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to materialize and the magnitude of the associated economic consequences. Assuming climate change proceeds as today's models predict, however, some of the potential economic impacts of climate change in the Pacific Northwest will likely include:³⁶

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon's agriculture through changes in growing season, temperature ranges, and water availability.³⁷ Climate change may impact Oregon's forestry through an increase in wildfires, a decrease in the rate of tree growth, a change in the mix of tree species, and increases in disease and pests that damage trees.³⁸
- *Potential impact on tourism and recreation.* Impacts on tourism and recreation may range from (1) decreases in snow-based recreation if snow-pack in the Cascades decreases, (2) negative impacts to tourism along the Oregon Coast as a result of damage and beach erosion from rising sea levels,³⁹ (3) negative impacts on availability of water summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times, these trends may run counter to the long-term trends described above. A recent example is the downturn in economic activity in 2008 and 2009 following declines in the housing market and the mortgage banking crisis. The result of the economic downturn was decreases in employment related to the housing market, such as construction and real estate. As these industries recover, they will continue to play a significant role in the national, state, and local economy over the long run. This report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run national business cycles on employment or economic activity.

wacciaexecsummary638.pdf; Madsen, T. and E. Figdor. 2007. *When it Rains, it Pours: Global Warming and the Rising Frequency of Extreme Precipitation in the United States*. Environment America Research & Policy Center and Frontier Group.; and Mote, P.W. 2006. "Climate-driven variability and trends in mountain snowpack in western North America." *Journal of Climate* 19(23): 6209-6220.

³⁶ The issue of global climate change is complex and there is a substantial amount of uncertainty about climate change. This discussion is not intended to describe all potential impacts of climate change but to present a few ways that climate change may impact the economy of cities in Oregon and the Pacific Northwest.

³⁷ "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

³⁸ "Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, May 2007.

³⁹ "The Economic Impacts of Climate Change in Oregon: A preliminary Assessment," Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

State Trends

Short-Term Trends

According to the Oregon Office of Economic Analysis (OEA), the Oregon economy “is on firmer ground today following a rocky start to the year...” They emphasize, however, that the economy continues to strike the “sweet spot” despite a rocky start to 2019.⁴⁰ The OEA also reports that although the Oregon economy has been slowing down over the last couple of years and is not outpacing the nation any longer, its “growth is strong enough to keep up with a growing population but also deliver economic and income gains to Oregonians.”⁴¹

Wages in Oregon continue to remain below the national average, but they continue to rise and remain strong, staying at their highest point relative to the state’s mill closures in the 1980s.⁴² By the end of 2019, the OEA forecasts 39,800 jobs will be added to Oregon’s economy. This is an approximate 2.1% annual growth in total nonfarm employment relative to 2018 levels.⁴³ The health services, professional and business services, leisure and hospitality, retail trade, and manufacturing industries are forecasted to account for well over half of the total job growth in Oregon for 2019. Oregon continues to have an advantage in job growth compared to other states, due to its industrial sector and in-migration flow of young workers in search of jobs.

The housing market continues to recover as Oregon’s economy improves, though new supply is not keeping up with demand. As a result, prices continue to rise to considerable levels and the OEA reports housing “(in)affordability is becoming a larger risk” to Oregon’s economic outlook.⁴⁴ Oregon is seeing an increase in household formation rates, which is good for the housing market as this will “help drive up demand for new houses.”⁴⁵ Though younger Oregonians are tending to live at home with their parents longer, the aging Millennial generation (from their early 20s to mid-to-late 30s) and the state’s increase in migration will drive demand for homes in the coming years. Housing starts in 2019 are on track to reach 20,600 units and in 2020, starts are expected to increase to 21,800. Beyond 2020, the OEA forecasts an average growth of 24,000 units per year to satisfy the demand for Oregon’s growing population and to make up for the under development of housing post-recession.⁴⁶

The Oregon Index of Leading Indicators (OILI) continues to grow quite rapidly in 2019 despite a decrease in 2018. The leading indicators showing improvement are: air freight, consumer sentiment, and withholding. Indicators that are slowing down include: help wanted ads, housing permits, industrial production, initial claims, the manufacturing purchasing managers

⁴⁰ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 2. Retrieved from: <https://www.oregon.gov/das/OEA/Documents/forecast0519.pdf>.

⁴¹ *Ibid*, page 2.

⁴² *Ibid*, page 6.

⁴³ *Ibid*, page 36.

⁴⁴ *Ibid*, page 13.

⁴⁵ *Ibid*, page 12.

⁴⁶ *Ibid*, page 12.

index (PMI), new incorporations, and the Oregon Dollar Index. The one indicator not improving at this point in time is semiconductor billings. Relative to their September 2018 forecast, many economic indicators in their May 2019 forecast have changed from *improving* to *slowing*, which further illustrates the slowing down of Oregon's economy after several years of extended growth.⁴⁷

Oregon's economic health is dependent on export markets. The value of Oregon exports in 2018 was \$22.3 billion, a 2% growth from 2017. In 2018, Oregon's exports made up approximately 9.4% of its total 2018 GDP.⁴⁸ The countries that Oregon exports the most to are China (21.4% of total Oregon exports), Canada (14.4%), Japan (9.8%), South Korea (7.6%), Malaysia (6.6%), and Vietnam (5.0%).⁴⁹ With the escalating trade war occurring overseas, specifically with China, Oregon exports are left potentially vulnerable, as China is a top destination for Oregon exports.⁵⁰ The OEA notes that it is too soon to assess the disruptiveness of the trade war on global supply chains, however, developments will be tracked as it continues. An economic slowdown across many parts of Asia will have a spillover effect on the Oregon economy.

Long-term Trends

State, regional, and local trends will also affect economic development in McMinnville over the next 20 years. The most important of these trends includes: continued in-migration from other states, distribution of population and employment across the state, and change in the types of industries in Oregon.

- **Continued in-migration from other states.** Oregon will continue to experience in-migration (more people moving *to* Oregon than *from* Oregon) from other states, especially California and Washington. From 1990 to 2018, Oregon's population increased by about 1.35 million, 69% of which was from people moving into Oregon (net migration). The average annual increase in population from net migration over the same time period was approximately 32,000 persons. During the early- to mid-1990's, Oregon's net migration was highest, reaching over 60,000 in 1991, with another relatively high peak of 57,100 persons in 2017. Oregon has not seen negative net migration since the early- to mid-1980's.⁵¹
- **Forecast of job growth.** Total nonfarm employment is expected to increase from 1.95 million in 2019 to 2.04 million in 2022, an increase of 88,000 jobs. The industries with the largest growth are forecasted to be Government, Health Services, Professional and

⁴⁷ *Ibid*, page 9.

⁴⁸ U.S. Bureau of Economic Analysis. Gross Domestic Product (GDP) by State (Millions of current dollars). Retrieved from: <https://apps.bea.gov/iTable/indexregional.cfm>

⁴⁹ United States Census Bureau. State Exports from Oregon, 2015-2018. Retrieved from: <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

⁵⁰ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 2.

⁵¹ Portland State University Population Research Center. 2018 Annual Population Report Tables. April 2019. Retrieved from: <https://www.pdx.edu/prc/population-reports-estimates>.

Business Services, Leisure and Hospitality, and Retail, accounting for 89% of employment growth.⁵²

- **Continued importance of manufacturing to Oregon's economy.** Oregon's exports totaled \$19.4 billion in 2008, nearly doubling since 2000, and reached \$22.3 billion in 2018. The majority of Oregon exports go to countries along the Pacific Rim, with China, Canada, Japan, South Korea, Malaysia, and Vietnam as top destinations. Oregon's largest exports are tied to high tech and mining, as well as agricultural products.⁵³ Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.⁵⁴
- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing industries.** Since 1970, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon's manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry and concurrent growth of employment in other manufacturing industries, such as high-technology manufacturing (Industrial Machinery, Electronic Equipment, and Instruments), Transportation Equipment manufacturing, and Printing and Publishing.⁵⁵
- **Income.** Oregon's income and wages are below that of a typical state. However, Oregon wages continue to grow and remain strong, and they are at their highest point relative to the mill closures resulting from the early 1980's recession. In 2018, the average annual wage in Oregon was \$53,058, and in 2017, the median household income in Oregon was \$60,212 (compared to national average wages of \$57,265 in 2018, and national household income of \$60,336 in 2017).⁵⁶ Total personal income (all classes of income, minus Social Security contributions, adjusted for inflation) in Oregon is expected to increase by 22%, from \$219.5 billion in 2019 to \$267.6 billion in 2023.⁵⁷ Per capita income is expected to increase by 16% over the same time period, from \$51,700 (thousands of dollars) in 2019 to \$60,200 in 2023 (in nominal dollars).⁵⁸

⁵² Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 36.

⁵³ United States Census Bureau. State Exports from Oregon, 2015-2018. Retrieved from: <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

⁵⁴ Oregon Employment Department. *Employment and Wages by Industry (QCEW)*. 2018 Geographic Profile, Manufacturing (31-33). Retrieved from: qualityinfo.org.

⁵⁵ Although Oregon's economy has diversified since the 1970's, natural resource-based manufacturing accounts for about 37% of employment in manufacturing in Oregon in 2018, with the most employment in Food Manufacturing (29,900) and Wood Product Manufacturing (23,400) (QCEW).

⁵⁶ Average annual wages are for "Total, all industries," which includes private and public employers. Oregon Quarterly Census of Employment and Wages, 2018. Retrieved from: <https://www.qualityinfo.org>; Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2017; Total, U.S. Census American Community Survey 1-Year Estimates, 2017, Table B19013.

⁵⁷ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 36.

⁵⁸ *Ibid*, page 36.

- **Small businesses continue to account for a large share of employment in Oregon.** While small firms played a large part in Oregon’s expansion between 2003 and 2007, they also suffered disproportionately in the recession and its aftermath (64% of the net jobs lost between 2008 and 2010 was from small businesses).

In 2016, small businesses (those with 100 or fewer employees) accounted for 95% of privately-owned businesses in Oregon. Said differently, most businesses in Oregon are small (in fact, 76% of all businesses have fewer than 10 employees), but the largest share of Oregon’s employees work for medium-to-large businesses (those with 100 or more employees).⁵⁹

The average annualized payroll per employee for small businesses was \$37,958 in 2016, which is considerably less than that for large businesses (\$57,488) and the statewide average for all businesses (\$47,746).⁶⁰ Younger workers are important to continue growth of small businesses across the nation. More than one-third of Millennials (those born between 1980 - 1999) are self-employed, with approximately half to two-thirds interested in becoming an entrepreneur. Furthermore, in 2011, about 160,000 startup companies were created each month; 29% of these companies were founded by people between 20 to 34 years of age.⁶¹ According to the Kauffman Indicators of Entrepreneurship, in 2018, about 79% of startups nationwide were still active after one year. On average, startups nationwide created approximately 5.2 jobs in their first year (when normalized by population).⁶² However, it is typically the case that startups are important for job creation on a longer time horizon, well beyond their first year, as “fewer than half of all startups in America are still in business after five years.”⁶³

- **Entrepreneurship in Oregon.** The creation of new businesses is vital to Oregon’s economy as their formations generate new jobs and advance new ideas and innovations into markets. They also can produce more efficient products and services to better serve local communities. The Kauffman Foundation reports several statistics at the state level related to entrepreneurship. They report: the rate of new entrepreneurs, the opportunity share of new entrepreneurs (new entrepreneurs who created a business by choice instead of necessity), startup early job creation (the average number of jobs created by startups in their first year, normalized by population), and startup early survival rate (the percent of startups that are still active after one year).

According to Kauffman’s indicators, Oregon’s opportunity share of new entrepreneurs is at its highest relative point post-recession, reaching approximately 80% in 2017, up

⁵⁹ U.S. Census Bureau, 2016 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States.

⁶⁰ *Ibid.*

⁶¹ Cooper, Rich, Michael Hendrix, Andrea Bitely. (2012). "The Millennial Generation Research Review." Washington, DC: The National Chamber Foundation. Retrieved from: <https://www.uschamberfoundation.org/sites/default/files/article/foundation/MillennialGeneration.pdf>.

⁶² Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. Indicators: Startup Early Job Creation and Startup Early Survival Rate. Information retrieved on December 19, 2019 from: <https://indicators.kauffman.org/data-table>

⁶³ Nish Acharya. “Small Business Are Having A Bigger Impact on Job Creation Than Large Corporations.” Forbes, May 5, 2019. <https://www.forbes.com/sites/nishacharya/2019/05/05/who-is-creating-jobs-in-america/#5c74c156597d>

from its post-recession low of 71% in 2012. Startup early job creation also continues to increase. In 2017, the average number of jobs created by startups in their first year reached 5.24, which is comparable to the national average of 5.27. Relative to Oregon's post-recession low of 3.80 in 2010, the average number of startup jobs have increased approximately 38%. However, the two remaining entrepreneurial indicators, the rate of new entrepreneurs and startup early survival rate, are declining somewhat in Oregon. In 2017, the rate of new entrepreneurs decreased by 0.02 percentage points, from 0.34% in 2016 to 0.32% in 2017, though Oregon's 2017 rate aligns closely with the national average of 0.33%. For Oregon's startup early survival rate, it declined to 78.4% in 2017 from a post-recession peak of 80.1% in 2015. Though this decline is not substantially large, the downward trend suggests startups, on average, are not persisting as well as they used to relative to two years ago. Oregon's startup early survival rate in 2017 is 1.4 percentage points below the national average of 79.8%.⁶⁴

Moreover, in 2018, the Oregon OEA reports new business applications in Oregon are increasing. They do, however, simultaneously note startup businesses "are a smaller share of all firms than in the past."⁶⁵ Though this measurement of economic activity does not constitute a full understanding of how well entrepreneurship is performing, it does provide an encouraging signal.

Regional and Local Trends

Throughout this section and the report, McMinnville is compared to Yamhill County and the State of Oregon. These comparisons are to provide context for changes in McMinnville's socioeconomic characteristics.

Availability of Labor

The availability of trained workers in McMinnville will impact development of its economy over the planning period. A skilled and educated populace can attract well-paying businesses and employers and spur the benefits that follow from a growing economy. Key trends that will affect the workforce in McMinnville over the next 20 years include its growth in its overall population, growth in the senior population, and commuting trends.

Growing Population

Population growth in Oregon tends to follow economic cycles. Oregon's population grew from 2.8 million people in 1990 to nearly 4.2 million people in 2018, an increase of over 1,350,000 people at an average annual growth rate of 1.4%. Oregon's growth rate slowed to 1.1% annual growth between 2000 and 2018.

⁶⁴ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship. State Profile: Oregon*. Retrieved from: <https://indicators.kauffman.org/state/oregon>

⁶⁵ Lehner, Josh. (August 2018). "Start-Ups, R&D, and Productivity." Salem, OR: Oregon Office of Economic Analysis. Retrieved from: <https://oregoneconomicanalysis.com/2015/03/13/start-ups-and-new-business-formation/>.

McMinnville’s population increased by 15,916 residents over 1990 to 2018, nearly doubling in size. This growth is reflected in its average annual growth rate (AAGR) of 2.3% (and notably, the growth rate used for the 2000-2020 period in the 2002 McMinnville Housing Needs Analysis), which is 0.9 percentage points higher than the State’s rate of 1.4%. Similar to McMinnville, Yamhill County’s population grew more rapidly than the State, averaging 1.8% growth year-over-year. The County added 41,864 residents over 1990 to 2018 and McMinnville accounts for about 38% of this growth.

Exhibit 12. Population Growth, McMinnville, Yamhill County, and Oregon, 1990 – 2018

Geography					Change, 1990 - 2018		
	1990	2000	2010	2018	Number	Percent	AAGR
McMinnville	17,894	26,499	32,930	33,810	15,916	89%	2.3%
Yamhill County	65,551	84,992	95,925	107,415	41,864	64%	1.8%
Oregon	2,842,337	3,421,399	3,844,195	4,195,300	1,352,963	48%	1.4%

Source: U.S. Census Bureau, 1990, 2000, and 2010. Portland State University Population Estimates, 2018.

Age Distribution

The number of people aged 65 and older in the U.S. is expected to increase by nearly three-quarters by 2050, while the number of people under age 65 will only grow by 16%. The economic effects of this demographic change include a slowing of the growth of the labor force, need for workers to replace retirees, aging of the workforce for seniors that continue working after age 65, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.⁶⁶

Exhibit 13 through Exhibit 16 show the following trends:

- McMinnville’s population is aging slightly faster than Yamhill County’s population. Populations of both McMinnville and Yamhill County are aging faster than Oregon’s population with respect to each region’s growth in median age.
- Over the 2000 to 2013-2017 period, those in the age groups of 45 to 64 and 65 years and older in McMinnville increased by 59% and 48%, respectively. These age groups grew substantially more than all other age categories. This suggests that McMinnville may be retaining residents throughout their mid-to-late careers as they age and/or attracting more people in their mid-to-late careers.
- Yamhill County’s population is expected to continue to age, with people 60 years and older increasing from 23% of the population in 2017 to 28% of the population in 2035. This is consistent with statewide trends. McMinnville and Yamhill County may continue to attract mid-life and older workers over the twenty-year planning period. While the share of retirees in these respective areas may increase over the next 20 years, availability of people nearing retirement (e.g., 55 to 70 years old) is likely to increase.

⁶⁶ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2017, *The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, July 13, 2017. *The Budget and Economic Outlook: Fiscal Years 2018 to 2028*, April 2018.

People in this age group may provide sources of skilled labor, as people continue to work until later in life. These skilled workers may provide opportunities to support business growth in these areas.

McMinnville’s median age increased by about 4.6 years between 2000 and 2013-2017.

This change is slightly larger than Yamhill County’s increase of 4.1 years. Median age increases for both regions exceeded Oregon’s change of 2.8.

Exhibit 13. Median Age, McMinnville, Yamhill County, and Oregon, 2000 to 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census, Table P013; American Community Survey 2013-2017 5-year estimates, Table B01002.

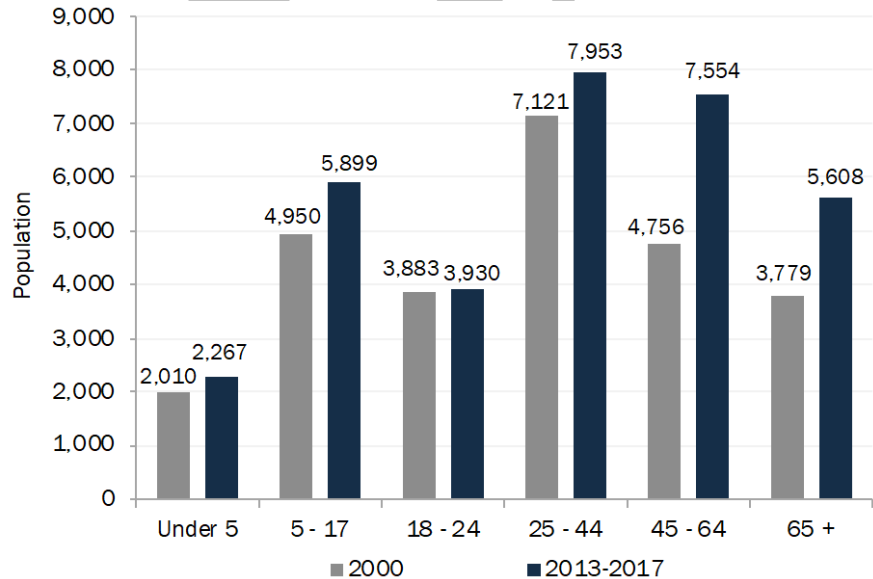
2000	31.5 McMinnville	34.1 Yamhill County	36.3 Oregon
2013-17	36.1 McMinnville	38.2 Yamhill County	39.2 Oregon

Over the 2000 to 2013-2017 period, McMinnville’s largest population increase was for those 45 to 64 (59%) and those aged 65 and older (48%).

This is consistent with statewide trends, where the aforementioned age categories increased the most relative to younger age categories. The Oregon population of those 45 to 64 years of age increased by 30% and those 65 and older increased by 50%.

Exhibit 14. McMinnville Population Change by Age Group, 2000 to 2013-2017

Source: U.S. Census Bureau, 2000 Summary File; American Community Survey 2013-2017 5-year estimates, Table B01001.



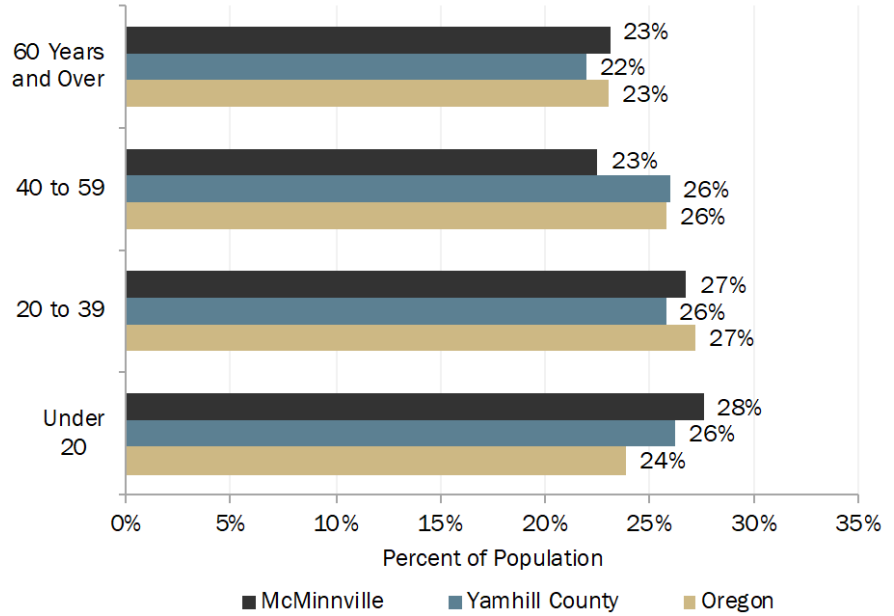
During the 2013-2017 period, the age distribution of McMinnville residents was roughly even across each category, with a slightly smaller proportion of middle-to-older aged adults (40 and older) relative to those 39 years of age and younger.

About 46% of McMinnville residents are 40 years and older and 54% are 39 and younger.

Additionally, the proportion of McMinnville residents under 20 years of age was four percentage points higher than Oregon.

Exhibit 15. Population Distribution by Age, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey, 2013-2017 5-year estimate, Table B01001.

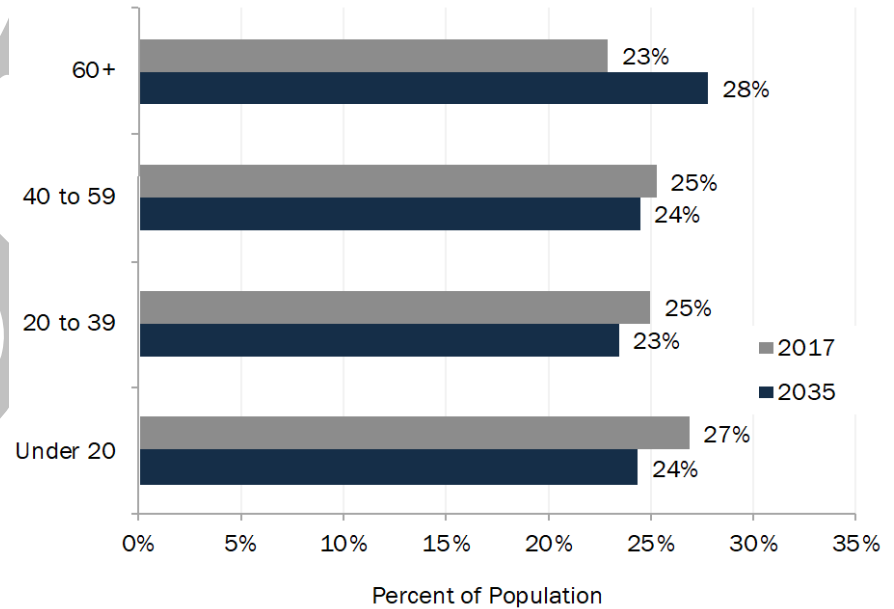


By 2035, Yamhill County will have a larger share of residents older than 60 than it does today. The population forecast for all other age groups projects smaller County population shares by 2035.

The share of residents aged 60 years and older will account for 28% of Yamhill County's population, compared to 23% in 2017.

Exhibit 16. Population Growth by Age Group, Yamhill County, 2017 - 2035

Source: Oregon Population Forecast, 2017.



Income

Income and wages affect business decisions for locating in a city. Areas with higher wages may be less attractive for industries that rely on low-wage workers. McMinnville’s median household income (\$50,299) was below the County median (\$58,392) during the 2013-2017 period. Average wages at businesses in McMinnville (\$40,105) were lower than the County average (\$42,315).⁶⁷

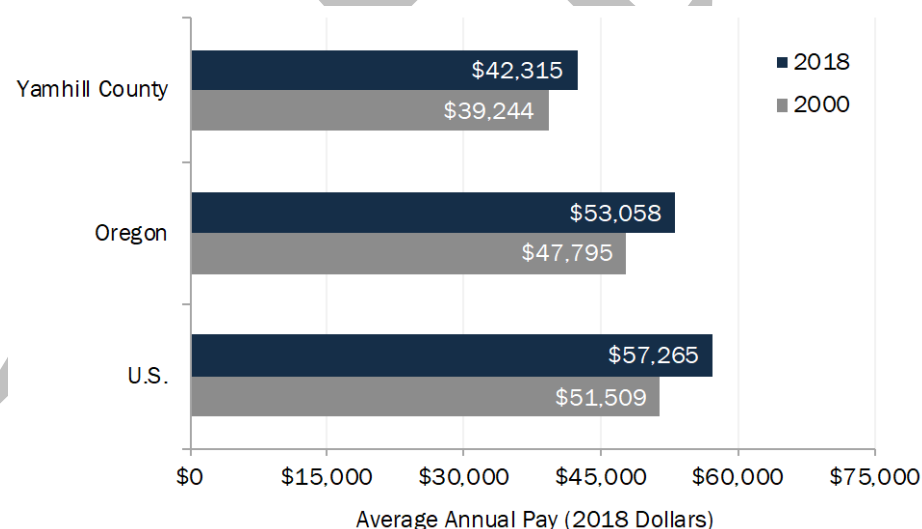
Between 2000 and 2018, Yamhill County’s average wages increased as they also did in Oregon and the nation. When adjusted for inflation to 2018 dollars, average annual wages grew by 8% in Yamhill County, 11% in Oregon, and 11% in the nation.

From 2000 to 2018, average annual wages rose in Yamhill County, Oregon, and the nation.

In 2018, average annual wages were \$42,321 in Yamhill County, \$53,058 in Oregon, and \$57,265 across the nation.

Exhibit 17. Average Annual Wage, Covered Employment, Yamhill County, Oregon, and the U.S., 2000 to 2018, Inflation-adjusted 2018 Dollars

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.
Note: 2018 average annual pay estimates are preliminary, according to the BLS.



Over the 2013-2017 period, the median household income in McMinnville was below that of Yamhill County and Oregon by 14% and 10%, respectively.

Exhibit 18. Median Household Income (MHI),⁶⁸ 2013-2017, Inflation-adjusted 2017 Dollars

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19013.

\$50,299	\$58,392	\$56,119
McMinnville	Yamhill County	Oregon

⁶⁷ According to the Census, Household income includes the income of the householder and other income earners ages 15 or older, thus the mix of sources of income ranges in reporting of household income. Average wage is calculated using Quarterly Census of Employment and Wages data, based on payroll information and number of employees by establishment.

⁶⁸ The Census calculated household income based on the income of all individuals 15 years old and over in the household, whether they are related or not.

McMinnville median family income during the 2013-2017 period, similar to median household income, was below the median family income of both Yamhill County and Oregon by 12% and 15%, respectively.

Exhibit 19. Median Family Income,⁶⁹ 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19113.

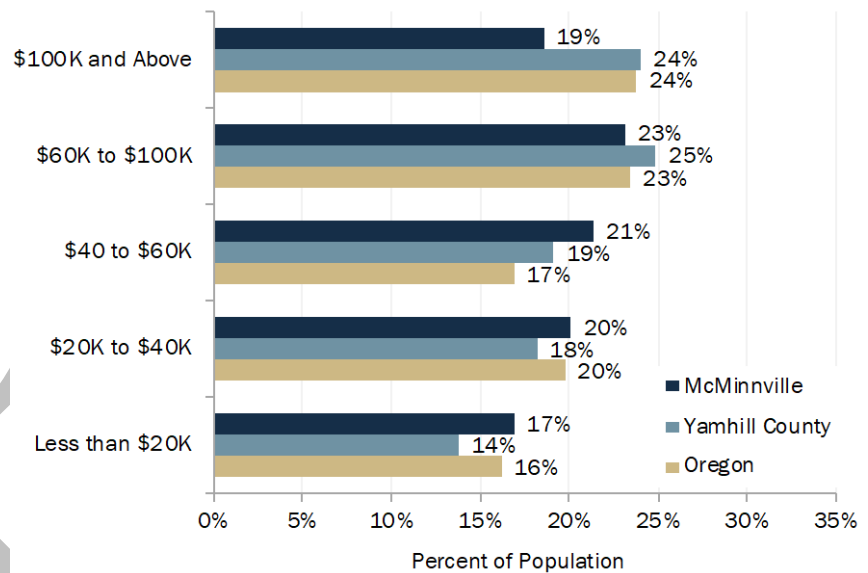
\$58,620 McMinnville	\$66,732 Yamhill County	\$69,031 Oregon
--------------------------------	-----------------------------------	---------------------------

During the 2013-2017 period, 37% of McMinnville households earned less than \$40,000 annually, compared to 32% of Yamhill County households and 36% of Oregon households.

Over the same period, McMinnville households had a lower proportion of higher income earnings (\$100,000 and above) relative to Yamhill County and Oregon.

Exhibit 20. Household Income by Income Group, McMinnville, Yamhill County, and Oregon, 2013-2017, Inflation-adjusted 2017 Dollars

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19001.



⁶⁹ The Census calculated family income based on the income of the head of household, as identified in the response to the Census forms, and income of all individuals 15 years old and over in the household who are related to the head of household by birth, marriage, or adoption.

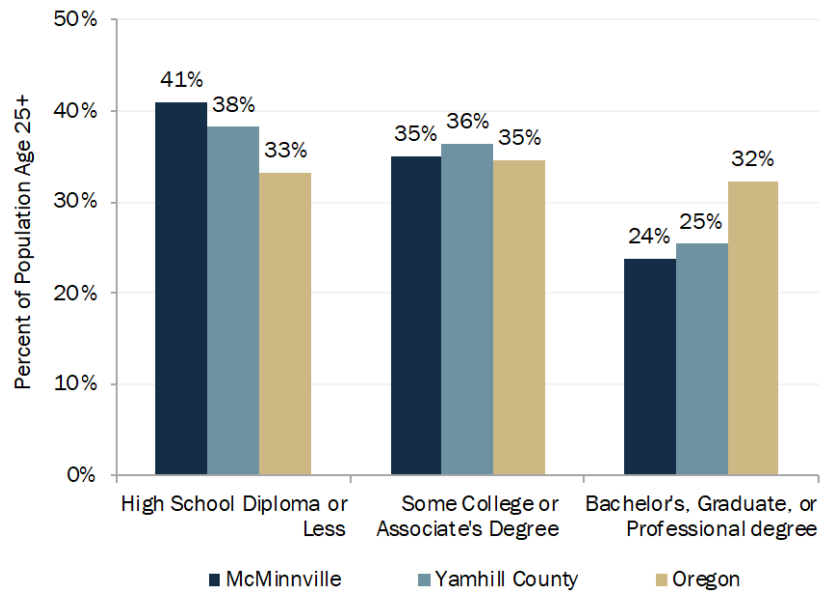
Educational Attainment

The availability of trained, educated workers affects the quality of labor in a community. Educational attainment is an important labor force factor because firms need to be able to find educated workers.

McMinnville's residents are consistent with residents statewide regarding their completion of some college or attainment of an Associate degree; however, attainment of a Bachelor's degree or a professional degree is lower for McMinnville's residents relative to statewide trends.

Exhibit 21. Educational Attainment for the Population 25 Years and Over, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B15003.



Labor Force Participation and Unemployment

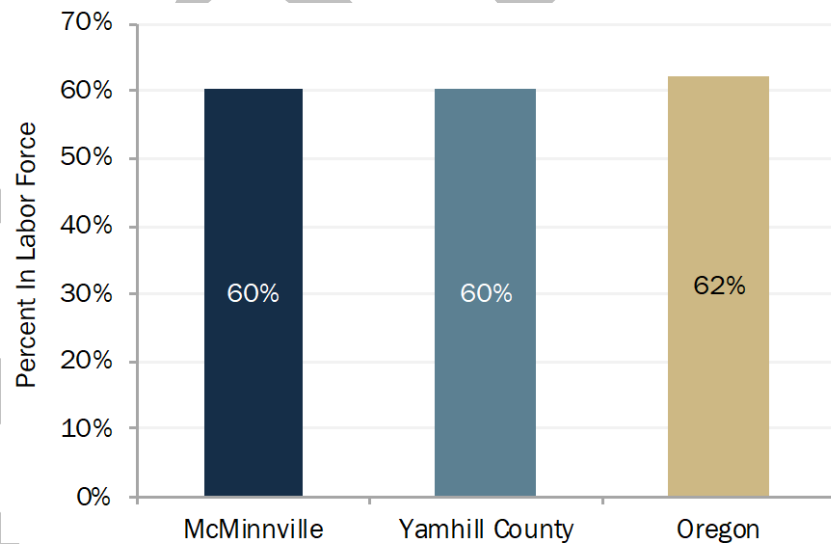
The current labor force participation rate is an important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2013-2017 American Community Survey, Yamhill County had more than 49,000 people in its labor force during that period and McMinnville had close to 15,500 people in its labor force.

In 2017, the Oregon Office of Economic Analysis reported that 64% of job vacancies were difficult to fill. The most common reason for difficulty in filling jobs included a lack of applications (30% of employers' difficulties), lack of qualified candidates (17%), unfavorable working conditions (14%), a lack of soft skills (11%), and a lack of work experience (9%).⁷⁰ These statistics indicate a mismatch between the types of jobs that employers are demanding and the skills that potential employees can provide.

McMinnville's labor force participation rate for the 2013-2017 period is comparable to Yamhill County.

Exhibit 22. Labor Force Participation Rate, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B23001.



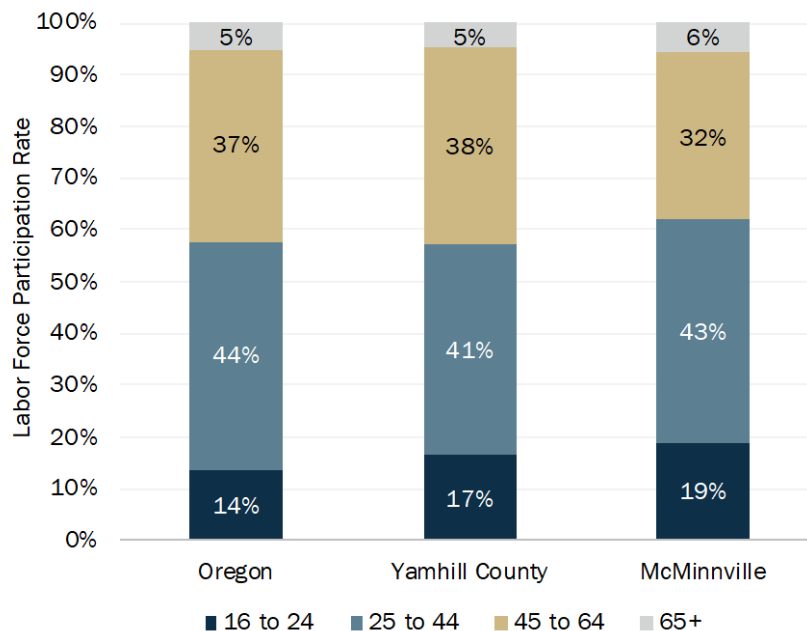
⁷⁰ Oregon's Current Workforce Gaps: Difficult-to-fill Job Openings, Oregon Job Vacancy Survey, Oregon Employment Department, June 2018.

By age group, McMinnville has a larger share of residents aged 16 to 24 participating in the labor force relative to Yamhill County and Oregon.

In contrast, McMinnville has a smaller share of residents aged 45 to 64 participating in the labor force compared to Yamhill County and Oregon.

Exhibit 23. Labor Force Participation Rate, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table S2301.

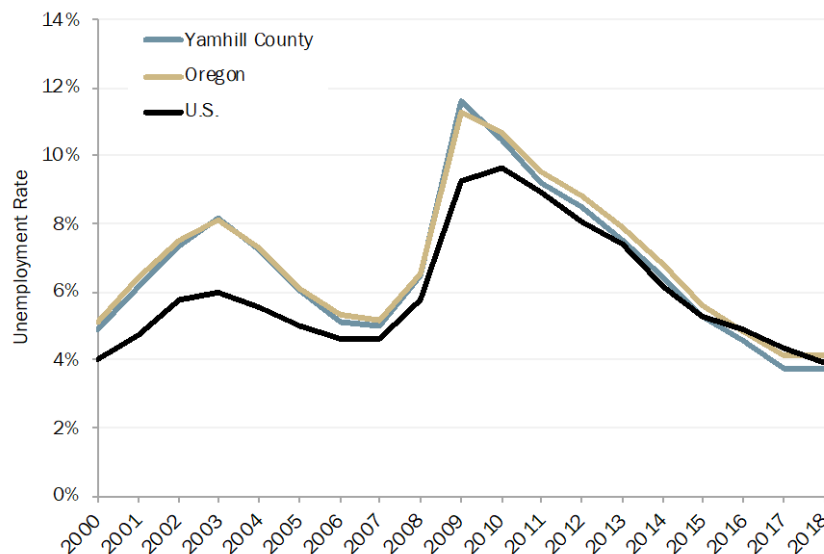


The unemployment rates in Yamhill County, Oregon, and the nation have declined below their respective 2000 rates.

Yamhill County closely follows Oregon's unemployment rate. In 2018, the unemployment rate in Yamhill County was 3.8%. In Oregon, the rate was 3.9%, and in the nation, 4.2%.

Exhibit 24. Unemployment Rate, Yamhill County, Oregon, and the U.S., 2000 - 2018

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics and Labor Force Statistics.



Commuting Patterns

Commuting plays an important role in the McMinnville's economy because employers in these areas are able to access workers from people living in cities across Yamhill County and from the broader Mid-Willamette Valley Region.

Exhibit 26 shows that 38% of people who work in McMinnville reside in McMinnville, 4% commute from Salem, 3% commute from Portland, and 3% from Newberg. The remaining workers commute from various other cities located across the Region.

McMinnville is part of an interconnected regional economy.

Of the approximate 15,080 persons employed in McMinnville (as of 2017), 62% of workers commute to their jobs from outside of the City. The remaining 38% of workers both live and are employed in McMinnville.

Exhibit 25. Commuting Flows, McMinnville, 2017

Source: U.S. Census Bureau, Census On the Map.



As of 2017, about 38% of all people who work in McMinnville also live in McMinnville.

Exhibit 26. Places Where McMinnville Workers Lived,⁷¹ 2017

Source: U.S. Census Bureau, Census On the Map.

38%	4%	3%	3%	3%
McMinnville	Salem	Portland	Newberg	Sheridan

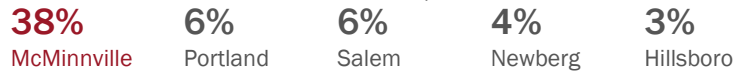
⁷¹ In 2017, 15,080 people worked at businesses in McMinnville, with 38% (5,721) people both employed and working in McMinnville.

About 38% of residents who live in McMinnville also work in McMinnville.

Six percent of McMinnville residents commute to Portland for work and another six percent commute to Salem.

Exhibit 27. Places Where McMinnville Residents were Employed,⁷² 2017

Source: U.S. Census Bureau, Census On the Map.



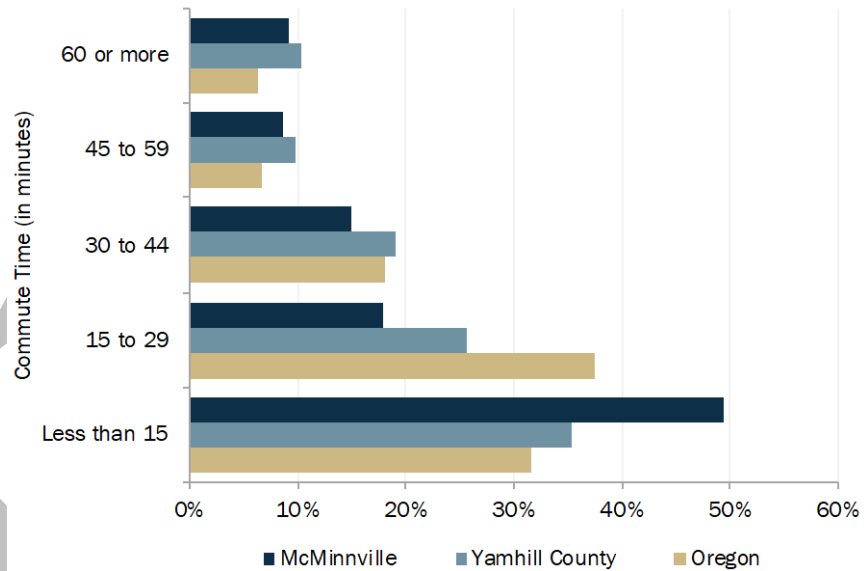
During the 2013-2017 period, about 49% of McMinnville workers had a commute of less than 15 minutes, compared to 35% of Yamhill County workers and 32% of Oregon workers.

Relative to Yamhill County and Oregon workers, McMinnville workers tend to have shorter commute times.

Where the majority (55%) of Oregon workers have commutes between 15 to 44 minutes, only 33% of McMinnville workers have commute times of that length. However, at the higher end of commuting times (45 minutes or more), almost one-fifth (18%) of McMinnville workers spend a sizable amount of time on the road.

Exhibit 28. Commute Time by Place of Residence, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B08303.



⁷² In 2017, 5,569 residents of McMinnville worked, with 38% of McMinnville residents (5,569 people) both living and employed in McMinnville.

Tourism in the Willamette Valley Region and Yamhill County

Longwoods International provides regional statistics on travel. The following information is from Longwoods International's 2017 Regional Visitor Report for the Willamette Valley Region, which is defined as Benton, Lane (eastern, non-coastal region), Linn, Marion, Polk, and Yamhill counties.⁷³ Broadly, travelers to the Willamette Valley Region accounted for:⁷⁴

- 5.5 million overnight trips in 2017, or 16% of all Oregon overnight travel that year.
- The primary market area for travelers over 2016 and 2017 were Oregon, California, and Washington.⁷⁵ 48% of Willamette Valley visitors came from Oregon, 19% came from California, and 14% came from Washington.
- About 53% of visitors stayed 2 or fewer nights over 2016 and 2017 in the Willamette Valley, 32% stayed 3 to 6 nights, and 15% stayed 7 or more nights. The average nights spent in the Willamette Valley Region was 4.3.
- The average per person expenditures on overnight trips in 2017 ranged from \$9 on recreation, sightseeing, and entertainment to \$35 per night on lodging.
- About 75% of visits to the Willamette Valley Region over 2016 and 2017 were via personally-owned automobiles/trucks, 18% were by rental car, and 13% were via an online taxi service (such as Lyft or Uber).
- Over 2016 and 2017, visitors tended to be middle-to-older aged adults, with the average age being about 48.7. Those aged 18 to 34 made up 24% of overnight visits, 34% were between 35 and 54, and 42% were 55 and older. About 56% of visitors graduated college or completed a post-graduate education. Additionally, 44% of visitors earned less than \$50,000 in household income, 37% earned between \$50,000 and \$99,999, and 19% earned more than \$100,000. The average household income for Willamette Valley visitors was about \$64,560.

⁷³ Travel Oregon. "Oregon 2017: Regional Visitor Report, Willamette Valley Region," Longwoods International, October 2018. Retrieved from: <http://industry.traveloregon.com/research/archive/willamette-valley-oregon-overnight-travel-study-2017-longwoods-international/>.

⁷⁴ Longwoods International issues caution in interpreting these tourism estimates in the Willamette Valley Region as the sample size for the marketable trips this region is low. For this reason, the data reported is a combination of survey data from 2016 and 2017.

⁷⁵ The data reported in this bullet as well as other bullets noting years "2016 and 2017" are based on *marketable trips*. Longwoods International states marketable trips "are defined as those trip types that can be influenced by marketing efforts and include leisure and business-leisure trips."

Yamhill County's direct travel spending increased 139% from 2000 to 2018.

The Willamette Valley Region's direct travel spending increased by 100% over the same period.

Exhibit 29. Direct Travel Spending (\$ millions), 2000 and 2018
Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2018.

2000	\$1,000	\$56.7
	Willamette Valley Region	Yamhill County
2018	\$2,000	\$135.7
	Willamette Valley Region	Yamhill County

Yamhill County's lodging tax receipts increased 653% over 2006 to 2018.

Exhibit 30. Lodging Tax Receipts (\$ millions), 2006 and 2018
Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2018.

2006	\$111.0
	Yamhill County
2018	\$835.8
	Yamhill County

Yamhill County's largest visitor spending for purchased commodities is accommodation and food services.

Exhibit 31. Largest Visitor Spending Categories (\$ millions), Yamhill County, 2018
Source: Dean Runyan Associates, Oregon Travel Impacts.

\$27.9	\$6.3	\$3.9
Accommodations and Food Services	Arts, Entertainment, and Recreation	Retail

Yamhill County's largest employment generated by travel spending is also in the accommodations and food services industry.

Exhibit 32. Largest Industry Employment Generated by Travel Spending (thousands), Yamhill County, 2018
Source: Dean Runyan Associates, Oregon Travel Impacts.

1.1 jobs	0.5 jobs	0.1 jobs
Accommodations & Food Services	Arts, Entertainment, and Recreation	Retail

The number of person nights spent in Yamhill County increased from 1,706,000 in 2017 to 1,773,000 in 2018, an increase of 67,000 overnight stays, or 4%. Over the last nine years, from 2010 to 2018, person nights increased approximately 19%.

4. Economic Development Potential

The fundamental purpose of Goal 9 is to make sure that a local government plans for economic development. The planning literature provides many definitions of economic development, both broad and narrow. Broadly,

“Economic development is the process of improving a community’s well-being through job creation, business growth, and income growth (factors that are typical and reasonable focus of economic development policy), as well as through improvements to the wider social and natural environment that strengthen the economy.”⁷⁶

That definition acknowledges that a community’s wellbeing depends in part on narrower measures of economic wellbeing (e.g., jobs and income) and on other aspects of quality of life (e.g., the social and natural environment). In practice, cities and regions trying to prepare an economic development strategy typically use a narrower definition of economic development; they take it to mean business development, job growth, and job opportunity. The assumptions are that:

- Business and job growth are contributors to and consistent with economic development, increased income, and increased economic welfare. From the municipal point of view, investment and resulting increases in property tax are important outcomes of economic development.
- The evaluation of tradeoffs and balancing of policies to decide whether such growth is likely to lead to overall gains in wellbeing (on average and across all citizens and businesses in a jurisdiction, and all aspects of wellbeing) is something that decision makers do after an economic strategy has been presented to them for consideration.

That logic is consistent with the tenet of the Oregon land-use planning program: all goals matter, no goal dominates, and the challenge is to find a balance of conservation and development that is acceptable to a local government and the State. Goal 9 does not dominate, but it legitimizes and requires that a local government focus on the narrower view of economic development regarding economic variables.

In that context, a major part of local economic development policy is about local support for business development and job growth; that growth comes from the creation of new firms, the expansion of existing firms, and the relocation or retention of existing firms. Specifically, new, small businesses (those with fewer than 100 employees) are accounting for a larger share of the job growth in the United States.⁷⁷ This shift toward a focus on entrepreneurship, innovation, and small businesses presents additional options for local support for economic development

⁷⁶ *An Economic Development Toolbox: Strategies and Methods*, Terry Moore, Stuart Meck, and James Ebenhoh, American Planning Association, Planning Advisory Service Report Number 541, October 2006.

⁷⁷ According to the 2018 Small Business Profile from the US Small Business Office of Advocacy, small businesses account for over 99 percent of total businesses in the United States, and their employees account for nearly 50% of American workers. <https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf>

beyond firm attraction and retention. Thus, a key question for economic development policy is: *What are the factors that influence business and job growth, and what is the relative importance of each?* Specifically, OAR 660-009-0015(4) requires that cities conduct an assessment of community economic development potential, as part of the EOA. This assessment considers: market factors, infrastructure and public facility availability and access, labor, proximity to suppliers and other necessary business services, regulations, and access to job training.

The local factors that form McMinnville’s competitive advantage are summarized in the subsections below.

Factors Affecting Community Economic Development Potential

OAR 660-009-0015(4) stipulates that relevant economic advantages and disadvantages considered with the EOA “may include but are not limited to” factors of: location, size and buying power of markets; availability of transportation facilities for access and freight mobility; public facilities and public services; labor market factors; access to suppliers and utilities; necessary support services; limits on development due to federal and state environmental protection laws; and educational and technical training programs.” This 2020 EOA update is organized to address these considerations together with other factors distinctive to economic development in McMinnville.

Location, Size & Buying Power of Markets. Location is an economic factor that is prominently mentioned in prior planning documents. The 2019 *MAC-Town 2032 Economic Development Strategic Plan* identifies both strengths and weaknesses related to McMinnville’s location and associated transportation factors. Comparative advantages and disadvantages and their implications for economic opportunity in McMinnville are drawn from the 2013 EOA together with more recent MEDP, SEDCOR, and related industry analyses, summarized as follows.⁷⁸

Advantages:

- *Ease of access – with proximity to Portland, Salem & the Oregon coast.* McMinnville is only 40 miles from Portland, 27 miles from Salem, and 51 miles from Lincoln City on the Oregon coast.⁷⁹
- *Central location to serve local community and regional employment and commercial service needs.* McMinnville is well situated to serve the employment and commercial needs of the local community and a larger market area of approximately 75,000 residents, according to the Three Mile Lane market analysis. The City’s market area encompasses

⁷⁸ The 2020 EOA update provides updated information related to comparative advantages and disadvantages, while keeping the structure of the 2013 EOA. Factors that are no longer relevant to McMinnville were removed.

⁷⁹ Source is www.maps.google.com.

North Willamette Valley region—comprised of Yamhill-Carlton, Chehalem Mountains, McMinnville, Ribbon Ridge, Dundee Hills, and Eola-Amity Hills – has been identified with 503 wineries and 20,279 acres of grapes as of 2018.

In addition to recognition as the leading production area for Oregon’s wine industry, Yamhill County agricultural production adds to both local and visitor appeal. The area is known for quality fresh-to-market products including berries, nuts, milk, eggs, fruits and vegetables – and increasingly for custom/organic livestock production. Nursery crops, grass and legume seeds, Christmas trees, grain and hay add to the diversity of Yamhill County agricultural production – as the 6th leading county in terms of value of production in Oregon in 2017.⁸³

The Evergreen Air Museum attracted an estimated 88,400 visitors in 2018. With over 3 million annual visitors, the Spirit Mountain Casino located 24 miles from downtown McMinnville is widely cited as one of the top visitor draws in the state.⁸⁴

McMinnville also is recognized statewide for its remarkable comeback and current vitality of its historic downtown core area. Promoted as “Oregon’s favorite main street,” the McMinnville Downtown Association characterizes the appeal of downtown in these terms:

“Quaint boutiques, unique shops, and local galleries abound. Music fills the air from our farmers’ market performers and outdoor concerts all summer long, and pours out of our restaurants and pubs on winter evenings.”⁸⁵

Disadvantages:

- *Retail sales leakage occurring due to lack of major comparison retail.* As described by the Three Mile Lane market analysis, there is a considerable retail sales leakage of an estimated \$208 million annually throughout the McMinnville Market Area. Factoring in household growth projections, the market analysis forecasts demand for an additional 539,000 square feet of retail development in the McMinnville market area over the coming decade, with 150,000 square feet (or about 28%) being captured in the Three Mile Lane area.⁸⁶

Sites in the McMinnville UGB offer the potential to serve a local and regional market extending to Sheridan/Willamina, Polk County and even some coastal communities – with improved opportunity to serve the Newberg-Dundee area as a result of the recently completed bypass construction. Centrally located sites with good highway access and street visibility can be instrumental to attract commercial businesses that may require market areas of 50,000-100,000+ population.

⁸³ U.S. Census of Agriculture. Yamhill County Profile. 2017.

⁸⁴ As cited by Memorandum #2, Market Study Current Conditions, prepared as part of Northeast Gateway Plan by Leland Consulting Group for the City of McMinnville, May 23, 2011.

⁸⁵ As cited by www.downtownmcminnville.com, as of September 2012.

⁸⁶ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

- *Need for additional value-added opportunities for visitors.* A key challenge for the future is to provide more and better value-added opportunities for visitors to spend more time and money while visiting the McMinnville area.

Also, the 2019 *Willamette Valley Winery Association Visitor Profile Study* reported that about 53.8% of domestic visitors to the area are non-Oregon residents. Survey respondents noted difficulty of travel to the Willamette Valley as a key factor in not returning to the area. The study also stated that the typical Oregon resident wine tourist spends about \$151.63 per person per day, while the typical non-Oregon resident spends about \$416.43 per person per day.

Note: The 2013 EOA noted the following disadvantage at that time:

“Limited duration of tourism visitation & low expenditure capture. While the McMinnville area and Yamhill County can now boast some of the state’s top tourism attractions, visitor spending does not appear to match visitation. This is because visitors tend not to stay overnight (but are often day visitors) and do not appear to be making substantial expenditures while in the area.”

This has changed substantially. Visit McMinnville reports that visitor spending in Yamhill County has doubled in the last ten years. Lodging statistics in McMinnville are up across the board, including demand, rate, length of stay, occupancy, revenue, and number of properties & inventory of rooms.

Availability of Transportation Facilities for Access & Mobility. Location, size and buying power of markets are substantially affected by current and planned transportation facilities. This is particularly the case in Yamhill County which increasingly has experienced the negative economic development effects of highway congestion on the 99W corridor. However, completion of Phase 1 of the Newberg-Dundee Bypass in January of 2018 has partially reduced congestion, especially for local residents of the region.

Economic development opportunities may be substantially enhanced with further plans for transportation improvements—as with the second phase of the Newberg-Dundee bypass, which is currently in its design phase. A broader look at the role transportation plays in shaping McMinnville’s economic opportunities is outlined as follows.

Advantages:

- *Western & mid-valley cross-roads.* McMinnville is directly served by Highway 99W – as a historically significant central organizing spine to access commercial and industrial businesses throughout the community. Highway 18 has come to play an increasingly important role, not only as a by-pass route for through traffic traveling between the Oregon coast and the Portland metro area but also as a means of accessing more local and regional employment/institutional uses as well as the McMinnville airport. While not directly in McMinnville, Highway 22 (via 99W) provides access to Salem and to Interstate 5 (within approximately 30 miles).

- *Changing traffic patterns.* While serving as one indicator of overall economic activity, this is of particular importance for retail and service businesses as well as tourism oriented destinations reliant on high traffic counts. As of 2018, an estimated 22,900 vehicles per day traveled Highway 18 in the vicinity of the McMinnville airport – an increase of 44% over 2005 counts.⁸⁷

On Highway 99W, up to an estimated 21,900 vehicles traveled daily through McMinnville in 2018, (representing an increase in 99W in-town traffic with 18,900 vehicles in 2013).⁸⁸

- *Air and rail accessibility.* As a general aviation airport, McMinnville Municipal Airport has the capacity to handle corporate jet aircraft – together with availability of aircraft rentals, flight instruction, aircraft maintenance, and fuel. The Portland International Airport (PDX) is located 36 miles from McMinnville, offering daily direct flights with passenger and freight service to Asia, Europe, and Mexico as well as cities throughout the U.S.

The Willamette and Pacific Railroad maintains freight service to McMinnville industrial users. This short-line carrier connects to the Burlington Northern Santa Fe and Union Pacific carriers for transcontinental shipments to and from McMinnville.

Disadvantages:

- *Poor linkages to Interstate freeway access.* Congestion on the 99W corridor in the area of Dundee and further north is cited as a disincentive to business investment from existing and prospective new firms in documents including the 2019 *MAC-Town 2032 Economic Development Strategic Plan*. Of particular concern is the approximate 30-mile distance from McMinnville to the Interstate 5 corridor, exacerbated by substantial congestion affecting connecting routes during much of the business day, especially for the segment of the 99W corridor extending from the Highway 18 merge north of McMinnville through Newberg. The *MAC-Town 2032 Economic Development Strategic Plan* notes that the development of the Highway 99 bypass will likely “improve access to McMinnville.”
- *Challenging Air & Rail Service.* While the distance to PDX for scheduled air service is less than 50 miles, regional roadway congestion makes travel times unpredictable during business hours and about half this distance from McMinnville occurs on two-lane roadways. With increasing regional traffic congestion, access to Portland International Airport is ever more problematic both for freight shippers and employees who must travel for their jobs.

As described by the 2001 EOA, “lack of convenient and efficient access to Portland International Airport was one factor cited by Hewlett-Packard in its decision to leave McMinnville, and it may discourage other existing or prospective firms from expanding

⁸⁷ Annual Average Daily Traffic counts (point near McMinnville Airport). Oregon Department of Transportation. <https://gis.odot.state.or.us/transgis/>

⁸⁸ Annual Average Daily Traffic counts (point near McMinnville High School). Oregon Department of Transportation. <https://gis.odot.state.or.us/transgis/>

or locating in McMinnville.” Also noted is that rail traffic bound for Portland has been routed south, then north, due to the unsuitability of existing trackage north of McMinnville.

The Oregon Department of Transportation (ODOT) completed construction of Phase 1 of the Newberg-Dundee Bypass and has proceeded into the design phase for Phase 2, which will affect economic opportunities in the coming years. Per the fact sheet associated with Phase 1 of the Bypass project, congestion was reduced by approximately 20% in downtown Newberg and by 40% in downtown Dundee. Freight traffic was also reduced by approximately 45% in Newberg and 68% in Dundee. These congestion reductions have the added benefit of increasing safety on 99W and simultaneously diminishing travel time during peak commute periods.⁸⁹ The Phase 2 improvement (currently in a design phase) is expected to have the effect of further reducing travel times on the 99W corridor north of McMinnville to Newberg via an extension of the Phase 1 Bypass.

Public-Private Facilities, Services & Environmental Factors. This discussion combines related items of OAR 660-009-0015(4) as related to public facilities and public services, access to suppliers and utilities, necessary support services, and environmental limitations. This is due to the inter-connected roles of these factors in affecting overall economic activity for both industrial and commercial business activities.

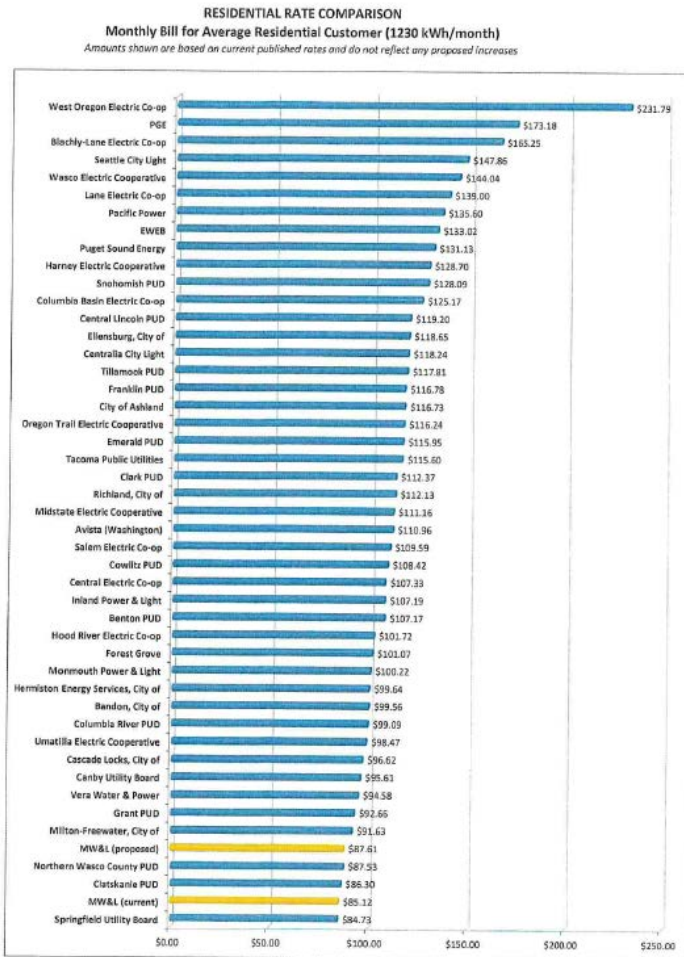
The availability and cost of both public and private support services can affect the costs of living or doing business in McMinnville. Environmental factors can similarly serve to constrain or, in some cases, benefit economic development investments. A firm’s location decision may reflect consideration of the comparative value versus cost of doing business in McMinnville or other potentially viable locations in Oregon or elsewhere.

Advantages:

- *Low public utility rates.* McMinnville is recognized as offering low electricity and water rates compared with other public and private utilities region-wide and statewide (Exhibit 34). The public utility provider, McMinnville Water and Light (MW&L), was founded in 1889 and continues to provide low cost, reliable water and power services.

⁸⁹ Oregon Department of Transportation. 2014. *Newberg-Dundee Bypass Project*. Retrieved from: <http://oregonjta.org/region2/files/highway99w/docs/overall-fact-sheet-for-web-dec-2014.pdf>

Exhibit 34. Residential Rate Comparison for Oregon Utility Services



Source: McMinnville Water and Light.

- Water & sewer capacity for growth.**
 - Water supply and water rights.** Water supply is from the Yamhill and Nestucca River basins. In 2005, MW&L completed expansion of McGuire Reservoir, more than doubling reservoir capacity, providing ample water supply through at least 2025. Beyond 2025, MW&L has sufficient capacity for water rights and supply to meet needs through at least 2075. This will address needs for the City's 20-year planning horizon of 2041 and the longer 2067 planning horizon.
 - Treatment capacity.** In 2010, MW&L completed expansion of the Water Treatment Plant (WTP). This increased capacity from 13 MGD to 22 MGD. The WTP can be expanded from the current 22 MGD to a maximum of 30 MGD. MW&L's 2010 master plan projects that this will provide treatment capacity through 2045. This addresses needs through the City's 20-year planning horizon through 2041, and MW&L can either expand treatment capacity at this location or supplement with new treatment capacity from the new intake on the Willamette to meet needs beyond 2045 through the 2067 planning horizon.

- *Long-Term Water Supply.* Previously noted as a disadvantage in the 2013 EOA, recent actions have turned long-term water supply into an advantage. While recent expansions to McGuire Reservoir are expected to provide ample supply through about 2025, actions are also being undertaken to address longer-term needs. A 2008 Yamhill County Water Supply Analysis concluded that most providers in Yamhill County have adequate water rights to meet projected maximum day demands to 2050; exceptions are noted for Dayton, Lafayette, McMinnville Water and Light (MWL), and Yamhill. As a result, MWL is partnering with the Cities of Carlton, Dayton and Lafayette in an application to the state to secure a water permit to the Willamette River as a potential second municipal source. In addition, this will provide McMinnville with a secondary source, as well as adequate supply and water rights through 2075.

In 2011, the Yamhill Regional Water Authority (YRWA) acquired a water right on the Willamette River with a 2011 priority date. In 2016, MW&L acquired an additional right with a priority date of 1982. In 2017, MW&L purchased a site on the Willamette River for a future intake and pump station. In 2018, MW&L procured the services of Carrollo Engineering to verify that the site would support facilities for a 50 MGD intake and pump station. In 2019, MW&L signed an agreement to supply water to the City of Lafayette. Engineering Design of the inter-tie is underway with construction in 2020. Tentative plans are to start supplying Lafayette with water in the summer of 2020. In 2020, MWL anticipates acquiring an additional senior water right from the Willamette for 4.8 MGD. For McMinnville, this means there will be adequate supply and water rights to meet needs through at least 2075.

- *Internet Services.* In the 2019 strategic plan, goal 1.4.3, which is to "identify and complete high-priority infrastructure projects that serve McMinnville's current and future business community," details a potential project where City staff will evaluate a 10GB fiber network with local Internet Service Provider, Online Northwest.
- *Local business entrepreneurship – with a record of technological innovation.* Focus groups conducted in 2007 for the MEDP strategic economic development plan coupled with interviews for the Marion-Polk-Yamhill County regional economic development strategy have pointed to this factor as a major distinctive strength of the mid-Willamette Valley region. The *MAC-Town 2032 Economic Development Strategic Plan* dedicates one of its target sector goals to foster opportunities in technology and entrepreneurship. This goal is comprised of four strategies, which include making McMinnville a location for small- and medium-sized technology firms to relocate and grow, provide co-working and other work arrangements enabled by telecommunications technology, incubate new businesses and start-ups, and create new talent pipelines for tech-related occupations.⁹⁰

⁹⁰ City of McMinnville. *MAC-Town 2032: Economic Development Strategic Plan*. Retrieved from: <https://www.mcminnvilleoregon.gov/sp/page/mac-town-2032-economic-development-strategic-plan>

Perhaps less readily recognized is the diversity of other small manufacturing and industrial companies that serve global markets through technological innovation and astute market positioning. Examples range from area aerospace and metals component manufacturers to technology companies to wineries.

- *Comparative property tax rates.* While the significance of property and other taxes to business investment decisions is debated nationally and regionally, there is no question that McMinnville’s relative tax burden has changed appreciably in a more favorable direction in recent years.
- *Economic development assistance.* A public services advantage noted with the 2001 EOA is the presence of the McMinnville Downtown Association, providing economic development assistance for businesses locating or expanding in the historic downtown. Since its formation in 1976, the association has been recognized for successful downtown revitalization and leadership among Oregon Main Street communities. Formed in 2006, the public-private organization, McMinnville Economic Development Partnership (MEDP), continues to serve as a single point of contact for economic development assistance for industrial and other firms throughout the McMinnville community. Further, the 2019 *MAC-Town 2032 Economic Development Strategic Plan* identified a “positive business climate perceptions and a sense of civic leadership” as a strength in McMinnville.

Disadvantages:

- *Environmental Effects on Land Supply.* The City of McMinnville has identified lands in steep slopes (of 15% or greater), floodplains, and wetlands identified in the National Wetlands Inventory (NWI) as environmental constraints. Lands with any of these characteristics are considered as constrained or unbuildable and have been deducted from lands identified as available whether vacant or partially vacant.

Labor Market Factors (including Training). This discussion combines two factors listed by OAR 660-009-0015(4) – notably items (d) labor market factors and (h) education and technical training programs – due to their mutual interdependence.

The availability of adequate, qualified labor is critical for economic development. This labor force is not limited to local McMinnville residents as local firms can draw workers from surrounding communities situated within a reasonable commute distance. Similarly, a portion of the McMinnville adult population may find employment in other communities – both nearby as well as extending into the Salem and Portland metro areas.

While direct information on the quality of the workforce is not always readily available, demographic characteristics that are typically used to indicate the quality of the labor force include age distribution, educational attainment, employment by occupation or industry, and race/ethnicity. Also of importance are opportunities for workforce training.

Advantages:

- *Favorable workforce demographics.* As detailed with the comparative demographic and economic data in Chapters 2 and 3 of this EOA update, factors conducive to adequacy of abundant labor supply in McMinnville include above average population growth rates, low median age of population, and high proportion of McMinnville residents who are able to find work locally. A well-represented Latino population also offers advantages for businesses that benefit from greater cultural diversity in accessing customers in a more diverse marketplace both regionally and nationally.
- *Ability to access much larger metro area workforce pool.* With an in-city labor pool of over 15,000, McMinnville employers have ready access to a countywide labor market of nearly 50,000. For some specialty positions in which the local market may not have adequate depth, there is an even larger regional Mid-Valley labor pool on which to draw – much of which is located within a 20-40 mile drive from McMinnville. However, employers have noted the immediately available labor pool in McMinnville as an issue.
- *Moderate local & countywide unemployment.* The 2013 EOA noted that McMinnville unemployment in McMinnville (in 2010) was 9.3%—above the U.S. rate of 9.0% and below the statewide rate of 10.4%. Comparatively, unemployment has improved since the recession. In 2018, the unemployment rate in Yamhill County was 3.8%.
- *The Linfield/Chemeketa Community College connection.* As a top-ranked U.S. News & World Report college in the western U.S., Linfield College has established a west coast if not national reputation for academic excellence and value. In December 2019, Linfield was ranked #117 among national liberal arts colleges by the national magazine U.S. News & World Report.⁹¹ A question for the future may be how best to leverage this reputation for greater community and economic benefit.

The Chemeketa Community College – Yamhill Campus offers increasing opportunity for linkages with economic development, particularly through workforce training targeted to the needs of local employers. Another example of a partnership opportunity would be the creation of an entrepreneurship program – marketed cooperatively to area businesses. The Yamhill Valley Campus was expanded to a new location directly adjacent to the Highway 18 corridor in 2011.

- *Workforce training resources.* Workforce recruitment programs are available through the McMinnville WorkSource Center (Oregon’s public workforce system), Express Employment Professionals, and the Oregon Employment Department. For young professionals, career centers at Linfield College, Chemeketa Community College (Yamhill Valley Campus), George Fox University, Portland Community College (Newberg), and McMinnville High School, provide support for improving skills and

⁹¹ U.S. News. *Best Colleges Rankings*. Linfield College, 900 S.E. Baker St., McMinnville, OR. Rank information retrieved on December 19, 2019 from: <https://www.usnews.com/best-colleges/linfield-college-3198>

connecting them with businesses in the broader Yamhill County region.⁹² Additionally, the MDEP operates a summer internship program named McMinnville WORKS, which assists in connecting local businesses with talented collegiate youth.⁹³

Disadvantages:

- The most significant labor force disadvantage is indicated by relatively low rates of college graduates. Only 24% of McMinnville adults have college degrees, compared to 25% in Yamhill County and 32% in Oregon, according to 2013-2017 ACS 5-year estimates.
- A related disadvantage may lie with relatively high proportions of service workers – as compared with the entire county, Mid-Valley region, entire state and U.S. This is one reason that McMinnville household incomes are also below those of the comparison geographies.

However, in some cases this available labor force will constitute a comparative advantage for firms that depend on service occupations. This is especially the case if local work force skills can also be enhanced over time to allow for improved wages and career options.

Other Factors. In addition to the factors identified in conjunction with OAR 660-009-0015(4), there are other factors of importance specifically to the McMinnville community. These relate to local demographics and also land availability. Key advantages and disadvantages as noted from this and other similar analyses pertinent to McMinnville are outlined below.

Advantages:

- *Diverse industry mix.* McMinnville has a relatively diverse mix of industry for a community its size, a factor noted by the 2001 EOA. This diverse employment base is attributed, in part, to the actions of McMinnville Economic Development Partnership (MEDP). Also noted by the 2001 EOA, the 2007 MEDP Strategic Plan, and more recently in the 2019 *MAC-Town 2032 Economic Development Strategic Plan*, is that the local diversity of employment is due in part to the perceived quality of life in McMinnville. This factor is important to attracting businesses and entrepreneurs seeking quality communities for themselves and their employees.
- *A relatively young & diverse population – with increased Latino presence.* Median age of McMinnville residents is three years less than that of the entire state of Oregon. Higher proportions of residents are found locally for all age cohorts from childhood to young adults (to age 39). Companies looking for youthful workforce can find it in McMinnville.

⁹² McMinnville Economic Development Partnership (MDEP), Find Your Workforce. <https://www.mcminnvillebusiness.com/workforce>

⁹³ MDEP, The McMinnville WORKS Summer Internship Program. <https://www.mcminnvillebusiness.com/mcminnville-works-internship-program>

McMinnville is at the leading edge of Oregon's population transformation. The community's Latino population increased from less than 15% of the city-wide total in 2000 to 22% in 2013-2017 (well above the statewide proportion of 13%). Throughout the entire mid-Willamette Valley region as well as statewide, the Hispanic/Latino population is expected to represent an increasingly important component of the next generation of workers and of customers for commercial services. McMinnville has an opportunity to lead the way – providing new career options for Latino workers and business development options for Hispanic-owned businesses.

- *Small-town residential charm including a walkable downtown.* While quality of life is often considered difficult to quantitatively assess, perceptions of quality of life relative to other communities can affect business location and expansion decisions. This is especially the case for entrepreneurial and other individually owned, non-corporate enterprises.

The 2018 Economic Development Strategic Plan's mission states, "Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville's high quality of life... As we evolve, we prize our small-town roots and we maintain McMinnville's character."⁹⁴ As described by the website of the McMinnville Area Chamber of Commerce, "McMinnville is located in the western portion of Oregon's agriculturally rich Willamette Valley on U.S. Highway 99W."

The quiet, friendly city enjoys a central location to Pacific Ocean beaches (50 miles), the big city (Portland - 30 miles to the northeast), and the state capitol (Salem - 25 miles southeast), with an easy scenic drive to Mt. Hood and other ski areas. "McMinnville offers small-town charm in a full-service city."⁹⁵

- *Adequacy of buildable industrial land.* The previous EOA process concluded that the McMinnville UGB had a surplus of buildable industrial land during a 20-year planning period. The 2020 EOA update shows that McMinnville continues to have a surplus of industrial land, with 323 unconstrained buildable industrial acres. About 266 of those acres are on lots greater than 10 acres. Further discussion of the industrial land supply and forecast is provided with Chapter 5 of this report.

Disadvantages:

- *Restricted population growth.* Since 2000, population has been increasing somewhat more rapidly than the state, but at an approximate 1.4% per year average rate. In the past, City services have been able to match without experiencing major fiscal issues. However, continued population growth at a somewhat reduced coordinated population growth rate averaging about 1.2% per year is now forecast through 2067. Constrained land supply is restricting growth and the cost of services is increasing faster than increases in assessed values.

⁹⁴ MAC-Town 2032 Economic Development Strategic Plan. 2019. p.10.

⁹⁵ Cited from www.mcminnville.org, as of September 2012.

- *Vulnerability to eroding incomes & standard of living.* As of 2013-2017, median household incomes for McMinnville are 14% below Yamhill County and 10% below statewide medians. Average wages for the McMinnville UGB are comparable to Yamhill County but below comparable regional, statewide and national figures.

As is occurring statewide and nationally, wages are now accounting for less than a 50% share of total personal income. Yamhill County residents also are more dependent on transfer payments than is the case regionally or nationally.

Future prosperity may be jeopardized to the extent that non-wage sources of income are subject to changing federal policies and the status of national/global investment markets – combined with social service needs for those dependent on transfer payments. Improving the ratio of wage to non-wage income will be influenced directly through the combination of providing more jobs and better paying job opportunities locally.

- *Tentative integration of Latino population into community & business leadership.* As noted with the 2007 MEDP Strategic Plan, in many communities with rapidly growing Hispanic populations, it has proven challenging to effectively draw Latinos into positions of community leadership and business ownership. The result can be lost opportunity for Latino business patronage and a more dynamic cultural environment that draws new blood, new ideas and new investment. A foundational strategy in the *MAC-Town 2032 Economic Development Strategic Plan* is to “improve systems for economic mobility and inclusion,” with emphasis on training, resources, and support for underrepresented entrepreneurs and workers.
- *Inadequacy of commercial buildable land.* The 2001/03 and 2013 EOA processes all concluded that the McMinnville UGB would experience a deficit of buildable commercial land over a 20-year time horizon. The 2013 EOA resulted in a 36-acre deficit for the 2013 to 2033 planning period, while the results in Chapter 5 show a 179-acre deficit of commercial land for the 2021 to 2041 planning period.

McMinnville’s Strengths, Weaknesses, Opportunities, and Threats

As part of the *MAC-Town 2032 Economic Development Strategic Plan*, McMinnville community members completed a SWOT analysis for economic development in McMinnville. It describes McMinnville’s Strengths, Weaknesses, Opportunities, and Threats.

<p>Strengths</p> <ul style="list-style-type: none"> • High quality of life to boast about and attract investment • Strong, widely-recognized downtown • Robust wine and tourism economy, as well as cultural (e.g. Air and Space Museum) and recreational amenities that bring visitors • Well known regionally and nationally as a destination for wine and food, with some supporting tourist assets • Balanced employment across industry sectors • Presence and involvement of postsecondary educational institutions (Linfield College and Chemeketa Community College) • Location advantages: • Good location in proximity to major metro area • High quality soils in surrounding areas, climate suited for agriculture • Natural environment assets nearby, including Yamhill River, access to the ocean and mountains • Inexpensive power and water, with sustainable sources • Major infrastructure assets: major highways, freight rail, airport • Various parks and recreational assets • Positive business climate perceptions and a sense of civic leadership 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Relatively low educational attainment • A limited labor pool for local companies and those looking to relocate • Difficult access to and from I-5 and no near near-term possibility of a more direct connection • End-of -the-line location for wine country visitors coming from the Portland area • Lack of housing options • Low levels of professional and office office-using employment • Comparatively high poverty rates and low median household income
<p>Opportunities</p> <ul style="list-style-type: none"> • Proximity to Portland allows McMinnville to capitalize on urban infrastructure and amenities • Local airport has comparative advantages over other regional airports • Highway 99 bypass : future completion will improve access to McMinnville • A stronger framework for regional collaboration , improved opportunity in surrounding communities • Opportunity sites for new downtown development • New housing development – higher density , diversity of types, live live-work units • Improved connections to the University of Oregon and Oregon State University • Stronger branding and improved gateways into McMinnville • Innovation in agriculture and food systems • Wine -oriented makerspace • Food hub • \$6M gift to Linfield College’s wine program • Expanded culinary and craft beverage retail offerings 	<p>Threats</p> <ul style="list-style-type: none"> • Limited land availability for residential, commercial and industrial development • Regulatory challenges associated with UGB expansion • Worsening housing affordability • Brain drain due to local graduates leaving for other job markets • Absorption of projected growth without detrimental impacts to character, congestion, affordability • Future oversaturation of wine/tourism and increasing concentration of low-wage service industry jobs • Need to find a sustainable solution to homelessness • Future impacts of climate change on agriculture and related industries, including tourism

Target Industries

The characteristics of McMinnville will affect the types of businesses most likely to locate in the city. McMinnville's attributes that may attract firms are: McMinnville's access to land and resources; recreational opportunities; and quality of life.

2013 Updated Cluster Targets

The 2013 EOA recommended a short list of cluster target industries, described as:

- **Advanced Manufacturing.** Corresponds to an industry cluster pivotal to the Oregon Business Plan and Business Oregon (the Business Development Department). In McMinnville, this cluster is exemplified by major McMinnville employers including Cascade Steel, Meggitt Polymers and Composites, NW Unmanned Aerial Systems, Betty Lou's, Inc., and Freelin-Wade Co. Also included are agricultural producers ranging from employers in the emerging breweries to small boutique wineries as in the Granary district which also serve to complement the Yamhill County Agri-Business Economic and Community Development Plan.
- **Healthcare/Traded Sector Services.** Aimed to facilitate continued competitiveness and future expansion of non-manufacturing businesses that serve area residents plus customers located beyond the immediate McMinnville/Yamhill County community. Willamette Valley Medical Center and associated health care facilities can be expected to continue to experience employment growth in the years ahead. Examples of traded sector service activities are diverse, ranging from Linfield College to Evergreen International Airlines to Oregon Mutual Insurance. Also included is a significant component of small firms as the export-focused portion of McMinnville's fast growing and entrepreneurial service business sector such as Precision Analytical, Hurst Berry Farms Corporate Headquarters, and NW Rapid Manufacturing.

MAC-Town 2032 Economic Development Strategic Plan Target Sectors

Furthermore, Goals 4-8 of the *MAC-Town 2032 Economic Development Strategic Plan* outline the "target sector goals and strategies," as well as potential tasks and projects, as follows:

- **4. Sustain and Innovate within Traditional Industry and Advanced Manufacturing**
 - 4.1 Ensure workforce availability in trades and other mid-skill positions.
 - Encourage expansion and allocate resources for middle, high school, and community and technical college programs that encourage career exploration and skills development in trades and mid-skill occupations
 - Convene a panel of business leaders from traditional industry and advanced manufacturing employers in McMinnville to pioneer a collaborative approach to expanding apprenticeships and volunteering employee time to teach in-demand skills to individuals evaluating trade-based careers.

- 4.2 Connect traditional industry and advanced manufacturing to innovation resources for sustainable growth.
 - Highlight industrial innovation in McMinnville through periodic events, posts and other marketing, connecting innovators through storytelling and innovation partnerships.
 - Plan and participate in an industrial innovation working group or recurring social event to facilitate idea sharing and cross-pollination among business leaders.
 - Connect business leaders with regional innovation resources through Business Oregon and other innovation-oriented organizations.
 - Consider an international sister city program to share innovative practices.
- 4.3 Expand and market land availability for industrial activities.
 - Promote and market the McMinnville Industrial Park as a target area for advanced manufacturing investment within Yamhill County.
 - Coordinate with McMinnville Industrial Promotion to ensure leadership succession and continued engagement.
- **5. Foster Opportunity in Technology and Entrepreneurship**
 - 5.1 Become a place where small and medium technology firms can relocate and grow.
 - Foster physical connections to existing tech and entrepreneurship hubs through low-cost air services.
 - Market McMinnville as a destination for young and aspiring employees to find opportunity in business, entrepreneurship, computer and software engineering and other programs in Oregon's post-secondary institutions.
 - Survey local "tech" employers to identify current regulatory shortcomings or infrastructural needs for business relocation and expansion.
 - Promote the concept of McMinnville's "tech terroir" to emphasize McMinnville's potential assets to entrepreneurs, business owners and others involved in tech-oriented occupations.
 - Explore opportunities to improve connections to and otherwise better leverage McMinnville's dark fiber ring for business use.
 - Hire an innovation officer and/or complete a comprehensive strategy around smart cities and innovation in urban sustainability.
 - Create an "Invest in the Future" grant program that is targeted towards private investment and business development with living wage job outcomes.

- 5.2 Provide opportunities for co-working, teleworking, and other arrangements enabled by telecommunications technology.
 - Collaborate to develop a coworking space to foster entrepreneurship, innovation and to enable convenient telecommuting to regional employers in Portland or elsewhere. Explore unique partnership opportunities for cooperative or pop-up telecommuting spaces.
- 5.3 Incubate new businesses and start-ups.
 - Maintain a list of funding sources for start-up and expansion grants for locally-owned businesses.
 - Coordinate with partners to improve access to funding and resources available through local foundations, non-profits and other funders in McMinnville to empower local capacity-building efforts.
 - Study the feasibility of aggregators or cooperatives to efficiently distribute locally-made products from McMinnville businesses to larger metropolitan markets.
- 5.4 Create new talent pipelines for tech-related occupations.
 - Connect business leaders with interested local educators to develop extracurricular activities and to improve current curricula and align education and training with emerging employer needs.
 - Cultivate relationships with post-secondary institutions to ensure awareness of job opportunities in McMinnville, and ensure that McMinnville job opportunities are represented on school job boards, in job fairs, and other promotional events.
- **6. Be a Leader in Hospitality and Place-Based Tourism**
 - 6.1 Make downtown the best it can be.
 - Evaluate current zoning, historical districts and designations, and existing land use patterns, including underutilized parcels, to ensure that key downtown parcels offer the highest and best use for their location.
 - Communicate with County officials to explore the potential for a purpose-built County facility, outside of downtown, that includes a courthouse, commissioners offices, and clerks office.
 - Continue to evaluate new downtown events to diversify downtown events and activities and publicize emerging retailers or other non-retail organizations.
 - Evaluate the feasibility of improving or expanding the provision of public restrooms in the downtown area.
 - 6.2 Become the preferred destination for wine-related tourism.

- Collaborate to expand marketing of McMinnville and Yamhill Valley products and to improve national and international recognition of local wine.
 - Connect hoteliers and other hospitality professionals in Oregon and elsewhere to local opportunities for high-quality additions to McMinnville’s current hospitality offerings.
 - Collaborate with Travel Oregon to host a tourism workshop for McMinnville business owners to establish and leverage competitive advantages of over similar regional offerings.
 - Leverage Linfield’s wine studies program to identify opportunities to increase visitation to the Willamette Valley region and to the viticultural areas immediately surrounding McMinnville
 - 6.3 Diversify tourism destinations beyond wine.
 - Create branded itineraries for a range of activities and distribute online and in hard copy throughout McMinnville and at local and regional airports to offer pre-planned adventures for visitors.
 - Optimize social media performance by continuing and expanding the use of hash tags, branded icons, slogans, and other techniques to highlight and encourage sharing of McMinnville-based experiences.
 - Conduct a feasibility study to identify the potential costs and economic and fiscal impacts of building an indoor sports complex for local recreation and regional event use.
 - Engage the Wings and Waves water park to identify and pursue opportunities for growth and expansion.
 - Become a national destination for bicycle tourism and other recreational and leisure activities.
 - 6.4 Market and promote McMinnville.
 - Develop and maintain robust relationships with Travel Oregon, and seek promotion opportunities accordingly.
 - Document and track the economic impact of tourism and outdoor recreation to Yamhill Valley communities.
 - Work with visit McMinnville and local hoteliers to identify gaps in available conference space and to establish a plan to expand McMinnville’s offerings for small and large conferences.
- **7. Align and Cultivate Opportunities in Craft Beverages and Food Systems**
 - 7.1 Maintain prominence in wine while looking for opportunities to innovate within supply chains, viticulture and production.

- Convene a technical assistance panel to identify new opportunities in urban wine-making and distribution and to establish a framework for collaboration and innovation in wine-making that best leverages public and private resources and identifies critical public/private partnerships.
 - Expand programming at IPNC to include a technical component for knowledge sharing between wine-makers and other professionals in viticulture and oenology.
 - Encourage collaborative research at Linfield and Chemeketa CC and facilitate connections between these schools and other viticulture programs nationally.
 - Proactively recruit beverage-makers that complement existing wineries and breweries, such as cideries and distilleries.
- 7.2 Locate higher job-density food and beverage activities within McMinnville.
- Ensure the sufficiency of regulations in applicable zones to accommodate urban wine-making and other non-retail aspects of the wine industry, including transportation and distribution.
 - Encourage further clustering of wine-oriented business in the Granary/Alpine District.
 - Contact wineries throughout the region to identify growth-oriented operations needing new or larger space, and target marketing and recruitment efforts accordingly.
 - Recruit food processing and production companies that offer synergies with wineries, such as charcuterie and cheese companies.
 - Coordinate with educational institutions to anticipate needs and ensure that McMinnville remains a hub for wine education while expanding culinary education and training locally
 - Hire an Agriculture Coordinator or Resource Officer to connect producers with resources and coordinate efforts to innovate within wine and agriculture.
 - Convene a group of wine-makers and entrepreneurs to evaluate the feasibility of a wine maker-space or similarly collaborative wine-making space for small producers, experimental products, or research.
 - Conduct a feasibility study and potentially complete a business plan for an integrated food hub and permanent, year-round farmer's market.
 - In partnership with other Oregon cities and counties, commission a study of value-added industry successes and best practices related to agriculture in western U.S. and Canadian communities.

- Liaise with researchers at OSU’s Small Farms Program and other similar agricultural programs throughout the state and the region.
 - Invite educators in the region to conduct research and teaching based in the Yamhill Valley, including possible distance learning and online college course options.
 - Explore opportunities for expanded agricultural production using hydroponics, aquaponics and other similar cultivation methods
- 7.4 Open new markets for local agricultural products.
 - Establish a branding and marketing program for local agricultural products, such as “Yamhill County Grown” or similar.
 - Develop and market a local Farm-to-Table program by connecting Yamhill Valley farmers with local restaurants.
 - Explore the potential for a cooperative distribution model to move McMinnville’s agricultural products to restaurants in the Portland metro.
- 7.5 Encourage a holistic approach to local food culture, improving connections to the local producers and cultivating a community of exceptional restaurants and culinary establishments.
 - Create a forum for local restaurateurs to connect with local agricultural producers and improve culinary offerings.
 - Work with stakeholders to establish a local demonstration or innovation kitchen that can be rented to test new recipes, host small events, or otherwise incubate local culinary endeavors.
 - Publicize local food offerings across all price levels through a branded guide to local cuisine, and distribute at and regional hotels, wineries, airports and other places frequented by travelers.
 - Partner on development of a “Farm-for-a-Day” agri-tourism program connecting local farming operations to paying guests.
 - Evaluate alignment of current food cart regulations with community goals.
- 7.6 Preserve natural assets while ensuring long-term stability in agricultural production.
 - Espouse an approach to environmental stewardship and encourage participation and support by local farmers for initiatives in keeping with this approach.
 - Establish and facilitate a business leadership group to identify solutions to sustainability challenges.

- Establish local resiliency infrastructure and training through programs like FEMA’s Community Emergency Response Teams (CERT) or other community-based models
- **8. Proactively Assist Growth in Education, Medicine and Other Sciences**
 - 8.1 Leverage institutional land assets and support planning for institutional growth and clustering.
 - Ensure that the Willamette Valley Medical Center can accommodate future growth through a master plan that includes supportive zoning, targeted capital improvements and other tools.
 - Use regulatory tools and constructive dialogue with businesses to encourage clustering of medical-professional uses near the Willamette Valley Medical Center and to create a regional anchor for health care.
 - Engage McMinnville’s large institutions in a dialogue about proactive planning for large and underutilized land assets.
 - Assess the desirability and potential feasibility of the creation of a “university district” or similar near one or more of McMinnville’s college campuses.
 - 8.2 Assist in recruitment and training to fill specific workforce needs.
 - Identify and fill gaps in education and training opportunities at local educational institutions for in-demand skills in “Eds and Meds” occupations.
 - Connect employers in education and health care to national skilled workforce pools through branding, recruitment, relocation incentives and other tools.
 - Explore public-private and other partnerships to improve amenities for students and employees, potentially including an expanded supply of student housing or housing appropriate for students on or near Linfield and Chemeketa campuses, and improved transportation to campuses and other institutions.
 - 8.3 Support the expansion of programmatic offerings at local institutions.
 - Work with Linfield College and Chemeketa CC to assess demand for education and training in health care and related services and to expand programming accordingly.
 - Engage Chemeketa CC leadership in a dialogue to explore the creation an on-site culinary and hospitality program.
 - Collaborate with leadership at the school district and at Linfield and Chemeketa to better engage Oregon’s four-year public universities.

- Connect local students with opportunities to work with OSU Extension, in labs or to participate in other UO and OSU programs prior to high school graduation.
- Explore the creation of an aviation education program that leverages McMinnville's existing infrastructure and workforce assets.
- Identify opportunities to bring programming offered at other Chemeketa Community College campuses to McMinnville, particular when serving established local industries.
- Foster R&D opportunities for existing and emerging industries.
- 8.4 Improve and expand connections between key institutions and the City of McMinnville.
 - Create safer and more intuitive physical connections to McMinnville from Linfield and Chemeketa, including better sidewalks, lighting and public transportation, particularly along Davis Street.
 - Proactively engage students in community events to improve dialogue between permanent residents and college attendees.

5. Forecast Employment and Land Needs

Goal 9 requires cities to prepare an estimate of the amount of commercial and industrial land that will be needed over a 20-year planning period. The estimate of employment land need and site characteristics for McMinnville is based on expected employment growth and the types of businesses that are likely to locate in McMinnville over the 5-, 10-, 20-, and 46-year periods. This chapter presents the buildable land inventory, analysis of target industries that build from recent economic trends, an employment forecast and associated land needs, and other land needs that aren't accounted for by the employment forecast.

EOA Update Process

The updated employment forecast and land needs estimates started with discussion of the assumptions used in the 2013 EOA. The project team conducted a detailed review of the 2013 assumptions and presented the assumptions, along with updated and new data to the Project Advisory Committee (PAC) for review and discussion during the September and October PAC meetings. The information generated considerable discussion at the PAC and ultimately resulted in PAC recommendations regarding the assumptions. The employment forecasts and land need estimates presented in this chapter reflect the PAC recommendations.

Buildable Lands Inventory

The buildable lands inventory is intended to identify commercial and industrial lands that are available for development for employment uses within the McMinnville UGB. The inventory is sometimes characterized as *supply* of land to accommodate anticipated employment growth. Population and employment growth drive *demand* for land. The amount of land needed depends on the type of development and other factors.

This chapter presents results of the commercial and industrial buildable lands inventory for the McMinnville UGB. The results are based on analyses of Yamhill County GIS property data and State of Oregon GIS employment data by ECONorthwest and reviewed by City staff. The remainder of this chapter summarizes key findings of the draft buildable lands inventory.

The general steps in the buildable lands inventory are:

1. Generate UGB "land base"
2. Classify lands by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

A key step in the buildable lands analysis is to classify each tax lot into a set of mutually exclusive categories based on development status. For the purpose of this study, all commercial

and industrial tax lots in the UGB are classified into one of the following categories and based on a tax lot's status as of January 2019:

- *Vacant land.* Vacant land is defined as tax lots either (a) Equal to or larger than on half-acre not currently containing permanent buildings or improvements; or (b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements. This is consistent with OAR 660-009-005(14).
- *Partially vacant land.* Partially vacant land is defined as tax lots between one and five acres occupied by a use that could still be further developed based on the zoning. The final determination of partially vacant land was based on a visual assessment of aerial imagery and City staff verification.
- *Developed land.* OAR 660-009-0005(1) defines developed land as “Non-vacant land that is likely to be redeveloped during the planning period.” Lands not classified as vacant, partially-vacant, or public or exempt are considered developed.
- *Public or exempt land.* Lands in public or semi-public ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches, institutions, and other semi-public organizations, and properties with conservation easements. Public lands were identified using the Yamhill County Assessment property tax exemption codes and City staff verification.

The next section provides a summary of the results of the commercial and industrial buildable lands inventory for the McMinnville UGB in both tabular and map formats. Appendix A presents the detailed methodology for developing the inventory.

Buildable Lands Inventory Results

Exhibit 35 summarizes all land included in the employment land base (e.g., lands with plan designations that allow employment) in the McMinnville UGB. ECONorthwest used this land base in the buildable lands inventory for McMinnville. The land base includes traditional employment designations within the McMinnville UGB, which includes about 1,388 acres in 958 tax lots in total.⁹⁶

Exhibit 35. Tax lots and total acres in employment land, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Zone/Plan Designation	Number of taxlots	Percent	Total taxlot acreage	Percent (total)
Commercial	708	74%	580	42%
C-1 Neighborhood Business	1	0%	1	0%
C-2 Travel Commercial	3	0%	13	1%
C-3 General Commercial	641	67%	487	35%
O-R Office Residential	58	6%	12	1%
Commercial Plan Des.	4	0%	54	4%
EF-80 (County Zone)	1	0%	13	1%
Industrial	250	26%	809	58%
M-1 Light Industrial	43	4%	74	5%
M-2 General Industrial	199	21%	594	43%
M-L Limited Light Industrial	2	0%	115	8%
Industrial Plan Des.	6	1%	25	2%
Total	958	100%	1,388	100%

Development Status

Exhibit 36 shows commercial and industrial land in McMinnville by development status. Of the 1,388 total acres, about 861 acres (62%) are in classifications with no development capacity (or, “committed acres”). Of the remaining 527 acres, 111 acres (8%) are constrained and 416 acres (30%) are buildable land with development capacity. Appendix A provides more detail about the constraints associated with employment land, as recommended by the PAC.

Exhibit 36. Employment acres by classification and plan designation, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

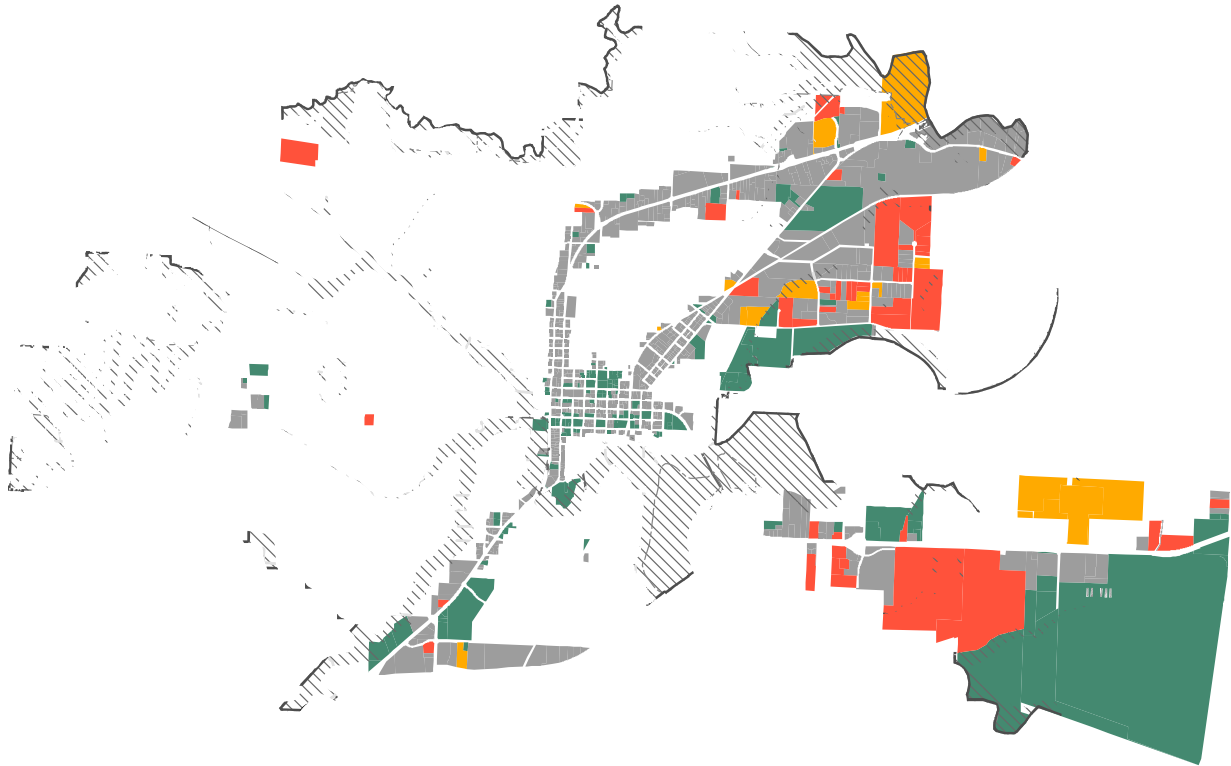
⁹⁶ Note: the 2013 EOA reported a total acreage that included land with a public or semi-public (i.e., institutional) use. Since the 2020 update accounted for public and semi-public land need separately, the resulting total acreage of employment land is lower.

Zone/Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
Commercial	580	432	54	94
C-1 Neighborhood Business	1	1	0	-
C-2 Travel Commercial	13	0	-	12
C-3 General Commercial	487	418	6	63
O-R Office Residential	12	11	0	-
Commercial Plan Des.	54	1	48	5
EF-80 (County Zone)	13	-	-	13
Industrial	809	429	57	323
M-1 Light Industrial	74	55	5	14
M-2 General Industrial	594	347	26	221
M-L Limited Light Industrial	115	25	3	88
Industrial Plan Des.	25	2	22	-
Total	1,388	861	111	416

Draft

Exhibit 37. Employment land by classification with development constraints, McMinnville UGB, 2019

Status



Vacant Buildable Land

The next step in the commercial and industrial buildable land inventory was to net out portions of vacant tax lots that are unsuitable for development. Areas unsuitable for development fall into three categories: (1) developed areas of partially vacant tax lots, (2) areas with service constraints, (3) areas with physical constraints (areas with wetlands, floodways, floodplain, and steep slopes as summarized in Appendix A).

Exhibit 38 shows unconstrained buildable acres for vacant and partially vacant land by zone (or plan designation). The results show that McMinnville has about 416 unconstrained buildable acres in commercial and industrial designations. Of this, 22% (94 acres) is in commercial designations, and 78% (323 acres) is in industrial designations.

Also, in McMinnville, it is common that development applications include approvals for “Planned Developments” which may modify the underlying zoning regulations, and may include an associated master plan for a property. Permitted uses in zoning districts may be amended to include other uses on a portion of the property, or certain uses otherwise permitted in the underlying zoning may be precluded by the Planned Development overlay regulations. For example, while the Evergreen property is zoned C-3 General Commercial, it is subject to a Planned Development overlay that restricts uses to certain tourism-related uses.

Exhibit 38. Employment land with unconstrained development capacity (vacant and partially vacant) by plan designation, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Zone/Plan Designation	Total buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant
Commercial	94	60	33
C-1 Neighborhood Business	-	-	-
C-2 Travel Commercial	12	12	-
C-3 General Commercial	63	35	28
O-R Office Residential	-	-	-
Commercial Plan Des.	5	-	5
EF-80 (County Zone)	13	13	-
Industrial	323	305	17
M-1 Light Industrial	14	12	2
M-2 General Industrial	221	206	15
M-L Limited Light Industrial	88	88	-
Industrial Plan Des.	-	-	-
Total	416	366	50

Exhibit 39 shows the size of lots by plan designations for buildable employment land. McMinnville has 18 lots between 0.5 and 1 acres (12.7 acres of land), 34 lots between 1 and 5 acres in size (72.4 acres of land), 10 lots between 5 and 10 acres in size (64.6 acres of land), 3 lots between 10 and 20 acres in size (39.9 acres), and 4 lots over 20 acres in size (226.7 acres of land).

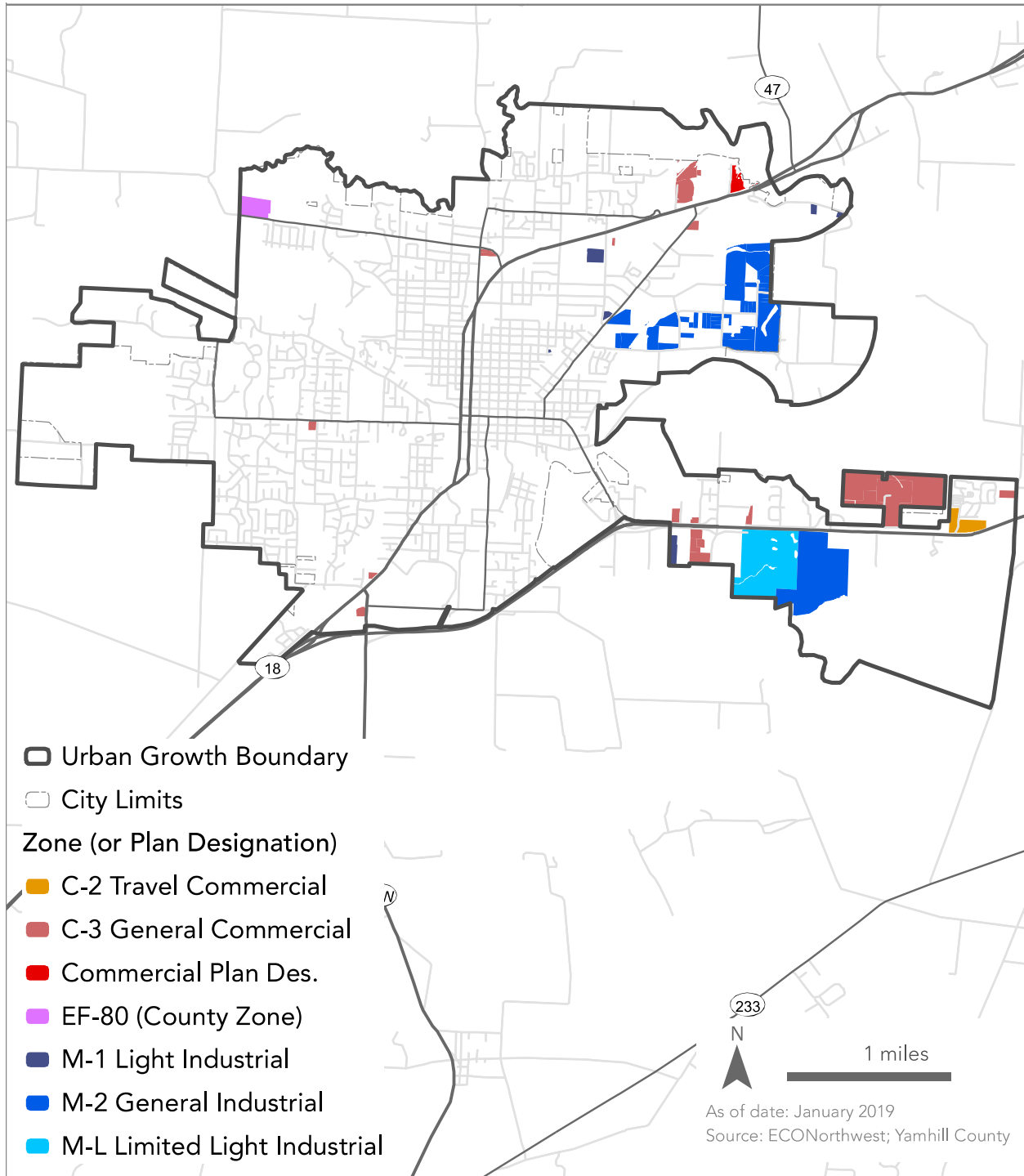
Exhibit 39. Lot size by plan designation, buildable acres, McMinnville UGB, 2019

	Buildable acres in taxlots								Total
	<0.50 acre	0.50-0.99 acres	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00- 19.99 acres	20.00- 49.99 acres	50.00+ acres	
Buildable acres on partially vacant tax lots									
<i>Commercial</i>	0.4	0.8	1.5	4.5	13.8	12.1	-	-	33
C-3 General Commercial	0.4	0.8	1.5	4.5	8.8	12.1	-	-	28
Commercial Plan Des.	-	-	-	-	5.0	-	-	-	5
<i>Industrial</i>	0.5	3.5	5.0	8.1	-	-	-	-	17
M-1 Light Industrial	0.1	-	2.3	-	-	-	-	-	2
M-2 General Industrial	0.4	3.5	2.7	8.1	-	-	-	-	15
Buildable acres on vacant tax lots									
<i>Commercial</i>	-	2.0	7.5	24.6	12.9	13.5	-	-	60
C-2 Travel Commercial	-	-	-	5.0	7.2	-	-	-	12
C-3 General Commercial	-	2.0	7.5	19.7	5.6	-	-	-	35
EF-80 (County Zone)	-	-	-	-	-	13.5	-	-	13
<i>Industrial</i>	-	5.4	15.8	5.3	37.9	14.4	49.5	177.1	305
M-1 Light Industrial	-	1.0	-	-	10.9	-	-	-	12
M-2 General Industrial	-	4.4	15.8	5.3	27.0	14.4	49.5	89.6	206
M-L Limited Light Industrial	-	-	-	-	-	-	-	87.5	88
Acreage subtotal	0.9	11.8	29.8	42.6	64.6	39.9	49.5	177.1	416
Number of partially vacant taxlots with buildable acreage									
<i>Commercial</i>	1	1	1	1	2	1	-	-	7
C-3 General Commercial	1	1	1	1	1	1	-	-	6
Commercial Plan Des.	-	-	-	-	1	-	-	-	1
<i>Industrial</i>	2	5	4	2	-	-	-	-	13
M-1 Light Industrial	1	-	2	-	-	-	-	-	3
M-2 General Industrial	1	5	2	2	-	-	-	-	10
Number of vacant taxlots with buildable acreage									
<i>Commercial</i>	-	3	5	8	2	1	-	-	19
C-2 Travel Commercial	-	-	-	1	1	-	-	-	2
C-3 General Commercial	-	3	5	7	1	-	-	-	16
EF-80 (County Zone)	-	-	-	-	-	1	-	-	1
<i>Industrial</i>	-	6	11	2	6	1	2	2	30
M-1 Light Industrial	-	1	-	-	2	-	-	-	3
M-2 General Industrial	-	5	11	2	4	1	2	1	26
M-L Limited Light Industrial	-	-	-	-	-	-	-	1	1
Lot subtotal	3	15	21	13	10	3	2	2	69

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Buildable Lands Inventory

Vacant and Partially Vacant Commercial and Industrial Land



Forecast of Employment Growth and Commercial and Industrial Land Demand

Demand for industrial and commercial land will be driven by the expansion and relocation of existing businesses and by the growth of new businesses in McMinnville. The employment projections in this section build off of McMinnville's existing employment base, assuming overall future growth is similar to Yamhill County's long-term historical employment growth rates.

The employment forecasts do not take into account a major change in employment that could result from the location (or relocation) of one or more large employers in the community during the planning period that would account for a substantial portion of the overall forecast. Such a major change in the community's employment would exceed the growth anticipated by the city's employment forecast and its implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are difficult to include in a study of this nature. The implications, however, are relatively predictable: more demand for land (of all types) and public services.

The 2013 EOA defined the process of projecting demand for industrial and commercial land as a series of 10 steps. The table below outlines these steps and identifies the recommendations, if applicable, decided by the PAC during meetings held between July and November of 2019. Generally, the PAC started with a discussion of the assumptions used in the 2013 EOA, and reviewed alternatives for the 2020 update.

Exhibit 41. Steps to project demand for commercial and industrial land in McMinnville

Step	Purpose	Options	Recommended Option
Step 1. Set Forecast Time Period	Establish the 20-year planning period; select a base year	2021-2041 with adjustments to account for 2019-21	The state requires a 20-year planning period; 2021-41 is used for consistency with the Housing Needs Analysis
Step 2. Population Forecast	The population forecast does not serve a direct purpose other than being the basis for one of the safe harbor employment forecast methods.	Use the required PSU forecast.	State policy allows no flexibility in this process.
Step 3. Evaluate UGB Employment Trend	Inform allocations of employment to land use types.	This is an analytical step and does not require assumptions.	
Step 4. Evaluate and Select Job Forecast	Develop a 20- and 46-year employment forecast.	Option 1 (low-growth, 1.13%): OED safe harbor method Option 2 (medium-growth, 1.36%): PSU safe harbor population forecast Option 3 (high-growth, 1.70%): Non-safe harbor method used as the baseline in the 2013 EOA.	Option 2
Step 5. Allocate Job Growth by Land Use Type Scenarios	Allocate jobs to land using land use types.	Option 1: 2013 EOA Method Option 2: Four land use types (service commercial, retail, industrial, govt) Option 3: Five land use types (the four above plus a tourism category).	Option 3
Step 6. Allocate Job Growth by Land Development Status	This step makes deductions for employment that will not require vacant land.	Option 1: 17% (per 2013 EOA) Option 2: Alternative assumption justified by PAC.	5% for all land use types
Step 7. Apply Job Density Factors	Analyze existing job densities to inform density factors (expressed in employees per acre - EPA)	Option 1: use factors from the 2013 EOA Option 2: use modified factors based on analysis	11 employees per acre for industrial land use type 23 employees per acre for commercial land use types
Step 8. Estimate 20-Year Employment Land Demand	Apply all of the assumptions to the land demand model to estimate 20- and 46- year land demand.	No options - this is an analytical step	n/a
Step 9. Estimate Additional Land Need Not Determined in Forecast	This step accounts for other types of employment land need including exogenous other needed sites and retail leakage.	Option 1: Do not assume additional need Option 2: Provide findings and analysis that supports additional land needs.	Option 2.
Step 10. Compare Land Demand to Supply	Compare land need to the supply as documented in the buildable land inventory. Conduct one further step of assessing land suitability.	No options - this is an analytical step	n/a
Step 11. Evaluate Policy Options and Objectives	This update will not include a top to bottom review of policy options and objectives - those were assessed in the 2013 EOA and in the 2019 EDSP. Some modifications may be required to reflect changing conditions.		

Employment Base for Projection

This section addresses Step 1: Set Forecast Time Period, Step 2: Population Forecast, and Step 3: Evaluate UGB Employment Trend.

The purpose of the employment projection is to model future employment land need for general employment growth. The forecast of employment growth in McMinnville starts with a base of employment growth on which to build the forecast. Exhibit 42 shows ECONorthwest's estimate of total employment in McMinnville in 2017.

To develop the figures, ECONorthwest started with estimated covered employment in the McMinnville UGB from confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Based on this information, McMinnville had about 14,964 covered employees in 2017.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that *covered* employment reported by the Oregon Employment Department for Yamhill County is only about 76% of *total* employment reported by the U.S. Department of Commerce.⁹⁷ We evaluated this ratio for each industrial sector for Yamhill County and used the resulting ratios to determine the number of non-covered employees. This allowed us to determine the total employment in McMinnville. Exhibit 42 shows McMinnville had an estimated 20,990 *total* employees within its UGB in 2017.

The PAC approved the use of the covered to total employment ratios shown in Exhibit 42.

⁹⁷ **Covered** employment includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as "1099 employees"), or some railroad workers. Covered employment data is from the Oregon Employment Department.

Total employment includes all workers based on data from the U.S. Department of Commerce. Total employment includes all covered employees, plus sole proprietors and other non-covered workers.

Exhibit 42. Estimated total employment by sector, McMinnville UGB, 2017

Sector	Generalized Land Use Type	Covered Employment	Estimated Total Employment	Covered % of Total
Agriculture, Forestry, and Mining	Industrial	356	356	100%
Construction	Industrial	585	852	69%
Manufacturing	Industrial	2,277	2,549	89%
Wholesale Trade	Industrial	127	180	71%
Retail Trade	Retail Commercial	2,170	2,842	76%
Transportation and Warehousing and Utilities	Industrial	140	250	56%
Information	Office & Commercial Services	127	211	60%
Finance and Insurance	Office & Commercial Services	459	912	50%
Real Estate and Rental and Leasing	Office & Commercial Services	113	867	13%
Professional and Technical Services	Office & Commercial Services	367	998	37%
Management of Companies	Office & Commercial Services	117	161	73%
Admin. and Support/Waste Mgmt/Remediation Serv.	Office & Commercial Services	584	1,044	56%
Health Care and Social Assistance; Private Education Serv.	Office & Commercial Services	3,159	4,457	71%
Arts, Entertainment, and Recreation	Tourism Services	168	458	37%
Accommodation and Food Services	Tourism Services	1,503	1,666	90%
Other Services	Office & Commercial Services	630	1,105	57%
Government	Government	2,082	2,082	100%
Total Non-Farm Employment		14,964	20,990	76%

Source: 2017 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.

Forecast growth rates

This section addresses Step 4: Evaluate and Select Job Forecast.

The employment forecast covers the 2021 to 2067 period, with increments of 5, 10, 20, and 46-years. This forecast requires an estimate of total employment for McMinnville in 2021. While there is no required method for employment forecasting, OAR 660-024-0040(9) sets out some optional “safe harbors”⁹⁸ that allow a city to determine employment land need. The PAC evaluated three options for the forecast, including use of two safe harbors from OAR 660-024.

- **Low-growth scenario (1.13%).** The low-growth option uses the safe harbor that allows a city to base their employment forecast on regional employment projections from the Oregon Employment Department (OED).⁹⁹ The regional employment projection for the

⁹⁸ A safe harbor is an assumption that a city can use in a housing needs analysis that the State has said will satisfy the requirements of Goal 14. OAR 660-024 defines a safe harbor as, “... an optional course of action that a local government may use to satisfy a requirement of Goal 14. Use of a safe harbor prescribed in this division will satisfy the requirement for which it is prescribed. A safe harbor is not the only way or necessarily the preferred way to comply with a requirement and it is not intended to interpret the requirement for any purpose other than applying a safe harbor within this division.”

⁹⁹ OAR 660-024-0040(9) states: “The following safe harbors may be applied by a local government to determine its employment needs for purposes of a UGB amendment under this rule, Goal 9, OAR chapter 660, division 9, Goal 14 and, if applicable, ORS 197.296.

(a) A local government may estimate that the current number of jobs in the urban area will grow during the 20-year planning period at a rate equal to either:

(A) The county or regional job growth rate provided in the most recent forecast published by the Oregon Employment Department; or

Mid-Valley Area (Linn, Marion, Polk, and Yamhill Counties) for the 2017 to 2027 period shows that employment will grow at an average annual growth rate of 1.13%.

- **Medium-growth scenario (1.36%).** The medium-growth option is another safe harbor, based on the rate of growth from the current population projections from Portland State University. The coordinated population forecast for the McMinnville UGB between 2021 and 2041 shows that population will grow at an average annual growth rate of 1.36%, and long-term average annual growth rate between 2021 and 2067 of 1.19%.
- **High-growth scenario (1.70%).** The high-growth option aligns with the moderate (referred to as “baseline”) forecast rate used in the 2013 EOA. The 2013 EOA evaluated low, moderate, and high growth alternative scenarios. At the time the 2013 EOA was completed, the OED forecast for the Mid-Valley region was the “low-growth” scenario at 1.5%, and the “high-growth” scenario of 1.9% was based on the OED forecast for the Portland metro area. This option does not conform to the safe harbors in OAR 660-024-0040(9) and would require substantial evidence as a factual basis for choosing a non-safe harbor growth rate. Examples of substantial evidence to justify a non-safe harbor growth rate include adopted and relevant economic development policies or site needs considerations.

Exhibit 43 shows employment growth in McMinnville between 2021 and 2041, as well as 2021 and 2067, based on the average annual growth rate of each forecast scenario. The estimated number of employees for the beginning of the planning period is extrapolated from the estimate of total employment in 2017 from Exhibit 42 (20,990 employees), using the appropriate forecast rate for each scenario.

For the 2021 to 2041 period, the low-growth scenario would result in an increase of 5,544 employees; an increase of 6,885 employees in the medium-growth scenario; and an increase of 9,003 employees in the high-growth scenario.

(B) The population growth rate for the urban area in the appropriate 20-year coordinated population forecast determined under rules in OAR chapter 660, division 32.

Exhibit 43. Employment growth scenarios, total employment, McMinnville UGB, 2021–2067

Year	Low-growth (based on OED forecast)	Medium-growth (based on PSU population forecast)	High-growth (based on 2013 EOA moderate forecast)
2021	21,957	22,157	22,454
2026	23,228	23,708	24,429
2031	24,573	25,367	26,577
2041	27,501	29,042	31,457
2067	36,853	38,158	48,759
Change 2021 to 2041			
Employees	5,544	6,885	9,003
Percent	25%	31%	40%
AAGR	1.13%	1.36%	1.70%
Change 2021 to 2067			
Employees	14,896	16,001	26,305
Percent	68%	72%	117%
AAGR	1.13%	1.19%	1.70%

Source: ECONorthwest

The PAC recommended using the medium-growth option (1.36% AAGR) for the employment forecast for the 2021-2067 planning period. The results of the employment forecast presented in the EOA reflect this growth rate.

Allocation to land use types

This section addresses Step 5: Allocate Job Growth by Land Use Type Scenario

The next step in forecasting employment is to allocate future employment to broad categories of land use. Firms wanting to expand or locate in McMinnville will look for a variety of site characteristics, depending on the industry and specific circumstances. For example, small retail stores may look for an existing space in a shopping center in an area with high visibility for attracting customers, while a new food product manufacturer may need a mid-sized site of 5 to 10 acres in an area with direct access to a state highway.

At direction from the PAC, ECONorthwest grouped employment into five broad proposed categories of land use based on North American Industrial Classification System (NAICS): industrial, retail commercial, office and commercial services, tourism services, and government.¹⁰⁰ This approach differs from the 2013 EOA, which defined three land use types—commercial, industrial, and institutional. The primary difference in the proposed updated categories is a separation of different types of commercial land into retail, office, and tourism commercial. Some of these land use types might have different site needs considerations, and these land use types better align with the City’s economic development goals, such as a focus on tourism-related employment. This was based on identifying commercial sub-types associated with the target industries in the Economic Development Strategy, to assess whether land needs

¹⁰⁰ The generalized land use type categories are defined by the NAICS sectors listed in Exhibit 42.

might differ for these commercial sub-types. ECONW informed the PAC that the sub-types could ultimately be recombined at the end of the analysis if the differentiation didn't prove useful. Ultimately, the three commercial subtypes were recombined into a single commercial category, as the employment sectors didn't necessarily correlate to distinct land uses that would be differentiated through zoning. For example, the NAICS codes included in the tourism category included food and beverage, which are typically permitted in the same zones as retail commercial. Ultimately, the land uses almost exclusively related to destination tourism uses that weren't consistent with the [employment forecast and](#) employment density factors were instead addressed as [other needed sites and](#) that is addressed in more detail in the respective section in this chapter.

Exhibit 44 shows the expected share of employment by land-use type in 2021 and the forecast of employment growth by land-use type in 2041 in the McMinnville UGB, and Exhibit 45 shows employment growth for all growth increments. The PAC recommended the future share of land use types will align with both projections from the Oregon Employment Department (OED) for the Mid-Valley Area, as well as economic development goals and policies as stated in the *MAC-Town 2032 Economic Development Strategic Plan* and *Three Mile Lane Area Plan*.

OED projects that in the 2017 to 2027 period, the share of future employment in industrial sectors will increase; the share of retail commercial as well as government employment will decrease; and the share of office and commercial services and tourism services will increase.¹⁰¹ These trends closely align with McMinnville's future economic development goals, though the *MAC-Town 2032 Economic Development Strategic Plan* estimates growth in office employment, as well as an emphasis on tourism-related services, advanced manufacturing (i.e., industrial), and food and beverage manufacturing target industries.

The values highlighted in green in Exhibit 44 show the future share of total new employment for each land use type in 2041, based on the information summarized above. **The green highlighted percentages in the 2041 “% of Total” column are assumptions recommended by the PAC.**

Exhibit 44. Forecast of employment growth by land use type, McMinnville UGB, 2021–2041

Land Use Type	2021		2041		Change 2021 to 2041
	Employment	% of Total	Employment	% of Total	
Industrial	4,431	20%	6,099	21%	1,667
Retail Commercial	3,102	14%	3,485	12%	383
Office & Commercial Services	10,192	46%	13,650	47%	3,458
Tourism Services	2,216	10%	3,485	12%	1,269
Government	2,216	10%	2,323	8%	108
Total	22,157	100%	29,042	100%	6,885

Source: ECONorthwest

¹⁰¹ Oregon Employment Department Industry Employment Forecast 2017-2027, Mid-Valley Area (Linn, Marion, Polk, and Yamhill Counties). Published June 26, 2018.

Exhibit 45. Forecast of employment growth by land use type, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	New Employment Growth			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	417	834	1,667	3,582
Retail Commercial	96	192	383	1,477
Office & Commercial Services	864	1,729	3,458	7,742
Tourism Services	317	635	1,269	2,363
Government	27	54	108	837
Total	1,721	3,443	6,885	16,001

Source: ECONorthwest

Estimate of Demand for Commercial and Industrial Land

The next step in the employment forecast is to estimate the demand of commercial and industrial land.

The estimate of demand for commercial and industrial land included three components: (1) employment forecast and employment density assumptions, with deduction for employment that won't require vacant employment land, (2) recapture of existing retail leakage, and (3) [exogenous other needed sites](#) which are not accounted for in the [employment forecast and average](#) employment density factors; these are target industries and uses in the *MAC-Town 2032 Economic Development Strategic Plan*. In addition, employment for public/semi-public uses was backed out of the employment forecast and land needs were calculated separately.

The employment forecast includes all new employment in the McMinnville UGB. Some of this employment, however, will not be located on vacant commercial or industrial land. Other lands that will accommodate new employment growth include residential land and redevelopment sites. Another factor in estimating the demand for commercial and industrial land is consideration for employment density, or employees per acre. Appendix B provides additional background information developed for the PAC to make recommendations for new employment on vacant commercial and industrial land, as well as employment density. Government employment was also backed out of the forecast because government land need was addressed as part of the public/semi-public land need process.

The next section describes the approach for (1) estimating employment on vacant commercial and industrial land with considerations for employment on redevelopment sites, and (2) estimating employees per acre by land use type.¹⁰²

¹⁰² Note: the government land use type is excluded from the remaining employment forecast calculations, as we account for government employment in calculations for other land needs. Deductions for private education were also made in the office and commercial services category, based on employment reported (IPEDS data) for Linfield College of 360 employees. Adjustments for future employment at Linfield assumed the share of Linfield employment would remain the same.

Employment that does not require vacant commercial and industrial land

This section addresses Step 6: Allocate Job Growth by Land Development Status

Some employment growth in McMinnville will not require vacant (or partially vacant) employment land over the planning period. This includes redevelopment of areas with existing employment, where redevelopment increases the intensity of employment uses (i.e., more employees are accommodated on the same amount of land). The 2013 EOA assumed that 17% of employment for each land use type would not require vacant commercial or industrial land.¹⁰³ **Based on the information presented in Appendix B, the PAC determined that a reasonable assumption would be 5% refill/redevelopment for both commercial and industrial employment.**

Exhibit 46 shows the estimate of employment on vacant commercial and industrial land by land use type for each scenario, using the 5% assumption for employment that will occur through redevelopment, refill, or on non-employment sites. The table (reading left to right) starts with the number of new employment growth calculated over the planning period; then calculates the amount of employment that does not require vacant employment land based on 5% of the new employment growth; and results in the amount of new employment growth on vacant industrial and commercial land. From this point in the analysis forward, the commercial land use types (i.e., retail commercial, office and commercial services, and tourism services) were combined as the land needs for these land use types overlap.

Exhibit 46. Estimate of employment on vacant land by land use type, McMinnville UGB, 2021–2041

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	83	1,584
Commercial	4,998	249	4,749
Total	6,665	332	6,333

Source: ECONorthwest Note: As described above, government employment is calculated separately and is not included in Exhibits 45-48.

Exhibit 47. Estimate of employment on vacant land by land use type, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	Employment on Vacant Land			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	396	792	1,584	3,403
Commercial	1,187	2,373	4,749	10,756
Total	1,582	3,165	6,333	14,159

Source: ECONorthwest

¹⁰³ The 2013 EOA used a 17% assumption, based on a PAC recommendation. The 2001/03 EOA assumed 14-17%, depending on the land use type. This EOA updated used 5% based on empirical analysis that showed refill and redevelopment rates didn't achieve employment densities that would be associated with 17% refill/redevelopment on employment land.

Employment density

This section addresses Step 7: Apply Job Density Factors and Step 8: Estimate 20-Year Employment Land Demand.

This section shows the resulting demand for vacant (including partially vacant) land in McMinnville over the 20-year period, accounting for potential variations in employment density. The assumptions about employment density are based on the 2013 EOA, as stated in text excerpt below. Based on information provided in Appendix B, the PAC recommended using an employment density of 11 employees per acre for industrial employment and 23 employees per acre for commercial employment (i.e., retail commercial, office and commercial services, and tourism services). Further explanation of employment density and the conversion of net to gross acres is provided below.

- **Employment density.** Employees per acre is a measure of employment density based on the ratio of the number of employees per acre of employment land that is developed for employment uses. Employment densities factor in all employment on a site, whether full or part time or different shifts in a workday. Thus, employment at a given site may overrepresent the number of employees at a site at a specific time. For example, retail service locations often have many part-time employees who work different shifts. Despite the potential for overestimating the number of employees on site at a given time, the data do provide a reasonable estimate of total employment on a site and therefore total employees per acre, and this is reflected in the analysis of historic employment density, too.
- **Conversion from net-to-gross acres.** The data about employment density is in *net* acres, which does not include land for public right-of-way.¹⁰⁴ Future land need for employment should include land in tax lots needed for employment plus land needed for public right-of-way. One way to estimate the amount of land needed for employment, including public right-of-way, is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for public right-of-way.¹⁰⁵ A net-to-gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

Based on empirical evaluation of McMinnville’s existing net-to-gross ratios, ECONorthwest uses a net-to-gross conversion factor of 6% for industrial and 18% for commercial, retail, and tourism.

Using these assumptions, the forecasted growth of 6,333 new employees between 2021 and 2041 will result in the following demand for vacant (and partially vacant) employment land: 153

¹⁰⁴ The 2013 EOA does not describe a method for converting net to gross acres.

¹⁰⁵ OAR 660-024-0010(6) uses the following definition of net buildable acre. “Net Buildable Acre” consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

gross acres of industrial land and 252 gross acres of commercial land (Exhibit 48). Exhibit 49 shows the demand for vacant land to accommodate employment growth in the 5-, 10-, 20-, and 46-year planning periods.

Exhibit 48. Demand for vacant land to accommodate employment growth, McMinnville UGB, 2021–2041

Land Use Type	New Emp. on Vacant Land	Employees per Acre		Land Demand (Net Acres)	Land Demand (Gross Acres)
		(Net Acres)	(Net Acres)		
Industrial	1,584	11		144	153
Commercial	4,749	23		206	252
Total	6,333			351	405

Source: ECONorthwest

Exhibit 49. Demand for vacant land to accommodate forecasted employment growth, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	Land Demand (Gross Acres)			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	38	77	153	329
Commercial	63	126	252	570
Total	101	202	405	899

Source: ECONorthwest

Estimated Land Need 2019-2021

The buildable lands inventory (BLI) shows employment land status as of January 2019, while the forecast of need for employment land begins in 2021. We estimated land needed for employment between 2019 and 2021 using the same assumptions as the other planning periods. McMinnville employment in 2019¹⁰⁶ was about 21,566 employees, resulting in an increase of 591 employees between 2019 and 2021. About 496 of these 591 employees will require vacant commercial or industrial land. Using data on vacant unconstrained land from Exhibit 38, Exhibit 50 shows that McMinnville has supply of 323 gross acres of industrial land and 93 gross acres of commercial land. Between 2019 and 2021, the McMinnville UGB has a demand for 11 gross acres of industrial land and 20 gross acres of commercial land. This results in a surplus of 312 gross acres of industrial and 73 gross acres of commercial land as of 2021. These values are used as the land supply in the land sufficiency calculations starting in 2021.

¹⁰⁶ 2019 total employment was extrapolated from the 2017 Quarterly Census of Employment and Wages, using the methods described in the “Employment Base for Projection” section. We assumed the 20-year growth rate of 1.36%.

Exhibit 50. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2019-2021

Land Use Type	Land Supply		Land Sufficiency (Deficit)
	(Suitable Gross Acres)	Land Demand (Gross Acres)	
Industrial	323	11	312
Commercial	93	20	73

Source: ECONorthwest

Retail Leakage

In 2018, the city of McMinnville initiated development of a plan for the Three Mile Lane Area Plan (3MLAP). The project updates the 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The 3MLAP will integrate a wide range of land uses and a multi-modal transportation system that serves both local and state transportation needs and provides active connectivity within the plan area as well as to the City’s downtown core. Leland Consulting Group performed the market analysis for the project.

The project analyzed a market area that represents the area from which the most demand for residential, commercial, and industrial uses will originate, and where most of the competitive development is located. The market area (shown in Exhibit 1 and Exhibit 33) is roughly bounded by the Willamette River to the east, Tillamook State Forest to the west, and Polk County to the south—although the market does extend into Polk County, there are few residents or jobs located in this area—and the City of Yamhill to the north. The study includes a retail leakage analysis, with the express intent that the city would capture some of the retail spending that is occurring in the larger Salem, Portland, and I-5 corridor markets.¹⁰⁷

Leland characterizes retail leakage as follows:

“Retail sectors in which household spending is not fully captured are called “leakage” categories, while retail categories in which sales are higher than estimated household demand generated by existing residents are called “surplus” categories. A retail sales surplus indicates that a community pulls consumers and retail dollars in from outside the trade area, thereby serving as a regional market. Conversely, when local demand for a specific product is not being met within a trade area, consumers are going elsewhere to shop, creating retail leakage.”¹⁰⁸

The study reports overall demand for 529,000 square feet of retail space in the study area for a 10-year period (Table ES-3, pg 4). The study also shows a breakdown of the 10-year demand broken out by demand from household growth, leakage recapture, and replacement space (Figure 38, pg 51). Data provided by Leland show that the leakage

¹⁰⁷ Note: As discussed in Chapter 3, while retail environments are changing at a national level, the extent to which e-commerce will replace all types of retail is unclear and unlikely. The need for certain types of retail will persist both nationwide and in places like McMinnville.

¹⁰⁸ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

recapture component of the 10-year demand is 131,808 square feet. This is an element of retail land need that is not reflected in the employment forecast.

Exhibit 51 shows an estimate of land needed to accommodate recapture of retail leakage. The analysis builds from the Leland estimates and assumes 470 square feet per employee. The square feet per employee assumption comes from Metro’s Employment Density Study (pg 17). Dividing recapturable existing leakage by square feet per employee provides an estimate of the amount of employment generated by the space; dividing that by the PAC approved assumption of 23 employees per acre yields the land need assumption. The results show that McMinnville needs an additional 12.2 acres of land to accommodate recapture of retail leakage.

Exhibit 51. Demand for Regional Commercial and Office Space

Sector	Recapture-able Existing Leakage (s.f.)	SF/Emp	Employees (20 years)	Employees Per Acre (EPA)	Acres
Furniture & Home Furnishings	6,257	470	13	23	0.6
Electronics and Appliance	4,450	470	9	23	0.4
Building Material, Garden Equip	-	470	-	23	-
Food & Bev. (grocery)	0	470	-	23	-
Health & Personal Care	-	470	-	23	-
Clothing & Accessories	9,600	470	20	23	0.9
Sporting Gds, Hobby, Books, Music	6,076	470	13	23	0.6
General Merchandise	83,278	470	177	23	7.7
Misc. Store Retailers	-	470	-	23	-
Food & Drinking Places	21,611	470	46	23	2.0
Other (incl. cinema, prof./med office, banks)	538	470	1	23	0.0
Totals	131,808		280		12.2

Source: Demand estimates by Leland Consulting Group; sq ft per employee assumptions from the Metro Employment Density Study; EPA assumptions from EOA PAC

Land Needs Not Addressed in the Average Employment Densities (Other Needed Sites)

This section addresses Step 9: Estimate Additional Land Need Not Determined in Forecast

Statewide planning Goal 9 requires cities to “Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies.”¹⁰⁹ McMinnville has identified several employment land needs that ~~are exogenous (outside of, or not reflected in) to the employment forecast~~ have other needed sites. These related to target industry sectors identified in the *MAC-Town 2032 Economic Development Strategic Plan*. These are addressed in the respective subsections below, describing these land needs and the factual basis for each need.

¹⁰⁹ <https://www.oregon.gov/lcd/OP/Documents/goal9.pdf>

Other Needed Sites Calculated Separately from Average Employment Densities

The City's Economic Development Strategic Plan provides the City's economic development opportunities, vision, and strategy. The City need not be bound by history and past trends, but can rather seek to achieve the community's economic vision, supported by data, and realistically achievable given competitive advantage, as supported by data and emerging trends.

Statewide Planning Goal 9 states that comprehensive plans for urban areas shall: "Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies." This indicates that cities have some degree of flexibility in determining land needs as long as (1) they are consistent with plan policies, and (2) are justifiable. The land needs described in this section are all identified in existing city plans, but are not considered in the employment forecast.

~~Cities have found that when there are large firms seeking sites that aren't available in a region, this precludes economic development organizations such as Business Oregon and MEDP from marketing the area to these prospects. Attracting such activities to the region may be newly identified in the economic development strategy and additive to past economic development efforts. An otherwise Goal 9-compliant Economic Opportunities Analysis based on projected growth reflective of traditional patterns may not account for these new efforts, and attraction of a large site user would be considered an exogenous impact to these projections. This often applies to industrial users, but also applies to uses such as destination tourism uses that can require unique sites.~~

The needs analysis also needs to account for these "~~exogenous sites~~" other needed sites for uses anticipated as part of the Economic Development Strategy. Below are some examples of ~~exogenous~~ other needed sites in McMinnville and other Oregon communities:

- For example, when McMinnville's UGB was established in the early 1980s, it wasn't anticipated that there would be a need for a large site for the Evergreen Museum or water park. These facilities occupy approximately 70 acres of their sites. These have substantial economic benefits to the McMinnville economy. In 2018, they had over 88,000 visitors. They also require large sites, differ from traditional employment uses, don't fit neatly within an employment ~~forecast~~ density assumptions, and they consume a significant amount of the land supply in the UGB.
- Another example of a needed site for tourism is the US Cellular Park in Medford. The park is 132 acres with 15 sports fields. The 2018 Annual Report shows that in 2018 it generated \$11.5 million estimated economic impact, surpassing \$100 million cumulative local economic impact since its inception in 2008, helping to sustain 110 jobs in the local economy based on the direct spending of visiting teams.¹¹⁰

¹¹⁰ U.S. Cellular Community Park Annual Report. Medford Parks, Recreation & Facilities. 2018. <https://www.sportsmedford.com/Assets/48/2018%20USCCP%20Annual%20Report.pdf>

- The City of Redmond is expanding its UGB to add nearly 949 acres for several employment uses. This allows the Deschutes County Fair and Expo Center to build out and become more of a regional player (with an additional 120 acres), while providing a new home for the Oregon National Guard's Redmond Armory (approximately 40 acres). It also provides nearly 700 acres for large industrial projects.¹¹¹
- The Allison Inn and Spa in Newberg takes advantage of place-based tourism. It is on a 35 acre site in the City of Newberg. It is situated adjacent to rural land with surrounding views of wine country and farmland. It includes accommodations, restaurant and bar, spa and meeting and event center. This could be considered an adaptation of one of the prototypes described in the agri-tourism plan described below, but adapted for an urban location interfacing with a rural setting, rather than located in a rural location.
- Over a decade ago, a County-wide plan was undertaken related to agri-tourism. It identified six prototype projects, each with specific assumptions about characteristics. These were predominantly rural prototypes, but the opportunities for these prototypes haven't been realized.¹¹²

The Economic Development Strategic Plan identifies 57 items that potentially have site-related needs. Based on further review and discussions, we assume the approximately 47 other items not included in the list of ten site needs below would be addressed through traditional sites needs within the [standard site needs and average employment density calculations. work completed on the employment forecast and/or public/semi-public land needs analysis.](#) Exhibit 52 summarizes the land needs for these [exogenous other needed sites.](#)

¹¹¹ "Fairground expansion, armory and more coming to SE Redmond." Stephen Hamway. The Bulletin. Feb 3, 2019. <https://www.bendbulletin.com/localstate/6884610-151/fairgrounds-expansion-armory-and-more-coming-to-se-redmond>

¹¹² *Yamhill County Agri-Business Economic and Community Development Plan Summary Report.* Barney & Worth, Inc. June 2009. https://www.co.yamhill.or.us/sites/default/files/Summary_Report_-_Yamhill_County_Agri-Business.pdf

Exhibit 52. Land needs identified in the MAC-Town 2032 Economic Development Strategic Plan (EDSP): Other needed sites that are not represented in the employment forecast have special site needs not reflected in average employment density calculations

Draft

Use	Description or Example*	Land Need	Employment Adjustment (Source)	EDSP or Other Reference
1. Community Center/Recreation Facility	Update, improve, expand and add recreational facilities that serve the community's needs <u>including a</u> (Community Center and Aquatic Center).	10 acres	<u>22 FTE</u> (Source: Parks Director)	3.2.2
2. Outdoor Stage/ Amphitheater	<u>Britt, Jacksonville</u> <u>Cuthbert, Eugene</u> <u>Bi-Mart, Central Point</u> <u>Les Schwab, Bend</u>	5 acres plus parking	<u>30 FTE</u> (Source: Britt Festival - 2,200 seating capacity)	3.2.1.
3. See Ya Later Foundation – Champions Center	The Champions Center is planned as a youth and family recreational and educational complex.	28 acres (4 acres for buildings, 6 acres for parking, 12 acres for 6 athletic fields, 6 acres for associated facilities)	<u>20 FTE</u> (Source: See Ya Later Foundation Proposal)	See Ya Later Foundation UGB Application
4. Arts and culture focused event center	Chehalem Cultural Center, Newberg)	3.5 acres	<u>9 FTE</u> (Source: Chehalem Cultural Center)	3.3
5. Evergreen Aviation and Space Museum and Yamhill County Heritage Museum	Support existing facilities; <u>based on facilities in master plan</u>	27 acres	<u>30 FTE</u> (Source: Evergreen Master Plan)	<u>3.3</u>
6. Wings and Waves	Opportunities for growth and expansion	Location-specific land need at existing partially vacant site	<u>Included in Evergreen Master Plan, see above</u>	6.3.
7. Conference Center:	40,000 sf conference space, accommodation, and parking:	5 acres	<u>13 FTE</u> (Source: Feasibility Analysis)	6.4
8. Equestrian center with supporting commercial activity inside UGB	Would include facilities that cannot be developed on EFU land	20 acres in UGB, larger footprint outside	<u>80 FTE</u> (Source: Comparable feasibility studies)	(6.3)
9. Food hub and public market	Focused on local craft foods & beverages	3.5 acres	<u>13 FTE</u> (Source: USDA Regional Food Hub Resource Guide)	3.2.2.
10. Makerspace/innovation hub/ fabrication center	Supports local innovation & entrepreneurial ecosystem	2 acres	<u>3 FTE</u> (Source: Talent Maker City)	6.3.
TOTAL		104 acres		
NET	<u>Deduct 220 employees @ 23 emp/ac = 10 ac</u>	<u>104 ac – 10 ac = 94 net additional acres</u>		

*Additional examples are provided in the following narrative.

1. COMMUNITY CENTER/RECREATION FACILITY

Strategy 3.2.2 of the MAC-Town 2032 EDSP seeks to cultivate partnerships to develop and market McMinnville’s recreation amenities. A specific action in that section is to add recreational facilities that serve the community’s needs including a Community Center and Aquatic Center.

The McMinnville Parks Department is in the process of completing a feasibility analysis for a facility and is currently estimating demand of 10 acres. Further information is expected to be available in February 2020.

This is consistent with other examples reviewed by ECONorthwest. ECONorthwest reviewed characteristics of comparable community centers. These include two facilities run by the Salvation Army (Kroc centers in Salem and Coeur d’Alene), and three city-managed facilities in Eugene, Portland, and Federal Way Washington. Exhibit 53 provides a summary of the facilities.

Exhibit 53. Community Center Characteristics

Facility	Facility Size (sq ft)	Site Size (acres)	Description
Salem Kroc Center	91,500	22.0	LEED certified with a waterpark (including a Jr. Olympic competition pool, water slide, lazy river, hot tub, and splash pad), Fitness Center, Gymnasium, Game Room, Art Studio, Library/Media Center, Amphitheater, Chapel/Performing Arts Center, 4000 ft ² of Event Space
Coeur d’Alene Kroc Center	132,000	12.0	Competition and leisure pools, health and wellness center, gym and climbing wall, game room, and classrooms
East Portland Community Center	45,000	5.7	Full-size gymnasium with retractable bleachers Transverse bouldering wall Fitness center with cardiovascular and circuit strength equipment Exercise studio with sprung wood floor and mirrors Multi-purpose, and poolside rooms Outdoor courtyard Indoor 4-lane Pool Indoor zero-depth entry leisure pool with current channel, waterslide, splashdown
Federal Way Community Center	72,000	10.0	Aquatics center, three gyms, fitness center, climbing pinnacle and Splash Café
Eugene Amazon Community Center	n/a	12.0	Outdoor pool, two community centers with many amenities, parking

Based on information from the Parks Department, and consistent with review of comparable facilities, the land need for this use is assumed to be 10 acres.

2. OUTDOOR STAGE/AMPHITHEATER

Strategy 3.2.1 of the MAC-Town 2032 EDSP seeks to update City Plans to evaluate and prioritize investments in recreation infrastructure. The strategy specifically identifies the desire to “add an outdoor stage or amphitheater to one of McMinnville’s existing parks.” The following list provides capacity and site sizes for amphitheatres in other Oregon cities.

- Les Schwab Amphitheater, Bend ~8,000 capacity ~5 acres plus parking (parking co-located with other uses)
- Bi-Mart Amphitheater, Central Point: ~6,000+ total capacity (~1985 fixed seats plus lawn), (parking co-located with other uses); ~5+ acres, plus parking & other support areas
- Britt Festival, Jacksonville: 2,200 total capacity (1,000 fixed seating plus lawn), parking co-located with other uses); Approximately 4 acres plus parking, (includes main stage, small stage, concession buildings, seating, staging area)
- Cuthbert Amphitheater, Eugene: 5,000 total capacity; parking co-located with Alton Baker Park; Approximately 4.3 acres without patron parking (includes main stage, seating, concession areas, and performer/equipment parking).

Based on review of comparable facilities, the land need for this use is assumed to be 5 acres. Assume shared parking, otherwise additional land will be needed for dedicated parking.

Note: This is calculated separate from the See Ya Later Foundation Champion Center. While that facility proposed an amphitheater. That site plan identified an amphitheater, but the concept is a different facility than what is identified in the Economic Development Strategic Plan. The Champion center would rely on use of two athletic fields for area comparable to above facilities ranging from 2,200-8,000 capacity (plus parking).

3. SEE YA LATER FOUNDATION-CHAMPIONS CENTER

In 2015, the See Ya Later Foundation (SYLF) proposed a UGB amendment for a sports complex which was not further pursued at that location given access constraints. The Foundation is still moving forward with the concept and envisions a 165,000 sf indoor recreational and educational building with the following amenities:

- Six athletic fields
- Sport fields, court gyms, fitness equipment
- Art, music, technology, and mentoring
- Outdoor amphitheater and regulation sports courts (for large-scale events, drawing visitors and dollars to McMinnville year-round)
- Meeting rooms and facilities for use by non-profits and social service organizations
- Non-denominational prayer room
- Great hall for events, commercial kitchen, coffee shop, variety of meeting facilities
- Parking (shared for uses)

To accommodate these facilities, SYLF requires a 28-acre site that meets specific suitability requirements and is accessible to the school-aged children it is intended to serve. A year-round site on the west side of McMinnville is preferred - recognizing that Joe Dancer Park is closed

from November to March, and the west side is rapidly growing with two additional planned schools.

Based on the 2015 application, we assume a land need of 28 useable acres (4 acres for buildings, 6 acres for parking, 12 acres for 6 athletic fields, 6 acres for associated facilities (walkways, landscaping, bleachers, campus open space, and driveways)).

Note: The ESDP identifies needs for regional athletic events and an indoor sports complex. These uses are assumed as part of a single site complex as represented in the Se Ya Later Foundation Champions Center described above. Therefore, these are not calculated separately. Other examples of these types of facilities of various scale and scope include the following:

- Facility for regional athletic events: 132 acres (US Cellular Park, Medford), 15 sports fields: 3 full-size baseball, 7 softball/baseball, 5 soccer/football
- Separate indoor sports complex: 5-8 acres

4. ARTS AND CULTURE FOCUSED EVENT CENTER

Strategy 3.3 (Leverage arts and culture amenities) of the MAC-Town 2032 EDSP identifies the desire for an arts and culture focused center. Specifically, the plan states “Initiate a conversation between local artists, arts organizations, philanthropies and other parties to identify the potential for an arts and culture-focused event center in McMinnville.” The strategy also includes the need for a community art space “Evaluate the feasibility of a public private partnership to create a community art space or collaborative studio and cooperative gallery.” Following is a summary of similar cultural centers:

- Chehalem Cultural Center, Newberg – is located in a historic building and houses a fine arts gallery and exhibition hall, three multipurpose arts studio classrooms, a state-of-the-art clay studio, a recording studio with four music practice studios, meeting space, and a 5,200 square foot grand ballroom for public and private events.

Based on review of comparable facilities, the land need for this use is assumed to be 3.5 acres.

5. OPPORTUNITIES TO SUPPORT EVERGREEN AVIATION AND SPACE MUSEUM-AND YAMHILL COUNTY HERITAGE MUSEUM

This opportunity is identified as part of Strategy 3.3 – Leverage arts and culture amenities. Specifically, the project is to establish periodic, formal dialogue with the Evergreen Aviation and Space Museum ~~and the Yamhill County Heritage Museum~~ to anticipate their needs and identify opportunities to provide support.

This expansion is consistent with the adopted Evergreen Master Plan and would build out about 27 additional buildable acres of the property (with constrained areas left intact –wetlands, ravine, etc.) The master plan also includes an adventure course and associated features that extend would outside the UGB. The use of the site is limited by the Planned Development Ordinance to the master plan unless the PD Ordinance is amended.

This opportunity assumes expansion onto ownership of partially vacant land of 27 acres. This deduction is included as part of the ~~exogenous land need~~ other needed sites since a portion of the site (27 acres) was inventoried as vacant in the buildable lands inventory.

6. WINGS AND WAVES OPPORTUNITIES FOR GROWTH AND EXPANSION

This opportunity is related to Strategy 3.3 and is part of McMinnville’s overall tourism strategy. The Waterpark was bought by The Falls Event Center in 2017, and is now run as a separate organization.

This opportunity assumes expansion onto ownership of partially vacant land.

7. CONFERENCE SPACE

This opportunity relates to Strategy 6.4 – Market and promote McMinnville. The plan includes a project to “Work with visit McMinnville and local hoteliers to identify gaps in available conference space and to establish a plan to expand McMinnville’s offerings for small and large conferences.” Towards that end, Visit McMinnville retained Johnson Consulting to complete a market analysis for conference facilities. The January 2018 report, titled *McMinnville Conference Center and Destination Analysis*, identifies need for a 40,000 sq ft conference space not including accommodations and parking. We looked at the following comparable facilities:

- Washington County Event Center: 89,000 sf; ~8 acres with parking
- Seaside: 25,000 sf, 10 meeting rooms; 4 acres with parking
- Pendleton: 28,000 sf, 9 meeting rooms; 12.5 acres with parking
- Blair County Convention Center, PA. 2 levels, ~50,000 sf; 11 acres with parking
- Blue Water Convention Center, MI: ~40,000 sf; 12 acres

Based on review of comparable facilities, the land need for this use is assumed to be 5 acres.

8. EQUESTRIAN CENTER

In 2012, developer JW Millegan proposed a major equestrian center in Yamhill County. The concept was not further pursued, due in part to restrictions on EFU lands. As proposed, the facility would require approximately 325 acre and would include a gallop track, polo fields, steeplechase facilities, plus resort, RV park, distillery, brewpub, and cobblestone plazas. In effect, this would be a rural/urban interface tourism use with supporting commercial activity inside UGB.

Due to land use restrictions, elements such as resort, RV park, distillery, brewpub, would need to be sited within the UGB at a location interfacing with rural lands.

Other equestrian facilities in the region include:

- Hunter Creek Equestrian Park, 14441 SW Wilsonville Rd, Wilsonville, (120 ac site)
- Wilsonville Equestrian Center, 24040 SW 8nd Avenue, Tualatin
- Swan Training/Whip ‘n Spur, 16091 SW Wilsonville Rd

- Arbor Grove Equestrian Center, 7359 Hwy 219 NE, Woodburn

An example of an RV Park near McMinnville includes:

- Willamette Wine Country RV Park and the Vintages are 191 sites on 14.5 acres

Based on the facility concept, and review of comparable facilities, the portion of the land need within the UGB for this use is assumed to be 20 acres.

9. CRAFT FOOD AND BEVERAGE FOOD HUB/FARMERS MARKET

McMinnville wants to develop an integrated food hub and year-round farmers market. Farmers markets are physical retail marketplaces intended to sell foods directly by farmers to consumers. Food hubs offer a combination of aggregation, distribution, and marketing services at an affordable price. Food hubs make it possible for many producers to gain entry into new larger-volume markets that boost their income and provide them with opportunities for scaling up production. Combining food hubs and farmers markets creates opportunities to better integrate local food value chains. Examples of farmers markets and food hubs include:

- Olympia Farmers Market, Olympia WA - supports local sustainable agriculture by connecting the public with local farmers, artisans, and other producers in an economically viable marketplace, has over 100 vendors and an estimated 400,000 visitors per year; 4.7 acres
- Bellingham Farmers Market, Bellingham WA – promotes and encourages the development of local, small scale agriculture and ensure a market balance for small, local growers and has over 100 vendors and is co-located at a transit station in downtown Bellingham; 1.5 acres
- Fallon Food Hub Co-op, Fallon NV – has the mission of educate residents about the benefits of eating seasonally and healthfully in order to create a thriving and expanding local food scene resulting in increased opportunities for area producers; 2.2 acres
- Catskills Food Hub, Sullivan County NY – a non-profit organization working to strengthen local agriculture, increase access to fresh food, and improve health outcomes for Sullivan County and the region; 2.7 acres
- Puget Sound Food Hub, Mt. Vernon WA – supports the relationship between regional farmers and their customers, enabling a values-based supply chain for food safety and transparency; 3.2 acres

Based on review of comparable facilities, the land need for this use is assumed to be 3.5 acres.

10. MAKERSPACE/INNOVATION HUB/ FABRICATION CENTER

Most industrial land demand is already reflected in the employment forecast. McMinnville wants to develop additional strategies to bolster the local maker community and the entrepreneurial ecosystems. Makerspace and fabrication laboratories are strategies that communities are pursuing. Makerspaces are community-operated, often nonprofit, workspaces

where people with common interests, such as computers, machining, technology, science, digital art, or electronic art, can meet, socialize and collaborate. CraterWorks Makerspace, located in Central Point, also includes a commercial kitchen and market space. It is about 2 acres in size.

Based on review of comparable facilities, the land need for this use is assumed to be 2 acres.

Site Characteristics and Needed Sites

OAR 660-009-0015(2) requires the EOA to “identify the number of sites by type reasonably expected to be needed to accommodate the expected [20-year] employment growth based on the site characteristics typical of expected uses.” The Goal 9 rule does not specify how jurisdictions conduct and organize this analysis.

The rule, OAR 660-009-0015(2), states that “[i]ndustrial or other employment uses with compatible site characteristics may be grouped together into common site categories.” The rule suggests, but does not require, that the City “examine existing firms in the planning area to identify the types of sites that may be needed.” For example, site types can be described by: (1) plan designation (e.g., heavy or light industrial), (2) general size categories that are defined locally (e.g., small, medium, or large sites), or (3) industry or use (e.g., manufacturing sites or distribution sites). For purposes of the EOA, McMinnville groups its future employment uses into three general categories based on land use types: (1) commercial (includes retail commercial, office & commercial services, and tourism services)¹¹³; (2) industrial; and (3) sites needed to meet specific economic development objectives (e.g., other land needs not addressed in the employment forecast as discussed above).

In short, in addition to estimating the acreage needed to accommodate current and future employment, it is necessary for the city to determine if it has sites with characteristics suitable for the development to address needs and opportunities. This includes site size, topography, access, utilities, and other characteristics such as location and proximity to other uses and amenities.

As a first step, ECO analyzed the size distribution of developed employment sites in McMinnville by land use type. Exhibit 54 shows the results. The majority of commercial lots are small – 89% of commercial lots are less than 1 acre, and 43% of the commercial land (in acres) is in lots less than 1 acre. No developed commercial lots are larger than 20 acres. (Some shopping centers include multiple tax lots).

¹¹³ At early stages of the EOA, McMinnville broke commercial out into separate land use categories, but found that many overlap and do not have distinct site needs from other commercial categories by NAICS sector.

Industrial sites show a different pattern. Seven industrial sites (about 2 percent of all industrial sites) are greater than 20 acres but account for 25% of all industrial land in acres. While McMinnville has 126 industrial sites less than 1 acre, those sites account for only 7% of developed industrial land (in acres). Some industrial users occupy multiple buildings and/or tax lots.

Exhibit 54. Size distribution of developed employment sites by land use type, McMinnville UGB, 2019

Land Use Type	Developed acres size								Total
	<0.50 acre	0.50-0.99 acres	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00- 19.99 acres	20.00- 49.99 acres	50.00+ acres	
Commercial									
Acres	99	54	57	90	26	34	-	-	360
Percent of Acres	28%	15%	16%	25%	7%	9%	0%	0%	100%
Tax Lots	524	80	41	30	4	3	-	-	682
Percent of Tax Lots	77%	12%	6%	4%	1%	0%	0%	0%	100%
Industrial									
Acres	13	19	43	87	91	61	25	79	418
Percent of Acres	3%	4%	10%	21%	22%	15%	6%	19%	100%
Tax Lots	100	26	32	29	13	5	1	1	207
Percent of Tax Lots	48%	13%	15%	14%	6%	2%	0%	0%	100%

In addition to basic logistical considerations, there are workforce considerations for locating within a community. For example, in the Three Mile Lane study, it was found that employers located to the area because there were sites that had land needed for expansion; however, employees preferred to be in amenity-rich locations. Employers have had to adjust business practices to accommodate employees in these locations absent the presence of amenities, such as those which were available in prior locations before relocating to accommodate space needs. This largely illustrates the need for the city's growth management strategy of balanced land uses that provide for a nearby mix of uses and opportunities to reduce vehicle miles travelled.

For certain development types, there is a standardized taxonomy and these types have specific site characteristic needs. The City's economic development vision and strategy may deviate from some of these typical prototypes in order to promote an authentic place-based experience, but the real estate principles must still function properly. Exhibit 55 and Exhibit 56 show taxonomies for industrial and commercial categories. It should be noted that certain development types need larger sites that must be planned and located all at one time, even if future phases within the development build out over time. Therefore, those sites need to be accounted for up-front, rather than incrementally. Other land uses have needs that don't fit into these broad categories but have other programmatic needs that define the site needs. Examples of these ~~exogenous~~ other needed sites apply to uses such as convention/ conference space, regional athletic facilities, etc. For those facilities identified in the Economic Development Strategy that have special sites needs that aren't sufficiently accounted for in the land needs calculated by the employment forecast and employment density, site characteristics have been separately described below.

Exhibit 55. Shopping Center Taxonomy, ICSC



U.S. Shopping-Center Classification and Typical Characteristics*								
Type of Shopping Center	Concept	Typical GLA Range (Sq. Ft.)	Acres	# of Anchors	% Anchor GLA	Typical Number of Tenants	Typical Type of Anchors	Trade Area Size
General-Purpose Centers								
Super-Regional Mall	Similar in concept to regional malls, but offering more variety and assortment.	800,000+	60-120	3+	50-70%	N/A	Full-line department store, mass merchant, discount department store, fashion apparel store, mini-anchor, cineplex or other large-scale entertainment attraction, and food-and-beverage service cluster.	5-25 miles
Regional Mall	General merchandise or fashion-oriented offerings. Typically, enclosed with inward-facing stores connected by a common walkway. Parking surrounds the outside perimeter.	400,000-800,000	40-100	2+	50-70%	40-80 stores	Full-line department store, mass merchant, discount department store, fashion apparel store, mini-anchor, cineplex or other large-scale entertainment attraction, and food-and-beverage service cluster.	5-15 miles
Community Center ("Large Neighborhood Center")	General merchandise or convenience-oriented offerings. Wider range of apparel and other soft goods offerings than neighborhood centers. The center is usually configured in a straight line as a strip, or may be laid out in an L or U shape, depending on the site and design.	125,000-400,000	10-40	2+	40-60%	15-40 stores	Discount store, supermarket, drug, large-specialty discount (toys, books, electronics, home improvement/furnishings or sporting goods, etc.)	3-6 miles
Neighborhood Center	Convenience-oriented.	30,000-125,000	3-5	1+	30-50%	5-20 stores	Supermarket	3 miles
Strip/Convenience	Attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the storefronts, but a strip center does not have enclosed walkways linking the stores. A strip center may be configured in a straight line, or have an "L" or "U" shape. A convenience center is among the smallest of the centers, whose tenants provide a narrow mix of goods and personal services to a very limited trade area.	< 30,000	<3	Anchor-less or a small convenience-store anchor.	N/A	N/A	Convenience store, such as a mini-mart.	<1 mile
Specialized-Purpose Centers								
Power Center	Category-dominant anchors, including discount department stores, off-price stores, wholesale clubs, with only a few small tenants.	250,000-600,000	25-80	3+	70-90%	N/A	Category killers, such as home improvement, discount department, warehouse club, and off-price stores	5-10 miles
Lifestyle	Upscale national-chain specialty stores with dining and entertainment in an outdoor setting.	150,000-500,000	10-40	0-2	0-50%	N/A	Large-format upscale specialty	8-12 miles
Factory Outlet	Manufacturers' and retailers' outlet stores selling brand-name goods at a discount.	50,000-400,000	10-50	N/A	N/A	N/A	Manufacturers' and retailers' outlets	25-75 miles
Theme/Festival	Leisure, tourist, retail and service-oriented offerings with entertainment as a unifying theme. Often in urban areas, they may be adapted from older—sometimes historic—buildings, and part of a mixed-use project.	80,000-250,000	5-20	Unspecified	N/A	N/A	Restaurants, entertainment	25-75 miles
Limited-Purpose Property								
Airport Retail	Consolidation of retail stores located within a commercial airport	75,000-300,000	N/A	N/A	N/A	N/A	No anchors; retail includes specialty retail and restaurants	N/A

*Disclaimer: While every effort is made to ensure the accuracy and reliability of the information contained in this report, ICSC does not guarantee and is not responsible for the accuracy, completeness or reliability of the information contained in this report. Use of such information is voluntary, and reliance on it should only be undertaken after an independent review of its accuracy, completeness, efficiency, and timeliness. Criteria used in the definitions above are intended to be only typical of general features, rather than covering all situations.



Exhibit 56. Industrial Development Profile Matrix, Business Oregon and Johnson Reid

	General Site	Clean Tech Campus		Heavy Industrial/	General	Food	High-Tech	Campus	Warehouse/	Call Center/
		Regional	Global	Manufacturing	Manufacturing	Processing	Manufacturing Processes	Industrial/Electronic	Distribution	Business Services
Physical Site Characteristics										
Net Contiguous Developable Area										
50-100 acres	x	x		x	x	x	x	x	x	x
101-200 acres	x	x	x	x	x	x	x	x	x	x
200+ acres	x	x	x	x	x	x	x	x	x	x
Maximum Slope	5%	5%	5%	5%	5%	5%	7%	10%	5%	12%
Infrastructure										
Transportation										
Auto/Truck	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
Interstate - Miles	10	15	10	10	20	30	15	10	5	NA
Trip Generation - ADT/Acre	65-192	76-106	76-106	42-58	76-106	76-106	76-106	76-106	65-86	144-192
Rail	Pref	Pref	Pref	Pref	Pref	Pref	NR	NR	Pref	NR
Marine	NA	Pref	Pref	Pref	Pref	Pref	NR	NR	Pref	NR
Airport - Regional Commercial	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref
Max Distance - Miles	30	60	30	60	60	60	30	30	60	60
Airport - International	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref
Distance - Miles	300	100	100	300	300	300	100	100	300	300
Water										
Min. Domestic Line Size/inches	8	10	8	8	8	10	10	10	4	4
Min. Fire Line Size/inches	10	10	10	10	10	10	10	8	10	8
High Pressure Supply	Pref	Pref	Pref	Pref	Pref	Pref	Pref	Pref	NR	NR
Flow/GPD	50-75,000	74,300	74,300	36,100	17,000	24,900	65,300	74,300	11,700	4,600
Sanitary Sewer	Req	Req	Req	Req	Req	Req	Req	Req	Req	Req
Min. Size/inches	8-10	10	10	8	8	10	10	8	4	4
Natural Gas/Preferred Min./inches										
		6	6	6	4	6	6	2	2	2
Electricity										
Min. Service Demand/kva	30-100 kva	50	100	30	30	30	30	30	10	30
Proximity to Substation	Pref	Req	Req	Pref	Pref	NR	Pref	Pref	NR	Pref
Secondary System Dependency	Pref	Req	Req	Req	NR	NR	Req			
Telecommunications										
High Capacity	Req	Req	Req	Pref	Pref	Pref	Req	Req	Pref	Req
Route Diversity	Pref	Req	Req	NR	NR	NR	Req	Pref	NR	Req
Fiber Optics	Req	Req	Req	Pref	Pref	Pref	Req	Req	Pref	Req
Location										
Workforce/50 Mile Radius	20,000-50,000	50,000	300,000	30,000	30,000	20,000	50,000	50,000	20,000	25,000
Executive & Workforce Housing	Pref									

Req Required
 Pref Preferred
 NR Not Required
 NA Not Applicable

Business Oregon and Johnson Reid



To meet the requirements of OAR 660-009-0015(2) to identify the number of needed sites by type, we analyzed the existing distribution of developed sites by size (Exhibit 57) and applied it to overall land need for the 2021-2041 period. Acres are converted to number of sites using average acres per tax lot (0.531.65 for commercial, and 2.023.78 for industrial).¹¹⁴ Note that this method likely underestimates the need for larger sites as many employment developments – both commercial and industrial – are on multiple tax lots.

Exhibit 57 shows that McMinnville has a deficit of sites needed in both commercial and industrial land, across most size classes. Discussions with McMinnville Industrial Promotions (MIP) also confirmed need for industrial sites in the 5 to 30 acre range. Currently, McMinnville has about nine industrial sites in this range, and an estimated need for 7 sites in this range.

Exhibit 57. Size distribution of needed employment sites compared to sites with buildable acres, by land use type, McMinnville UGB, 2021-2041

Land Use	Developed acres size							Total
	<1 acre	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00-19.99 acres	20.00-49.99 acres	50.00+ acres	
Number of Sites								
Commercial	422	29	21	3	2	0	0	477
Industrial	44	12	11	5	2	1	1	76
Total	466	40	32	8	4	1	1	553

Land Use	Acre size							Total
	0.50-0.99 acre	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00-19.99 acres	20.00-49.99 acres	50.00+ acres	
Number of Needed Sites								
Commercial	77	40	29	4	3	0	0	153
Industrial	10	12	11	5	2	0	0	40
Number of Sites with Buildable Acres								
Commercial	4	6	9	4	2	0	0	25
Industrial	11	15	4	6	1	2	2	41
Surplus (Deficit)								
Commercial	(73)	(34)	(20)	0	(1)	-	-	(128)
Industrial	1	3	(7)	1	(1)	2	2	1

Source: ECONorthwest

Land Sufficiency

This section addresses Step 10: Compare Land Demand to Supply

Exhibit 58 shows commercial and industrial land sufficiency within the McMinnville UGB. It shows:

- **Vacant or partially vacant unconstrained land** from Exhibit 50 within the UGB. Exhibit 58 shows that McMinnville will have 312 gross acres of industrial land, and 73 gross acres of commercial land in 2021.

¹¹⁴ We excluded sites less than 0.5 acres from this table based on the OAR 660-009-0005(14) definition for vacant land, which was used for the BLL. Those sites are assumed to be available to meet identified refill and development needs.

- **Demand for commercial and industrial land** from Exhibit 48. Exhibit 58 shows McMinnville will need a total of 153 gross acres for industrial uses and ~~368~~358 gross acres for commercial uses over the 2021-2041 period based on portion of demand determined through the forecast.
- Retail Leakage Additional needs, addressed previously in this Chapter, include retail leakage that is current demand that predates the employment forecast associated with new population growth(12-acre demand over the 20-year period)
- Demand for ~~additional~~ commercial land needs **with other needed sites** not identified in the forecast adequately accounted for in the average employment density calculations. Forecast commercial land includes land use types of retail commercial, office and commercial services, and tourism services. Additional needs, addressed previously in this Chapter, include retail leakage (12-acre demand over the 20-year period) and other These uses **withfor other needed sites** exogenous commercial land needs for target sectors are identified in the Economic Development Strategic Plan (104-acre demand over the 20-year period), a net difference of 94 additional acres after adjusting for associated employment.
- Needed site sizes from Exhibit 57 shows that McMinnville has a deficit of needed site sizes for commercial land for sites between 0.5 and 5 acres, as well as between 10 and 20 acres. McMinnville also has a deficit of industrial sites between 2 and 5 acres, as well as between 10 and 20 acres.

Note to reviewers: This evaluation may change depending on decision to adjust needs based on MIP and MEDP letters.

Exhibit 58 shows that McMinnville has:

- A 159-acre surplus of industrial land in 2041
- A ~~286~~95-acre deficit of commercial land in 2041.

Exhibit 58. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2021-2041

Land Use Type	Land Supply (Suitable Gross Acres)	Demand (Gross Acres)	Land Sufficiency (Deficit)
Industrial	312	153	159
Commercial	73	358	(286)
<i>Forecast</i>		252	
<i>Retail leakage</i>		12	
<i>Other needed sites</i>		94	

Land Use Type	Land Supply (Suitable Gross Acres)	Demand (Gross Acres)	Land Sufficiency (Deficit)
Industrial	312	153	159
Commercial	73	368	(295)
<i>Forecast</i>		252	
<i>Retail leakage</i>		12	
<i>Exogenous</i>		104	

Source: ECONorthwest

Summary of Land Sufficiency for Employment Land in McMinnville

This section summarizes the analysis completed in Chapter 5 and the findings related to land sufficiency for employment land in McMinnville.

Demand

McMinnville will need at least 512 gross acres (153 industrial and 358 commercial) for employment for the 2021 to 2041 period and 899 gross acres (329 industrial and 570 commercial) for the 2021 to 2067 period (Exhibit 4).

Demand was calculated in following components:

- By developing an employment forecast and assigning employment density factors to determine associated land needs, Employment forecasts indicate that McMinnville will add 6,885 jobs between 2021 and 2041 and 16,001 jobs between 2021 and 2067. For this component of the demand, McMinnville will need at least 405 gross acres (153 industrial and 252 commercial) for employment for the 2021 to 2041 period and 783 gross acres (329 industrial and 454 commercial) for the 2021 to 2067 period (Exhibit 4).

~~Demand was calculated in following components:~~

- ~~▪ By developing an employment forecast and assigning employment density factors to determine associated land needs, Employment forecasts indicate that McMinnville will add 6,885 jobs between 2021 and 2041 and 16,001 jobs between 2021 and 2067. Based on this employment forecast and employment density estimates, McMinnville will need at least 521 gross acres (153 industrial and 368 commercial) for employment for the 2021 to 2041 period and 899 gross acres (329 industrial and 570 commercial) for the 2021 to 2067 period (Exhibit 59)~~
- By removing the following employment from the employment forecast, and instead estimating land needs for these employers based on interviews with the respective entities: local government, K-12, and higher education. *These are discussed in the public and semi-public land needs section of the Urbanization Summary report, and are not discussed in the land sufficiency analysis for commercial and industrial employment.*
- By identifying the existing retail leakage identified in a market analysis, which identifies existing deficits in the base year which are not otherwise accounted for in the forecast of future employment from 2021-2041. *McMinnville will need about 12.2 acres to address existing retail leakage.*
- By estimating “exogenous” special site needs other needed sites which are not accounted for in the average density assumption employment forecast. The sites for these uses are unique and not accounted for in the employment forecast and standard employment density factors. These are target industries and uses in the Mac Town 2032 Economic Development Strategic Plan. *McMinnville will need 104 acres for exogenous-commercial land special site needs other needed sites (e.g., land needs not accounted for in the employment projections) in the 2021 to 2041 period. A net increase of 94 acres when*

[adjusting the employment forecast to reflect these unique site needs and adjustments to average density assumptions for these sites and uses.](#)

The City assumed 5% of new employment would be accommodated on sites that don't require new vacant land, through infill, redevelopment, and locations that don't require new employment land.

Draft

Supply

In 2019, within the UGB, McMinnville has 416 buildable acres of employment land, with 366 buildable acres in vacant lots and 50 buildable acres in partially-vacant lots. This includes 93 buildable acres of commercial land and 323 buildable acres of industrial land. By 2021, the forecast assumes there will have been demand for 31 gross acres of employment land: 11 gross acres of industrial land and 20 gross acres of commercial land. That leaves a 2021 supply of 385 buildable acres of employment land: 312 buildable acres of industrial land and 73 buildable acres of commercial land

- Commercial.** Of the 93 buildable acres of commercial land, about 60 acres are in vacant lots, and 33 acres are in partially-vacant lots. About 27 acres (approximately 30% of the buildable commercial land) is on the Evergreen property, which is subject to a Planned Development that limits uses to tourism-related uses consistent with the master plan. There are only about two dozen tax lots with buildable commercial acreage, and only some of these contiguous. There are only about a half dozen sites or contiguous properties that have buildable acreage over five acres, accounting for about 72% of the buildable acres.
- Industrial.** Of 323 buildable acres of industrial land, about 305 acres are in vacant lots, and 17 acres are in partially-vacant lots. About 55% of the supply (177 acres) is in two tax lots over 50 acres, about 88 and 90 acres. One site is just under 50 buildable acres (15% of the supply), and the remaining sites are below 15 buildable acres.

Sufficiency

Exhibit 59 shows the capacity of unconstrained vacant land and the demand for employment land over the 5-, 10-, 20-, and 46-year planning periods, as well as the pre-2021 period.

Exhibit 59. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2019-2021, 2021-2026, 2021-2031, 2021-2041, and 2021-2067

Land Use Type	2019-2021			5-year (2021-2026)			10-year (2021-2031)			20-year (2021-2041)			46-year (2021-2067)		
	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)
Industrial	323	11	312	312	38	274	312	77	236	312	153	159	312	329	(17)
Commercial	93	20	73	73	63	10	73	126	(53)	73	368	(295)	73	570	(498)

Source: ECONorthwest.

The next chapter provides a discussion of McMinnville's existing Comprehensive Plan goals and policies related to economic development. It suggests updates to policies that may not align with the findings of this EOA or recent updates to supporting planning work including the MAC-Town 2032 Economic Development Strategic Plan.

6. Comprehensive Plan Policies

OAR 660-009-0020 outlines requirements for industrial and other economic development policies.

Local comprehensive plans are to provide a commitment to provide a competitive short-term supply together with a commitment to provide adequate sites and facilities. With this EOA, also identified are fulfillment of community economic development objectives.

Economic Development Goals and Policies

As noted at the outset of this EOA update report, the 2019 MAC-Town Economic Development Strategic Plan states the City of McMinnville's mission related to economic development:

"McMinnville provides economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors, from steel manufacturing to technology. Economic growth is collaborative, and inclusive of individuals from diverse backgrounds. Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville's high quality of life. Our strong downtown serves residents and visitors alike, featuring unique shops and world-class restaurants that offer locally-produced food products and globally-renowned wine. As we evolve, we prize our small-town roots and we maintain McMinnville's character."

The currently adopted Comprehensive Plan also includes more detailed goal statements, and some goals include specific policies. This EOA update provides suggested changes to goals and policies that may not align with the city's current vision for economic development. The suggested changes are indicated with items to **remove** or items to consider **adding**.

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Policy:

- 21.00 Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the City. Such uses shall locate according to the goals and policies in the comprehensive plan.
- 21.01 The City shall periodically update its economic opportunities analysis to ensure that it has within its urban growth boundary (UGB) a 20-year supply of lands designated for commercial and industrial uses. The City shall provide an adequate

number of suitable, serviceable sites in appropriate locations within its UGB. If it should find that it does not have an adequate supply of lands designated for commercial or industrial use it shall take corrective actions which may include, but are not limited to, redesignation of lands for such purposes, or amending the UGB to include lands appropriate for industrial or commercial use. (Ord.4796, October 14, 2003)

- 21.02 The City shall encourage and support the start up, expansion or relocation of high-wage businesses to McMinnville.
 - 1. The City shall coordinate economic efforts with the Greater McMinnville Area Chamber of Commerce, McMinnville Industrial Promotions, McMinnville Downtown Association, Yamhill County, Oregon Economic and Community Development Department, and other appropriate groups.
 - 2. Economic development efforts shall identify specific high-wage target industries and ensure that adequately sized, serviced, and located sites exist within the McMinnville urban area for such industries. (Ord.4796, October 14, 2003)
- 21.03 The City shall support existing businesses and industries and the establishment of locally owned, managed, or controlled small businesses. (Ord.4796, October 14, 2003)
- 21.04 The City shall make infrastructure investments that support the economic development strategy a high priority, in order to attract high-wage employment. (Ord.4796, October 14, 2003)
- 21.05 Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the city. Such uses shall locate according to the goals and policies in the comprehensive plan. (Ord.4796, October 14, 2003)

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future neighborhood and community serving commercial lands and discouraging strip development.

General Policies:

- 22.00 The maximum and most efficient use of existing commercially designated lands will be encouraged as will the revitalization and reuse of existing commercial properties.
- 23.00 Areas which could in the future serve as commercial sites shall be protected from encroachment by incompatible uses.
- 24.00 The cluster development of commercial uses shall be encouraged rather than auto-oriented strip development. (Ord.4796, October 14, 2003)

Locational Policies:

- 24.50 The location, type, and amount of commercial activity within the urban growth boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord.4796, October 14, 2003)

- 25.00 Commercial uses will be located in areas where conflicts with adjacent land uses can be minimized and where city services commensurate with the scale of development are or can be made available prior to development.
- 26.00 The size of, scale of, and market for commercial uses shall guide their locations. Large-scale, regional shopping facilities, and heavy traffic-generating uses shall be located on arterials or in the central business district, and shall be located where sufficient land for internal traffic circulation systems is available (if warranted) and where adequate parking and service areas can be constructed.
- 27.00 Neighborhood commercial uses will be allowed in residential areas. These commercial uses will consist only of neighborhood oriented businesses and will be located on collector or arterial streets. More intensive, large commercial uses will not be considered compatible with or be allowed in neighborhood commercial centers.
- 28.00 A commercial planned development should be encouraged in the proximity of the intersection of Hill Road and West Second Street. Such a development should service the needs of people in western McMinnville. The development should be anchored by a grocery store.

Design Policies:

- 29.00 New direct access to arterials by large-scale commercial developments shall be granted only after consideration is given to the land uses and traffic patterns in the area of development as well as at the specific site. Internal circulation roads, acceleration/deceleration lanes, common access collection points, signalization, and other traffic improvements shall be required wherever necessary, through the use of planned development overlays.
- 30.00 Access locations for commercial developments shall be placed so that excessive traffic will not be routed through residential neighborhoods and the traffic-carrying capacity of all adjacent streets will not be exceeded.
- 31.00 Commercial developments shall be designed in a manner which minimizes bicycle/pedestrian conflicts and provides pedestrian connections to adjacent residential development through pathways, grid street systems, or other appropriate mechanisms. (Ord.4796, October 14, 2003)
- 32.00 Where necessary, landscaping and/or other visual and sound barriers shall be required to screen commercial activities from residential areas.
- 33.00 Encourage efficient use of land for parking; small parking lots and/or parking lots that are broken up with landscaping and pervious surfaces for water quality filtration areas. Large parking lots shall be minimized where possible. All parking lots shall be interspersed with landscaping islands to provide a visual break and to provide energy savings by lowering the air temperature outside commercial structures on hot days, thereby lessening the need for inside cooling. (Ord.4796, October 14, 2003)
- 34.00 The City of McMinnville shall develop and maintain guidelines concerning the size, placement, and type of signs in commercial areas.

- 35.00 The City of McMinnville shall encourage the development of a sign system that directs motorists to parking areas.

Goal IV 4: To promote the downtown as a cultural, administrative service, and retail center of McMinnville.

Downtown Development Policies:

- 36.00 The City of McMinnville shall encourage a land use pattern that:
 - 1. Integrates residential, commercial, and governmental activities in and around the core of the city;
 - 2. Provides expansion room for commercial establishments and allows dense residential development;
 - 3. Provides efficient use of land for adequate parking areas;
 - 4. Encourages vertical mixed commercial and residential uses; and,
 - 5. Provides for a safe and convenient auto-pedestrian traffic circulation pattern. (Ord.4796, October 14, 2003)
- 37.00 The City of McMinnville shall strongly support, through technical and financial assistance, the efforts of the McMinnville Downtown Steering Committee to implement those elements of Phase II of the “Downtown Improvement Plan” that are found proper, necessary, and feasible by the City. (Ord.4796, October 14, 2003)
- 38.00 The City of McMinnville shall encourage the renovation and rehabilitation of buildings in the downtown area, especially those of historical significance or unique design.
- 39.00 The City of McMinnville shall encourage and allow the development of pocket parks, landscaping, and other natural amenities to provide a visual contrast between streets and parking lots and buildings to enhance the general appearance of the downtown.
- 40.00 The City of McMinnville shall encourage and develop a policy of cooperation with federal, state, and local governments and agencies regarding the location of public administrative and service facilities in the downtown area and further encourage these same agencies to develop off-street parking opportunities and transportation alternatives for their employees.
- 41.00 The City of McMinnville shall encourage the expansion of retail and other commercial enterprises east of the railroad tracks and north and south of Third Street consistent with the adopted “Downtown Improvement Plan.” (Ord.4796, October 14, 2003)
- 42.00 The City of McMinnville shall continue to redesignate streets and traffic patterns in and around the downtown area to facilitate the movement of automobile traffic and provide for the safety and convenience of pedestrians.

- 43.00 The City of McMinnville shall allow the closing and/or vacating of streets to provide additional areas for off-street parking where such closure will not affect the ability of the police and fire departments, and public utilities to provide their designated service functions or where such closures will not negatively affect the overall traffic circulation in the downtown area.
- 44.00 The City of McMinnville shall encourage, but not require, private businesses downtown to provide off-street parking and on-site traffic circulation for their employees and customers.
- 45.00 The City of McMinnville shall study the feasibility of developing bicycle and pedestrian paths and/or lanes between residential areas and the activity centers in the downtown. (Ord.4961, January 8, 2013)
- 46.00 The City shall work to implement the recommendations of the adopted "McMinnville Downtown Improvement Plan."
- 46.01 The City shall, through its Landscape Review Committee, develop a list of street trees acceptable for planting within the public rights-of-way, parks and open spaces, and downtown. In addition, the committee shall develop standards for the planting of these trees, particularly within the downtown area, such that sidewalk and tree root conflicts are minimized. This effort should be coordinated with McMinnville Water and Light in an effort to minimize conflicts with utility lines.
- 46.02 The City shall, as funding permits and generally in the following order, periodically inventory trees within its public rights-of-way, parks and open spaces, and downtown area in order to assess the overall health of the city's urban forest and to determine those specific trees that may require maintenance, or removal and replacement. As a goal, the City seeks to maintain a diverse urban forest in terms of age and species.
- 46.03 The City shall take steps to minimize hardships to property owners situated adjacent to street trees that may have been found to be the cause of, but not limited to, the cracking or raising of a public sidewalk, or interfering with sewer lines that serve his/her property. In such cases, the City shall install root barriers, if practicable, or remove the offending tree(s). (Ord. 4816, December 14, 2004; Ord.4796, October 14, 2003)

Proposals:

- 6.00 A planned development overlay should be placed on the large cluster commercial development areas and the entrances to the City to allow for review of site design, on-site and off-site circulation, parking, and landscaping. The areas to be overlaid by this designation shall be noted on the zoning map and/or comprehensive plan map.
- 7.00 The City of McMinnville should study the feasibility of designating areas fronting Third Street east of the railroad tracks for retail commercial only, and designated areas on the fringes of the downtown as office residential.

- 8.00 The City of McMinnville should encourage the development of a commercial planned development center in the southwestern portion of the city large enough in scale to serve the needs of the area's population. The center should be in proximity of the intersection of Old Sheridan Road, U.S. Highway 99W, and Oregon Highway 18.

Goal IV 5: To continue the growth and diversification of McMinnville's industrial base through the provision of an adequate amount of properly designated lands.

Goal IV 6: To insure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

General Policies:

- 47.00 Industries that locate in the community shall meet federal, state, and local environmental standards. These standards shall be given full weight in evaluating the desirability of the industry. Criteria for evaluation shall include, but not be limited by the effect the industry would have on:
 - 1. The natural environment, including air and water quality, natural drainage ways, and soil properties and other physical characteristics of the land including topography.
 - 2. The human environment, including the amount of noise and traffic generated and the ability of the housing industry to provide sufficient dwelling units with at least an adequate level of required urban services.
 - 3. The physical facilities of the community, including the ability of sanitary and storm sewer systems, water supply and distribution system, energy supply distribution systems, police and fire, and schools to provide designated services.
- 48.00 The City of McMinnville shall encourage the development of new industries and expansion of existing industries that provide jobs for the local (McMinnville and Yamhill County) labor pools.

Locational Policies:

- 49.00 The City of McMinnville shall use its zoning and other regulatory methods to prevent encroachment into industrial areas by incompatible land uses.
- 49.01 The City shall designate an adequate supply of suitable sites to meet identified needs for a variety of different parcel sizes at locations which have direct access to an arterial or collector street without having to pass through residential neighborhoods. (Ord. 4961, January 8, 2013)
- 49.02 The location, type, and amount of industrial activity within the Urban Growth Boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord. 4961, January 8, 2013)

- 49.03 In designating new industrial properties, and in redesignating properties to industrial zoning from other designations, the City shall work to provide employment opportunities in locations that are reasonably accessible to McMinnville residents, while minimizing the need to drive through existing or planned residential neighborhoods. (Ord. 4961, January 8, 2013)
- 50.00 The City of McMinnville shall encourage industrial uses to locate adjacent to the airport and south of Three Mile Lane, adjacent to the existing Riverside Drive industrial area, and in existing industrial areas through the proper designation of lands on the comprehensive plan and zoning maps. Comprehensive plan and/or zoning map changes to industrial designations in other areas may be granted if all the applicable goals and policies of the plan can be met.
 - *The City should consider updating this policy to reflect findings of the Three Mile Lane Area Plan, which discusses potential commercial uses in this area.*
- 51.00 The City of McMinnville shall encourage the location of airport-related industrial uses only on the industrial land which is adjacent to the airport. Those lands so reserved shall be designated in the planned development overlay covering this area.
 - *The City should consider updating this policy to reflect updated goals for the area near the airport.*
- ~~52.00—The City of McMinnville shall create a new "limited light industrial" zone which shall be placed on the industrial areas on the south side of Three Mile Lane in those areas where residential development is expected on the north side of the road. The new zone will allow only those types of industrial uses that will not conflict with the residential uses.~~
- ~~53.00—The City of McMinnville shall encourage the phased development of industrial land so that a moderate rate of growth occurs. A moderate rate of growth will be considered that rate which enables the City to provide urban services in a timely, orderly, and economic fashion, and which allows the private sector to provide for the needs of the new residents.~~
- 54.00 The City of McMinnville shall establish industrial planned development ordinances which shall be placed over the future industrial areas designated on the McMinnville Comprehensive Plan Map, the industrial reserve area, and certain existing industrially designated areas within the city limits. The overlay shall also be applied to any areas which are in the future designated for future industrial use through an amendment to the comprehensive plan map. The overlays shall provide standards to control the nuisance and negative environmental effects of industries. These controls shall cover, but not be limited to, the following areas:
 - 1. Landscaping and screening
 - 2. Noise suppression
 - 3. Light and heat suppression
 - 4. Pollution control for air, water, and land

- 5. Energy impacts
- 6. Traffic impacts
- 55.00 Deleted as per Ord. 4796, October 14, 2003.
- 56.00 Deleted as per Ord. 4796, October 14, 2003.
- 57.00 Agricultural activities shall be encouraged on industrially designated lands until such time as the lands are utilized for industrial purposes.

Draft

Appendix A. Buildable Lands Inventory

ECONorthwest prepared a Goal 10 compliant Economic Opportunities Analysis (EOA) for the City of McMinnville to assess whether the city has sufficient land within its Urban Growth Boundary (UGB) to accommodate population and employment growth forecast for the 20-year period between 2021 and 2041, as well as 5-, 10-, and 46-year planning periods. A key component of this study is the buildable lands inventory (BLI).

The legal requirements that govern the BLI for the City of McMinnville are defined in Statewide Planning Goal 10, OAR 660-009-0005, and OAR 660-009-0015(3). This Appendix summarizes the methods ECONorthwest used to conduct employment buildable lands inventory.

Study Area

The Commercial and Industrial BLI for McMinnville includes all commercial and industrial land within the McMinnville UGB. From a practical perspective, this means that all lands within tax lots identified by the Yamhill County Assessment and Taxation Office that fall within a commercial or industrial plan designation were inventoried. Note that tax lots do not generally include road or railroad rights-of-way or water. ECONorthwest used a July 2018 tax lot shapefile (the same data used for the residential BLI) from Yamhill County for the analysis, as well as previous information used for the 2013 EOA. The inventory then builds from the tax lot-level database to estimates of buildable land by plan designation.

Methods for Inventory of Commercial and Industrial Lands

For commercial and industrial land, the general structure is similar to the residential lands process with a few differences. The buildable lands inventory uses methods and definitions that are consistent with OAR 660-009 and OAR 660-024. Following are the administrative rules that provide guidance on the commercial and industrial BLI.

OAR 660-009-0005:

(1) *"Developed Land"* means non-vacant land that is likely to be redeveloped during the planning period.

(2) *"Development Constraints"* means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

(11) *"Site Characteristics"* means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight

facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

(12) "Suitable" means serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed use.

(13) "Total Land Supply" means the supply of land estimated to be adequate to accommodate industrial and other employment uses for a 20-year planning period. Total land supply includes the short-term supply of land as well as the remaining supply of lands considered suitable and serviceable for the industrial or other employment uses identified in a comprehensive plan. Total land supply includes both vacant and developed land.

(14) "Vacant Land" means a lot or parcel:

(a) Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or

(b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.

Unlike with residential lands, the rules for employment lands include the concept of "suitability" which can be affected by factors other than the physical attributes of land. (See OAR 660-009-0005 (11) and (12) above.) The proposed BLI methods do not fully address the suitability factors, rather, they more narrowly assess whether a parcel is buildable based solely on attributes of the land. ECONorthwest had additional discussions with City staff about the assumptions embedded in the BLI as well as whether to apply additional suitability factors to employment lands, and if so, what factors to use.

Inventory Steps

The steps in the inventory of commercial and industrial buildable lands are:

1. Generate UGB "land base"
2. Classify lands by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

Step 1: Generate UGB "land base"

The commercial and industrial inventory used all of the tax lots in the McMinnville UGB with the appropriate plan designations. Specific designations that were used include:

- Commercial
- Industrial

Step 2: Classify lands

In this step, ECONorthwest classified each tax lot with a plan designation of Commercial or Industrial (based on the lot's status as of January 2019) into one of five mutually exclusive categories based on development status:

- Developed land
- Vacant land
- Partially vacant land
- Public or exempt land

ECONorthwest initially identified buildable land and classify development status using a rule-based methodology. The rules are described below.

Development Status	Definition	Statutory Authority
Vacant Land	<p>A tax lot: (a) Equal to or larger than on half-acre not currently containing permanent buildings or improvements; or (b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements</p> <p>For the purpose of criteria (a) above, lands with improvement values of \$0 were be considered vacant.</p>	OAR 660-009-005(14)
Partially Vacant Land	Partially vacant tax lots are those between one and five acres occupied by a use that could still be further developed based on the zoning. This determination is based on a visual assessment and City staff verification.	No statutory definition
Public or Exempt Land	Lands in public or semi-public ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches and other semi-public organizations and properties with conservation easements. Public lands are identified using the Yamhill County Assessment property tax exemption codes.	No statutory definition
Developed Land	<p>OAR 660-009-005(1) defines developed land as "Non-vacant land that is likely to be redeveloped during the planning period."</p> <p>Lands not classified as vacant, partially-vacant, undevelopable, or public or exempt are considered developed.</p>	OAR 660-009-005(1)

Step 3: Identify constraints

The commercial and industrial inventory uses development constraints consistent with guidance in OAR 660-009-0005(2). Most of the development constraints are the same as those used for residential lands. (The exception is steep slopes, which are defined as 15% or greater for employment lands and 25% or greater for residential lands.) Note that the previous EOA in 2013 used the 25% threshold for steep slopes. In the 2020 update, the PAC recommended using 15% to better reflect needs for development of employment land.

Constraint	Statutory Authority	Threshold	File name
Goal 5 Natural Resource Constraints			
Regulated Wetlands	OAR 660-009-0005(2)	Within National Wetlands Inventory	NWI
Natural Hazard Constraints			
Floodways	OAR 660-009-0005(2)	Lands within FEMA FIRM identified floodway	Floodplains_and_Floodways
100 Year Floodplain	OAR 660-009-0005(2)	Lands within FEMA FIRM 100-year floodplain	Floodplains_and_Floodways
Steep Slopes	OAR 660-009-0005(2)	Slopes greater than 15%	TBD

These areas were treated as prohibitive constraints (unbuildable). All constraints were merged into a single constraint file, which was then used to identify the area of each tax lot that is constrained. These areas were deducted from lands that were identified as vacant or partially vacant.

Step 4: Verify inventory results

As with the residential BLI, ECONorthwest used a multi-step verification process. This included review of aerial imagery, discussion and verification with City staff, and review of 2013 EOA results.

Step 5: Tabulate and map results

The results of the commercial BLI are presented in tabular and map format in Chapter 5.

Appendix B. Employment on Other Land and Employment Density

This appendix presents research and findings that ECONorthwest completed to provide rationale for employment density and “refill” and redevelopment assumptions for the 2020 update of the City of McMinnville’s EOA. It presents empirical analysis of existing employment densities in McMinnville and information on assumptions used for EOAs in comparison cities noted in *Exhibit 1*.

Exhibit 1. Cities used for comparison to the City of McMinnville by population and county

City	Population (2018 PSU Estimate)	County
Ashland	20,815	Jackson
Newberg	23,795	Yamhill
Redmond	29,190	Deschutes
Grants Pass	37,285	Josephine
Albany	53,145	Linn & Benton
Corvallis	59,280	Benton
Bend	89,505	Deschutes

In addition, with the 2013 EOA, the City also previously collected comparative data from other cities and the 2001/03 EOA for employment density and “refill” and redevelopment factors. That is summarized in Figure 40 of the 2013 EOA, which is also attached at the end of this document. It also includes guidelines from DLCD’s Goal 9 Guidebook. The City elected to add additional comparable cities to the analysis as three of the five cities in Figure 40 are metro cities with considerably different economic development opportunities and strategies.

Employment on Other (Non-Vacant) Land

ECONorthwest compiled information from the comparison cities on assumptions used in each city’s EOA for employment that doesn’t require vacant commercial or industrial land. (This corresponds to step 6 in the EOA summary matrix.) The 2013 McMinnville EOA used an overall assumption for employment on non-vacant land of 17%. Exhibit 2 summarizes assumptions used in other Oregon comparison cities.

Exhibit 2. Employment on other land assumptions for comparison cities

City	Emp. on Other Land	Rationale/Approach	Date
Ashland	20%	Empirical analysis of capacity on redevelopable lands.	2007
Newberg	5% (retail only)	Empirical analysis. (See Figure 40 on pg. 85 of 2013 McMinnville EOA)	2006
Redmond	10%	Reasonable judgement. (pg. 5-29).	2005
Grants Pass	10%	Reasonable judgement based on comparison areas. (pg. 8-46)	2007
Albany	0%	Redevelopment was accounted for in the BLI, so they did not account for it again in the forecast. (pg. 11)	2005
Corvallis	Industrial: 11% Retail: 12% Office: 29%	Reasonable judgement based on available buildable land. (pg. 4-56)	2016
Bend		Note: Bend used a site-based approach for estimating land need. We do not recommend this approach.	2016

DLCD's Goal 9 workbook presented guidelines of 85-90% growth on vacant land, based on 10-15% refill and redevelopment cited as a rule of thumb.

The effect of applying refill and redevelopment rates to existing developed land is to implicitly increase the employment density on those lands. Employment density is discussed further in the next section, but must be evaluated together with assumptions about refill and redevelopment. As discussed in the next section, the observed density of employment in commercial and industrial plan designations is currently about 10 employees/net acre in industrial plan designations (down slightly from the 2013 EOA) and 23 employees/net acre in commercial plan designations (up slightly from the 2013 EOA). Exhibits 3A-3C show the effective densities resulting from applying 17%, 10%, and 5% of new employment to developed commercial and industrial sites.

For industrial employment, this ranges from absorbing between 96 to 325 additional employees from present through 2041, and increasing to absorb between 191 to 650 additional employees from present through 2067 on *currently* developed properties. This would increase the employment density for these sites from 10 employees/acre to between 11 to 12 employees/acre.

For commercial development, this ranges from absorbing between 295 to 1,003 additional employees from present through 2041, and increasing to absorb between 619 to 2,103 additional employees from present through 2067 on *currently* developed properties. This would increase the employment density for these sites from 23 employees/acre to between 25 to 29 employees per acre.

Exhibit 3A. Effective Employment Densities with 17% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites							
				Current Calc Emp Density	17% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 17% of emp to 2041	17% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 17% of emp to 2067	
Industrial	3,422	4,485	428	10	325	4,810	11	650	5,135	12	
Commercial	6,245	8,184	357	23	1,003	9,187	26	2,103	10,287	29	

Exhibit 3B. Effective Employment Densities with 10% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites							
				Current Calc Emp Density	10% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 10% of emp to 2041	10% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 10% of emp to 2067	
Industrial	3,422	4,485	428	10	191	4,676	11	383	4,868	11	
Commercial	6,245	8,184	357	23	590	8,774	25	1,237	9,421	26	

Exhibit 3C. Effective Employment Densities with 5% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites							
				Current Calc Emp Density	5% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 5% of emp to 2041	5% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 5% of emp to 2067	
Industrial	3,422	4,485	428	10	96	4,581	11	191	4,676	11	
Commercial	6,245	8,184	357	23	295	8,479	24	619	8,803	25	

Both the industrial and commercial employment densities have remained nearly the same over time: from the 2001/03 EOA, the empirical calculations in the 2013 EOA, and the empirical calculations in the current analysis. Industrial densities have decreased slightly from about 11 employees/acre to about 10 employees/acre. Commercial densities have increased slightly from about 22 employees/acre to about 23 employees/acre.

The 2001/03 EOA used variable assumptions for refill/redevelopment, with 17% for industrial, 15% for commercial, and 13% for institutional, while the 2013 EOA increased these all to 17%.

Average employment densities don't appear to have increased consistent with those rates. Actual changes compared to assumptions about refill/redevelopment of the existing developed sites may be the result of:

- Refill/redevelopment has not occurred, or has occurred at lower rates than assumed in McMinnville's prior EOAs
- Employment densities of existing businesses may have declined, through reduction of employees or through expansion of facilities without commensurate increases in employment densities
- Increases in employment density in some cases may have been offset by reductions in employment density in other cases

Potential reasons may include:

- Increases in automation, where operations occupy the same space, but with fewer employees
- More new businesses/new land use of types with the same or lower employment densities than previous business' employment densities
 - Potential increases in area devoted to storage, cold storage, warehousing, and distribution, some of which may increase together with surrounding agricultural uses.
 - Potential increases in area devoted to indoor grow operations, potentially further increasing from the growth of industrial hemp production.¹¹⁵

The dynamics of new job creation should also be considered in evaluating refill and redevelopment.

- How strongly is job growth correlated with the size or age of a business? How much job growth is created through newer start-ups vs. long-term growth of more established businesses? How many smaller entrepreneurial businesses intend to grow to be larger businesses vs. remain smaller?
- While there may be capacity to add employees within established space for existing businesses, new businesses may need their own facilities that can't be located within the facilities of other businesses. Some existing businesses may retain partially vacant sites in the event they need to expand. Some businesses will require ownership of their land and facilities rather than leasing space on existing developed sites.

An assumption of 5% industrial refill/redevelopment would result in an increase in employment density from about 10 emp/ac to about 11 emp/ac on existing developed sites. This is generally consistent with McMinnville's historic trends.

¹¹⁵ <https://www.forbes.com/sites/andrebourque/2019/01/31/how-hemp-is-moving-oregon-marijuana-to-an-indoor-grow-crop/#10ff80b960ed>

The empirical calculated density for commercial sites in the 2013 EOA was 22 emp/acre, but an aspirational policy of 26 emp/acre was adopted. Any of the three scenarios calculated above (5%, 10%, or 17%) for refill/redevelopment on *currently* developed sites would result in an increase in density on these sites that would exceed currently observed densities, ranging from 24 to 26 emp/acre by 2041. Carrying over the 17% assumption from the 2013 EOA would mean an assumed employment density of 29 emp/acre on these sites by 2067, compared to the current 23 emp/acre, and exceeding even the aspirational overall assumption of 26 emp/acre used in the 2013 EOA. An assumption of 5% commercial refill/redevelopment would result in an increase in employment density from 23 emp/ac to 25 emp/ac on these sites in 2067.

Recommended approach and assumptions

This update could simply carry forward the 17% refill/redevelopment assumption from the 2013 EOA for all categories, but the analysis of empirical data, calculations of effective density, and comparisons with other cities and the DLCDC Goal 9 Guidebook suggest that assumption is high, and that McMinnville hasn't achieved this historically. Further, even if that level of refill/redevelopment had been achieved historically, carrying over an assumption for each planning period would have a compounding effect of assuming unlimited, successively higher capacity of the same existing developed sites to absorb more employment each time. This would push the employment density for those developed lands up each planning cycle, where infill and redevelopment would have already theoretically occurred and increased in each previous planning cycle.

A reasonable assumption would be 5% refill/redevelopment for both commercial and industrial employment, which is what we would recommend. This would result in an increase in employment density on currently developed sites, still exceeding the empirical employment densities from the 2013 EOA.

The assumed 17% refill/redevelopment rate from the 2013 EOA would be an aspirational assumption that exceeds the empirical densities and exceeds the aspirational density from the 2013 EOA. It is an estimate that we don't anticipate will be achieved, and is higher than most comparisons. The 2001/03 EOA refill/redevelopment assumption of 17% for industrial and 15% for commercial is another aspirational assumption that hasn't been observed historically.

The tables below show the result of the 5%, 10%, and 17% refill/redevelopment assumptions for comparison for the 2021-2041 period.

The government land use type is excluded from the remaining employment forecast calculations, as we account for government employment in calculations for other land needs.

Exhibit 4a. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (17% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	283	1,384
Retail Commercial	383	65	318
Office & Commercial Services	3,346	569	2,777
Tourism Services	1,269	216	1,053
Total	6,665	1,133	5,532

Exhibit 4b. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (10% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	167	1,500
Retail Commercial	383	38	345
Office & Commercial Services	3,346	335	3,011
Tourism Services	1,269	127	1,142
Total	6,665	667	5,998

Exhibit 4c. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (5% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	83	1,584
Retail Commercial	383	19	364
Office & Commercial Services	3,346	167	3,179
Tourism Services	1,269	63	1,206
Total	6,665	332	6,333

Employment Density

ECONorthwest completed an empirical analysis of the overall employment density in commercial and industrial areas, as well as in sample areas for the following land use types included in the employment forecast—industrial, office commercial, and retail commercial.¹¹⁶ The 2013 McMinnville EOA used the following assumptions for employment density:

- **Industrial:** 11 employees per acre
- **Commercial:** 26 employees per acre

The 2013 EOA included an empirical analysis of employment density. The 11 employee/acre industrial density was the empirical calculated density. The empirical commercial employment density was 22 employees per acre. The 26 employee/acre density was an aspirational, policy-based assumption.

In the PAC materials provided for the meeting on September 5, 2019, we completed a sensitivity analysis for employment density based on the 2013 EOA assumptions. The analysis shows the effect of a 10% increase and 10% decrease of the 2013 employment density assumptions and the range of resulting needed acreage. The PAC requested further research based on existing employment density in McMinnville. The results of that analysis are provided in this section.

Overall employment density for existing employment in McMinnville

The analysis of overall employment density for commercial and industrial areas included lots identified as “developed” in the buildable lands inventory (BLI) and summarized the employment per acre on these sites by plan designation (commercial or industrial land only). Land in wetlands was removed from the acreage calculation to better account for land used for employment. We calculated employment density, expressed here as total employees per acre, by dividing the number of employees on developed sites in commercial and industrial plan designations by the acreage (less wetlands) of those developed sites. The results of this calculation were:

- **Industrial:** 10 employees per acre
- **Commercial:** 23 employees per acre

Exhibit 5 shows the results of applying these employment density assumptions for the remaining land use types.

¹¹⁶ The other land use types—tourism services and government—were excluded from the sample area analysis. The PAC will be discussing site characteristics. The sites needed for tourism services are typically similar to the needs for retail commercial. Thus, it is reasonable to assume the same employment density for both tourism services and retail commercial. Government employment will not require vacant commercial and industrial land, so we did not analyze employment density for this land use type.

Exhibit 5a. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 17% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,467	10	147	156
Retail Commercial	337	23	15	18
Office & Commercial Services	2,945	23	128	156
Tourism Services	1,117	23	49	59
Total	5,866		338	389

Exhibit 5b. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 10% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,500	10	150	160
Retail Commercial	345	23	15	18
Office & Commercial Services	3,011	23	131	160
Tourism Services	1,142	23	50	61
Total	5,998		346	398

Exhibit 5c. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 5% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	10	158	169
Retail Commercial	364	23	16	19
Office & Commercial Services	3,179	23	138	169
Tourism Services	1,206	23	52	64
Total	6,333		365	420

While this approach provides a reasonable indication of employment densities in McMinnville, the mix of types of employment on sites may affect the overall result (i.e., not all employment in industrial areas is classified as industrial employment). However, these results align with comparable areas and previous guidelines for calculating employment density, and are therefore reasonable assumptions for the purposes of the EOA.

Sample area employment density for existing employment in McMinnville

ECONorthwest also analyzed sample areas representative of employment in McMinnville by land use type. City staff assisted in choosing these areas for further analysis based on local knowledge as well as requirements for data confidentiality. Again, we calculated the employment density by dividing the number of total employees in each sample area by the total acreage of the sample area site. The results by land use type were:

- **Industrial:** 11 employees per acre
- **Office commercial:** 29 employees per acre
- **Retail commercial:** 19 employees per acre

Similar to the first approach to calculate overall employment density, a sample area approach also has limitations. Sample areas, by definition, do not provide information on employment density across McMinnville. However, these areas were chosen based on a representation of typical employment areas in McMinnville. Limitations in data availability, reporting, and confidentiality also present limitations in results.

The results of both approaches align with results from other studies in comparable cities, as well as the guidelines in DLCD's *Industrial and Other Employment Lands Analysis – Basic Guidebook*, which states:

“Typical employment densities per net acre range from 8 - 12 jobs for industrial; 14 - 20 jobs for commercial; and 6 - 10 jobs for institutional/other jobs.”

The next section provides background information on employment density assumptions used in cities that are comparable to McMinnville.

Exhibit 6 shows the results of applying these employment density assumptions for the remaining land use types.

Exhibit 6a. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 17% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,384	11	126	134
Retail Commercial	318	19	17	20
Office & Commercial Services	2,777	29	96	117
Tourism Services	1,053	19	55	68
Total	5,532		294	339

Exhibit 6b. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 10% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,500	11	136	145
Retail Commercial	345	19	18	22
Office & Commercial Services	3,011	29	104	127
Tourism Services	1,142	19	60	73
Total	5,998		319	367

Exhibit 6c. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 5% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	11	144	153
Retail Commercial	364	19	19	23
Office & Commercial Services	3,179	29	110	134
Tourism Services	1,206	19	63	77
Total	6,333		336	388

Employment density comparison

City of McMinnville staff provided ECONorthwest with a list of cities typically used for comparison purposes. The cities and their population are listed in Exhibit 7.

Exhibit 7. Cities used for comparison to the City of McMinnville by population and county

City	Population (2018 PSU Estimate)	County
Ashland	20,815	Jackson
Newberg	23,795	Yamhill
Redmond	29,190	Deschutes
Grants Pass	37,285	Josephine
Albany	53,145	Linn & Benton
Corvallis	59,280	Benton
Bend	89,505	Deschutes

Each city listed above has completed an EOA between 2005 and 2016. Methodologies for each EOA varied, and information related to employment density assumptions was not consistently reported. The assumptions document in each EOA are listed in Exhibit 8, along with a description of the rationale or approach used for arriving at the employment density numbers, if available. These approaches generally fell into two categories, either (1) a reasonable judgement based on comparable cities or (2) an empirical analysis of existing employment density or other metric.

Exhibit 8. Employment densities for comparison cities

City	Employment Density (employees per acre)			Rationale/Approach	Date
	Industrial	Commercial	Retail		
Ashland	12	17	--	Reasonable judgement/comparison (pg. C-6)	2007
Newberg	11	21	21	Empirical analysis (pg. 84 McMinnville 2013 EOA)	2010
Redmond	5 (low) – 12 (high)	12 (low) – 20 (high)	--	Empirical analysis/comparison (pg. 5-29)	2005
Grants Pass	10	17	17	Reasonable judgement/comparison (pg.8-47)	
Albany	12	--	20	Reasonable judgement/comparison (pg 11)	2007
Corvallis	10	35	25	Empirical analysis (pg 4-60)	2016
Bend	--	--	--	<i>Note: Bend did not use an EPA approach for the 2016 EOA.</i>	2016

Recommended assumptions and approach

The results of the empirical analysis are within reasonable ranges for employment densities. Exhibit 9 shows the recommended approach of 11 employees per acre for industrial and 23 employees per acre for all other land use types. It would also be possible to use the commercial density as a total control for the commercial subcategories and allocate a proportion of the total acreage to each subcategory based on the share from the sampled employment densities if preferred, but we believe this method is reasonable.

Exhibit 9. Estimate of future land demand for new employment (recommended approach), McMinnville UGB, 2021 to 2041, after 5% refill/redevelopment deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	11	144	153
Retail Commercial	364	23	16	19
Office & Commercial Services	3,179	23	138	169
Tourism Services	1,206	23	52	64
Total	6,333		351	405

These calculations do not include the government land needs, which are calculated separately.

During discussion of site characteristics, a portion of the commercial uses will be split out and assigned to neighborhood-serving commercial and services to be located in neighborhood areas.

Figure 40. Comparative Employment Density & Redevelopment Factors

Reference	Employment Density (Jobs per Acre)	% of Job Growth on Vacant Employment Land
2001 McMinnville EOA	11 industrial 22 commercial 35 institutional	83% industrial 85% commercial 87% institutional (based on factors including 1-5% requires no non-res built space or land, 5-7% on existing developed land, and 5% vacancy rate)
DLCD Goal 9 Guidebook (2005)	8-12 industrial 14-20 commercial 6-10 institutional & other (demand for net acres; also noted is that each acre can accommodate 10-15 jobs for general commercial and office-park industrial, 20 for offices in non-metro downtowns & suburban settings)	85-90% job growth on vacant land (based on 10-15% use of vacant or redeveloped buildings cited as general rule of thumb)
Salem-Keizer Metro Area Regional EOA 2012-2032 (May 2011)	Forecast densities @: 20 light industrial (above 12-15 current) 36 general office (reflecting current average with range from 27 in retail areas to 73 in Salem central business area) Retail/personal service uses forecast not by jobs per acre (but @ 0.30 FAR)	95% industrial 83% general office (based on assumption that 5% of industrial and 17% of office new employment will locate in existing space or sites not requiring new land; EOA also notes that "there is no study that quantifies how much employment is commonly accommodated in existing built space over a 20-year period in a city.")
Albany EOA Update (2007)	12 industrial 20 commercial retail/services 10 government	100% job growth on vacant land (was at 90% with 2000 EOA @ 10% refill rate but adjusted to 0% rate as the updated 2007 BLI already accounted for infill and redevelopment on supply side of analysis)
Newberg EOA (2010)	11 industrial (including 10% increase in density as efficiency measure) 21 commercial retail & office (overall average with office calculated @ 40% FAR & avg 201 sf/job; retail estimated @ 14.8 net buildable acres per 1,000 new households)	See density for industrial Office appears to assume 100% development on vacant land Retail assumes 95% use of vacant land (with 5% assumed for infill & redevelopment)
City of Beaverton Final Draft EOA (2010)	18 general industrial 10 warehouse 23 flex/business park 58 office 30 retail 38 institutional (@ Metro method of jobs/bldg sf & FAR for densities)	94.2% industrial 92.7% commercial (calculated for excess vacancy above 6% target normalized rate with excess figures at 5.8% industrial, 7.3% commercial)
Metro Urban Growth Report (2009)	6 general industrial & warehouse 23 flex/business park 46 office 27 retail 27 institutional (Calculated using jobs/bldg sf & FAR for densities; @ low end of spectrum for outer ring suburbs)	80-90% general industrial, warehouse & flex/business park (10-20% refill) 70% office (30% refill) 40-70% retail (or 30-60% refill with most (generally @ lower end of refill rates) 60-65% institutional (or 35-40% refill) (Eange for outer ring suburbs, 2015-30 time period)

Sources: From documents prepared by ECONorthwest, Johnson-Gardner and E. D. Hovee & Company, LLC.

McMinnville Three Mile Lane Area Plan: Market Analysis

Date April 16, 2019 | FINAL DRAFT
To McMinnville Three Mile Lane Area Plan
Project Management Team
From Chris Zahas and Sam Brookham,
Leland Consulting Group

Executive Summary

This executive summary provides an overview of the McMinnville Three Mile Lane Market Analysis, which assesses conditions for residential, commercial, office, and industrial development, as well as public recreational facilities. The executive summary includes a description of residential, commercial, office, and industrial forecasts and demand.

Population and Employment Forecasts

The Population Research Center at Portland State University (PSU) produces the annual Population Estimates for Oregon and its counties and cities, as well as the estimates by age and sex for the state and its counties. The population is projected to grow faster from 2020 onwards within the McMinnville UGB than in Yamhill County.

Table ES- 1. Population Forecasts, 2017-2040

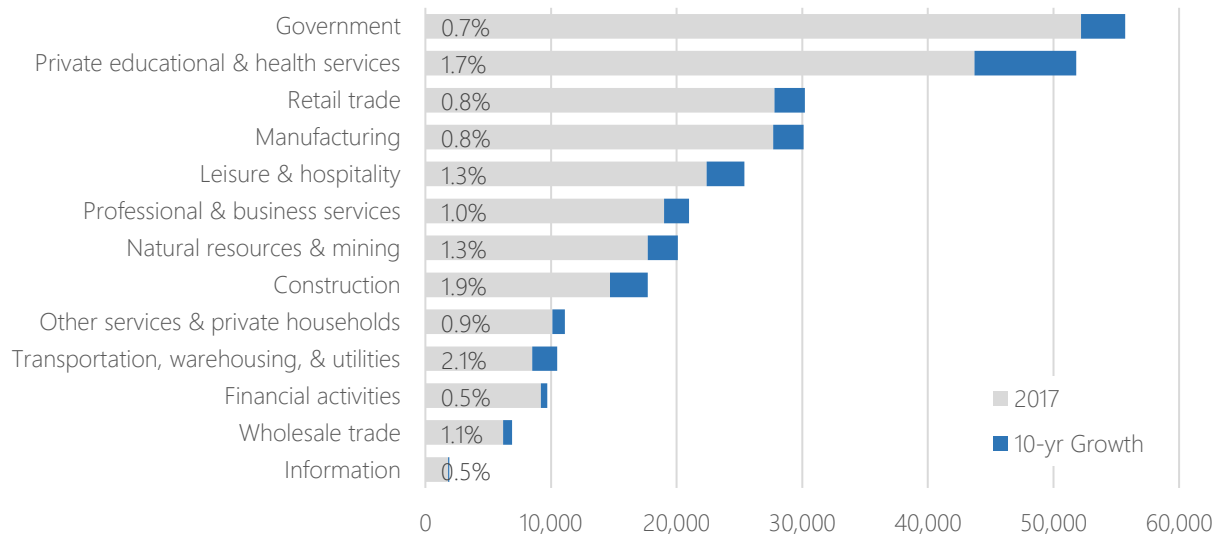
Area / Year	2017	2020	2025	2030	2035	2040
Yamhill County	106,555	111,101	119,339	127,404	135,096	142,311
Annual Growth Rate	N/A	1.40%	1.44%	1.32%	1.18%	1.05%
McMinnville UGB	34,293	35,709	38,437	41,255	44,122	46,956
Annual Growth Rate	N/A	1.36%	1.48%	1.43%	1.35%	1.25%

Source: Portland State University

The study area has a diversified employment base, reflecting the broad range of commercial and industrial businesses in the area. Key takeaways relating to regional employment forecasts include:

- More than one-quarter of all projected employment growth is expected to be in the educational and health services industries, with most in the health care field specifically.
- Industries that typically drive the majority of new office demand—namely Professional and Business Services, Financial Activities, and Information—are among the industries projected to see the slowest employment growth among all industries, and collectively account for eight percent of total projected employment growth.
- Manufacturing employment—the primary driver of industrial development—is projected to be responsible for eight percent of total employment growth.

Figure ES- 2. Projected New Employment Growth, Mid-Valley Region, 2017-2027



Source: Oregon Employment Department (QualityInfo.org).

Real Estate Market

Key takeaways relating to market conditions and real estate trends within the region, City, and Three Mile Lane study area specifically, are as follow.

- Residential prospects** are strong regionally and nationally, but market conditions are weaker in McMinnville. Significant growth in the Mid-Valley region has driven demand for household growth—for both multifamily and single-family. Growth projections for the region suggest demand will remain strong market-wide, although new development in McMinnville has clustered around the western and northern edges of the city. However, existing rents in the region are relatively low and may struggle to attract prominent multifamily developers in the region due to the continuously rising nature of construction costs. The single-family market is very tight, with strong absorption but very little inventory currently listed for sale—particularly in the sub-\$400,000 categories. Single-family homes, multiplexes, townhomes, cottage clusters, and low-rise “garden” apartments are all residential development types that would likely be feasible in the study area in the near-term. Higher-density developments may require additional incentives or other interventions.
- Retail prospects** are relatively strong for certain retail sectors, despite relatively weak market conditions (including rent, vacancy, absorption, etc.). The Three Mile Lane study area likely checks off many site selection criteria and market characteristics typically desired by prospective retailers. While there are few retailers currently in the area, desired physical characteristics, such as visibility, vacant developable land, and ease of access are all present. Further, McMinnville’s central location between the Oregon Coast, the Portland Metro, and Salem provides access to a wide variety of markets. Significant household growth and the burgeoning tourism industry will continue to improve retail prospects.
- Industrial users** are likely to find the Three Mile Lane area an attractive location given its separation from incompatible land users (like residential), ease of access, highway location, level terrain, and

proximity to the airport. While industrial development prospects at the national level are strong, especially warehouse and distribution—largely because of the rise of e-commerce—the Three Mile Lane corridor is not centrally located to large population centers and is therefore unlikely to capture much of this growing market. Instead, industrial growth is likely to be down to the growing agriculture and food and beverage production industry (including the wine industry). These latter users would be consistent with the existing industrial zoning while creating interesting places and improving walkable access to amenities.

- **Office prospects** are potentially strong but limited. Employment data shows few jobs and low historical growth for industry sectors that typically drive demand for new office space. Regionally, however, projections show significant employment growth in education, healthcare, and professional and business services—all of which drive the most demand for new office construction. If McMinnville is able to reposition its office market to capture a greater share of this regional growth, office prospects may expand. Indeed, two businesses recently relocated to the Three Mile Lane Area because of the lack of available office space downtown—reflecting the very low vacancy rate—but wished to remain in McMinnville because of the high quality of life. McMinnville’s quality of life not only has a positive impact on business retention, but there has also recently seen a significant uptick in small high-tech relocations from Silicon Valley that are struggling to find office space. Build-to-suit office opportunities may also arise and help build momentum in the local office market, especially with regard to healthcare and education where there are some existing major tenants and institutions.
- **Lodging** is likely to be a significant development type over the long-term, but the area may struggle to attract hotel developers due to its existing industrial character, lack of walkable amenities, and isolation from downtown. An assessment of the opportunities to capture demand associated with the burgeoning \$7 billion wine industry in the Willamette Valley and related tourism development requires further, more nuanced analysis.
- **Tourism** is a booming industry, particularly with regard to the wine industry, increasing market pressure for the new construction of compatible uses, such as experiential retail and restaurants, lodging, and craft industrial, as well as recreational amenities, such as trails and parks, that combined help to create an authentic, vibrant place.

Three Mile Lane in its entirety is located within an Opportunity Zone, a new tax program created by the 2017 Tax Cuts and Jobs Act designed to spur investment in distressed communities. Investors may defer tax on capital gains up to December 31, 2026, by making an appropriate investment through a qualified opportunity fund (QOF) in accordance with certain requirements. This will increase returns and should make investing in opportunity zones more appealing.

Demand and Forecasted Absorption

The following table provides a summary of market area demand for all applicable land uses. The table also includes an estimated development program for the Three Mile Lane study area, which is LCG’s projected “capture” of regional growth—based on historical trends, land supply, and anecdotal evidence based on the

two focus group discussion conducted to date.¹ The justification for both these numbers is included in the “Notes” column.

It is important to note that these numbers are not specific recommendations; rather, they simply provide an indication of the potential program mix based on market strength. Changes to the mix and specific numbers are anticipated with changes to the zoning, land supply, and public interventions, among other market disrupters.

Table ES- 3. Summary of Market Area Demand and Three Mile Lane Capture

Land Use	Market Area Demand	3ML Est. Program	Notes
Ownership Residential	2,555 units	NA	The market is strong for single-family, with high home values, household incomes, sales volumes, absorption, and construction activity. The quantity depends largely on the City’s vision for the area, applicable zoning, and buildable land.
Rental Residential	1,224 units	240 units	Despite solid national development prospects and strong market area demand due to high growth, low-rise rental apartments and multiplexes are likely the primary building types feasible in the study area because of relatively weak market characteristics.
Retail	539,200 sf	150,000 sf	The study area is well-positioned for new retail development, particularly large-format retail. Neighborhood-serving retail may be a mid- to long-term aspiration when additional residential construction occurs.
Office	144,500 sf	30,000 sf	The office market is relatively weak, and the absorption of significant speculative new development should not be expected. However, opportunities may arise because of McMinnville’s high quality of life, and the Three Mile Lane corridor’s proximity to the airport and institutional users, such as healthcare and education.
Industrial	793,000 sf	80,000 sf	The industrial market remains strong due to the growth of agriculture, food and beverage production, and manufacturing. Continued growth may generate demand in the study area, but development may negatively impact prospects for other land uses, such as lodging and multifamily.
Lodging	NA	NA	Lodging is a specialized development type, which may be feasible given McMinnville’s strong tourism industry. However, a weak office market may limit feasibility in the short-term.

Source: Leland Consulting Group

¹ Where applicable, LCG increased the projected growth rate to reflect higher spending due to tourism from the burgeoning wine industry. Spending generated from tourism would not otherwise get captured within LCG’s demand models as the majority of demand is typically generated by those that live and work within the primary market area.

Introduction

The Three Mile Lane Area Plan (3MLAP) project will develop an area plan for the Three Mile Lane corridor in McMinnville, updating the 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The 3MLAP will integrate a wide range of land uses and a multi-modal transportation system that serves both local and state transportation needs and provides active connectivity within the plan area as well as to the City's downtown core. The project will consider how to maximize the opportunities for job creation, housing, and resiliency planning in the corridor by leveraging the land assets to their highest and best use for affordable housing, industrial development, tourism development, hospital expansion, airport expansion, and gateway improvements.

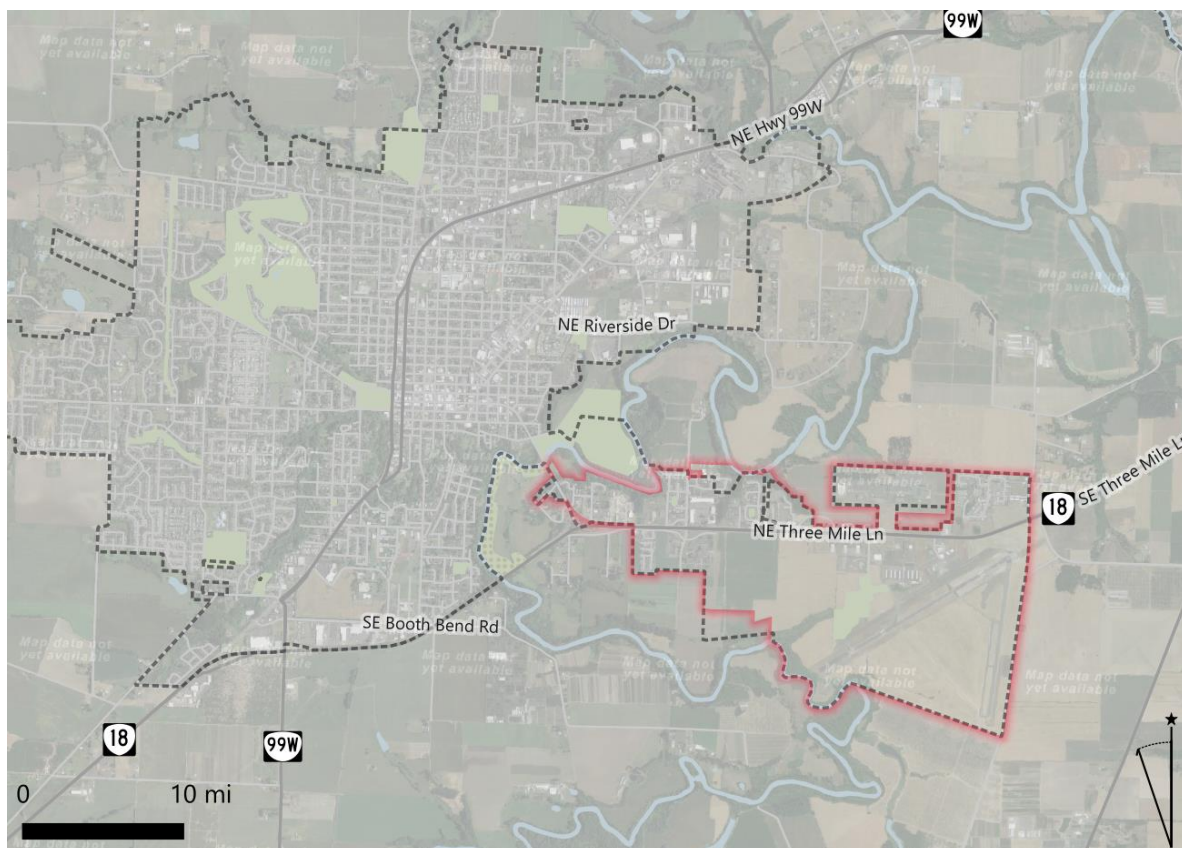
Task Overview

This Market Analysis includes existing and future market conditions for development in the Project Study Area based on current forecasts for population and employment growth; published forecasts for expected growth and development trends; contact with industry professionals; and information provided by participants project meetings and other public input.

Project Study Area

The project study area is located in the southeast arm of McMinnville, centered around State Highway 18/Three Mile Lane, as indicated below in Figure 1.

Figure 1. Three Mile Lane Study Area



Source: Google, TIGER, Leland Consulting Group

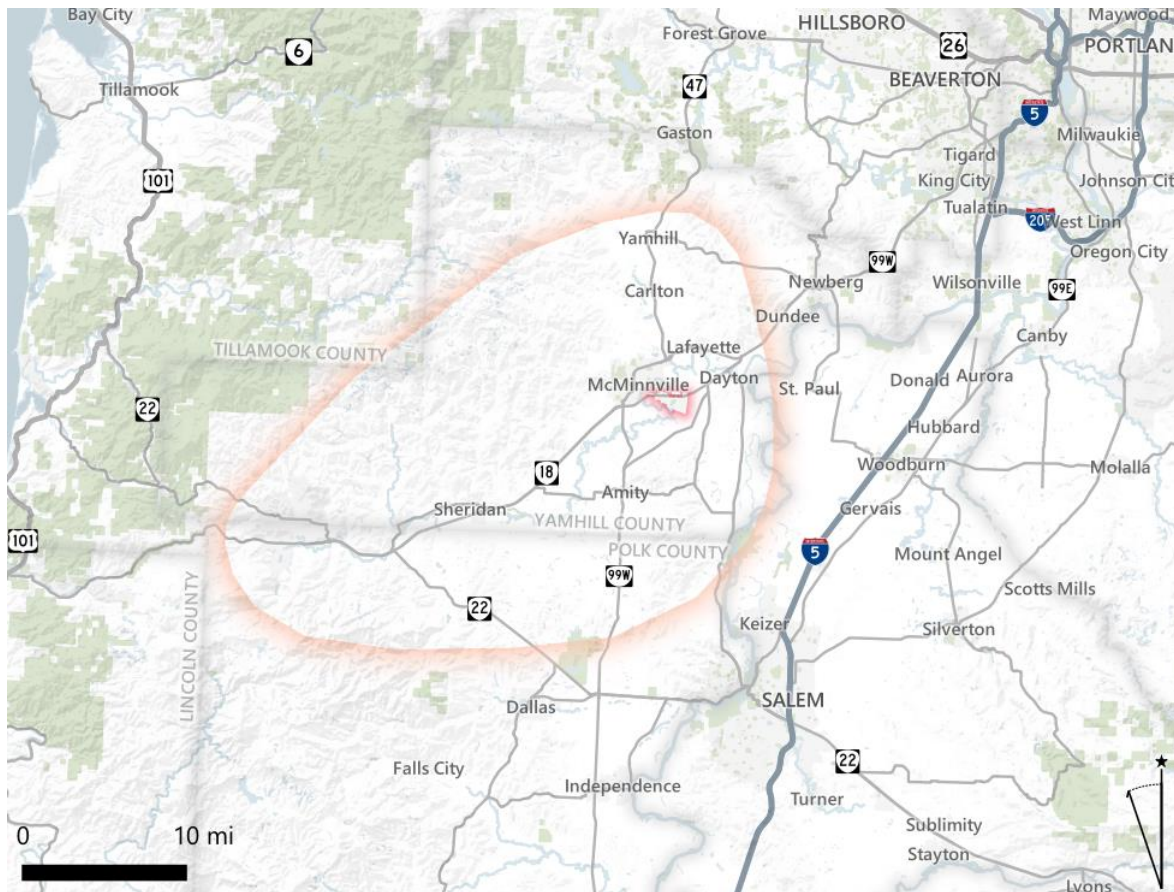
The Market Area

The market area, as defined in Figure 2, represents the area from which the most demand for residential, commercial, and industrial uses will originate, and where most of the competitive development is located. Residents and businesses located in this area are the primary groups to support retail on site, lease/utilize office space, and live in the study area. The market area is roughly bounded by the Willamette River to the east, Tillamook State Forest to the west, and Polk County to the south—although the market does extend into Polk County, there are few residents or jobs located in this area—and the City of Yamhill to the north.

The market area is defined based on several variables, including drive time, destinations, and commute patterns and other relationships to the City of McMinnville. As the most southwestern city of significance on the way to the coast, the market area extends further southwest than it does to the north and south, where McMinnville is unlikely to out-compete with Oregon’s major metropolitan regions—namely Portland and Salem. The pass-through traffic on Highway 18 from Portland to the coast is another market of importance to retailers and tourism-related developers, but not necessarily captured within this report. The retail leakage analysis, discussed in depth later in this report, would capture some of the retail spending, but impacts to hotels, wineries, and other important tourism-related organizations and development would not be cataloged.

McMinnville and other cities located on the western periphery are likely to capture the majority of demand in the Western Willamette Valley, while Newberg is closer to the Portland Metropolitan Area and more likely to capture demand for residents and businesses whose lives and livelihoods are oriented towards Portland.

Figure 2. Regional Overview and Market Area



Source: TIGER, Leland Consulting Group

National and Regional Context

Development Context and Market Trends

Development and Land Use Types

This section includes excerpts from the Urban Land Institute’s (ULI) Emerging Trends in Real Estate report for 2019, an annual publication that assesses the state of real estate markets both nationally and locally based on interviews and surveys with experts in development and finance. Both national and regional trends have an impact on future land uses in the study area: they set the stage for the types of investments that are desirable for real estate developers and investors.

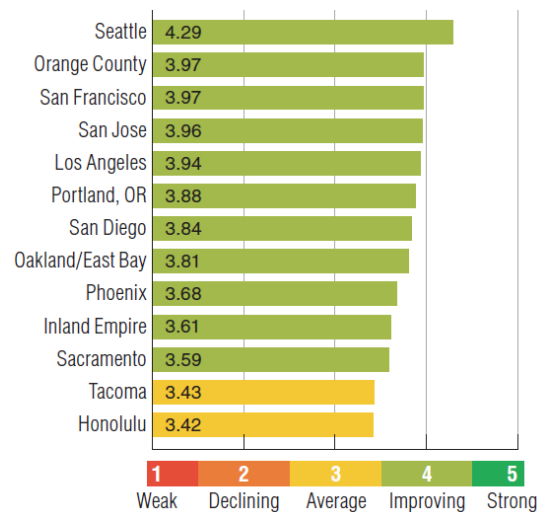
*Emerging Trends*² suggests that access to talent (i.e., well-educated workers) is what drives the economies of many of the Pacific Northwest markets.

The Portland metropolitan region³ is described by ULI as a "solid 18-hour city" whose strengths include strong economic growth due to increased wealth in the market, a high quality of life and attractive outdoor activities, and a diverse workforce that helps to supply trained labor to industries.

While the regional economy is not considered as strong as other Pacific Coast major metropolitan regions, it has experienced the benefit of being able to offer a more competitive cost structure to its more expensive neighbors along with a high quality of life for residents. This is a prime example of how quality of life can drive an economy and one that McMinnville can continue to leverage, especially given the affordability challenges facing the Portland metro.

Indeed, the main challenges in the Portland metropolitan area are housing affordability and critical infrastructure enhancements, where the median home value is \$338,000 and the median household income is \$68,100. McMinnville’s relationship to the Portland metropolitan region may be nuanced, but affordability appears to be a factor. According to 2015-2016 migration data from the IRS (which is based on the address on annual tax returns), Yamhill County attracted approximately 230 households from Multnomah County, with only 173 households migrating *from* Yamhill to Multnomah during this same period. In general, Yamhill’s migratory relationship with other Oregon counties is more prevalent than Multnomah: approximately 65 percent of incoming households to Yamhill County in 2015 to 2016 were from Oregon, compared to only 37 percent for Multnomah. Further, 69 percent of households *leaving* Yamhill migrated to other Oregon counties, compared to only 51 percent of Multnomah households.

Figure 3. Local Outlook: Pacific Northwest



Source: ULI

² [URL](#)

³ Since McMinnville is on the periphery of the Portland metropolitan area, Portland directly impacts McMinnville’s economy.

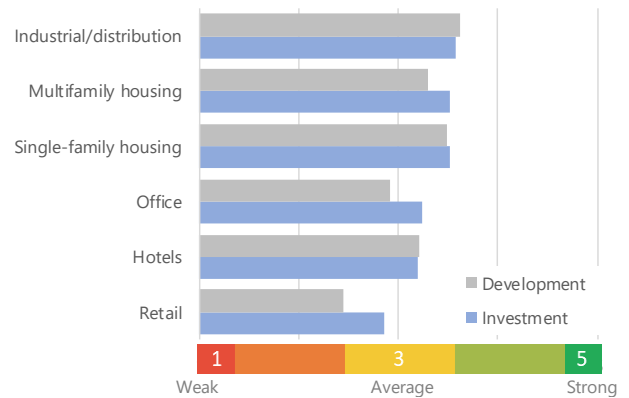
National Real Estate Development Prospects

Emerging Trends also provides guidance about the types of development that are likely to be most desirable in the coming years from a developer and investor perspective. While this is a national outlook, the guidance is relevant for most local markets, including McMinnville.

The following figure shows ULI’s high-level summary of national investment and development prospects for 2019. Several notable features are described below.

Industrial and distribution are favored development types, largely because of the acceleration of online retailing, and the need for distribution points for these goods. However, developers will seek to locate online distribution centers near the center of metropolitan areas where the density of residents and businesses is greatest, therefore the impact of this trend in McMinnville is likely to be modest. Single-family housing has picked back up significantly; for many years following the great recession the development of single-family housing was much slower. Multifamily housing is also seen as having fair to good development prospects. Hotel development is judged to be just above fair.

Figure 4. National Development Prospects, 2019



Source: ULI

LCG’s experience is that hotel development is a specialized form of development, which will continue to work in specific locations, often with an established base of major employers or a major tourism draw, as McMinnville has. Office development is less desirable,⁴ in part because the new generation of white-collar employees requires less space: many hard-wall offices have been eliminated in favor of open floor plans, more employees are working remotely, and paper filing and other “analog” space requirements have become digitized. A majority of new office development has also taken place in close proximity to central business subareas (e.g., downtown Portland), where many young professionals locate and where job growth has been fastest.

New retail development is seen by investors as the riskiest and least desirable type of development, primarily due to the rapid expansion of online retailers who are capturing market share from mall anchors and commodity retailers. Sears, Macy’s, Toys R Us, Sam’s Club, J.C. Penny, and Payless Shoes are among the chains that have completed major store closures. The retrenchment of these traditional retailers and years of high vacancies have made retail developers cautious. Nevertheless, there may be opportunities for retail growth in under-served markets or areas with significant population growth.

The Impact of Tourism on Development

There are several emerging trends in traveler behavior and consumer preferences that have a significant impact on tourism, and therefore should be considered in terms of potential investment decisions. While investments

⁴ However, two office-related businesses have recently moved to Three Mile Lane because they outgrew downtown locations. Office market characteristics provided later in this report shows a low vacancy rate in the office market of 1.4 percent, suggesting a significant lack of available office space.

are typically related to commercial estate, tourism can often also result in residential demand as visitors are drawn to a particular quality of life (for example, young, emerging professional looking to relocate or retirees looking for a place to retire). Some of these trends are described below.

- **Authenticity** – Travelers are increasingly seeking authenticity in the places they visit, where they can experience deeper and more personal connections. According to a travel trend poll of travel agents by American Express in 2014, more than one-third (34 percent) of respondents said customers are seeking to immerse themselves in unique and authentic aspects of their travel destinations.
- **Interactive/Experiential Tourism** – It is more likely that a visitor will be motivated to travel to a destination, extend their stay or return for a future visit if the attractions and assets allow for direct interaction. This has significant implications for the art/culture, entertainment/festival, culinary and other sectors of the McMinnville visitor offering.
- **Culinary/Food Tourism** – Authentic food experiences have become a popular motivator for travel, according to research conducted by TrekkSoft, an international tour operator software company. In a worldwide survey of nearly 150 tour operators, respondents described food markets, tasting sessions, cooking lessons and vineyard/farm visits as growing in popularity.
- **Health and Wellness** – Health-conscious consumers are now seeking to enhance their well-being through travel experiences. In 2017, Booking.com found that 40 percent of travelers are interested in a health and well-being travel experience, such as locally sourced menus, improved access to recreational activities such as yoga, and wellness- or fitness-oriented events.
- **Leveraging Waterfronts** – Both large- and mid-sized communities throughout the country have invested in their scenic waterfronts by planning and supporting the development of shopping districts, outdoor restaurants and river walks. Cities such as Grand Rapids (MI), Bend (OR), Pueblo (CO), Reno (NV) and many others have developed extensive plans and zoning adjustments to add riverside cafes, unique retail, gondolas, craft breweries and other assets that build on these invaluable natural assets.

The Impact of Airports on Development

The 650-acre McMinnville Municipal Airport is located within the Three Mile Lane Study Area on the south side of Highway 18. The facility can accommodate private jet aircraft, but there is no commercial airline that services McMinnville. Most of the aircraft housed at the airport are small planes owned by private individuals. There are also a few jets and a significant helicopter presence due to the helicopter flight school.

While there is not currently commercial air service operating out of the airport, it is important to acknowledge any impact it has on the area's prospects, including any related development opportunities. An assessment of national trends in general aviation and related development helps provide context for possible opportunities.

Nationally, many modern airports now generate most of their revenues from sources other than aviation. Airport authorities are no longer stale bureaucracies. They have quietly been morphing into what can best be called entrepreneurial landlords.

Depending on local circumstances, airports have seen the following types of development (in addition to the usual airport facilities like parking, etc.), either on their lands or directly adjacent to their lands (many of these are in high demand and, therefore, currently at a premium):

- Hotel developments
- Conference/convention centers
- High-end outlet malls
- Destination shopping centers
- Corporate head offices
- Mixed-use developments (shop, work, play, stay)
- Office buildings
- Post-secondary education facilities, specifically aerospace-related
- High-tech business parks
- Industrial developments (manufacturing, warehousing)
- Cargo facilities
- Casinos
- Entertainment destinations
- Recreational facilities
- Botanical gardens
- Butterfly gardens
- Residential developments
- Libraries
- International sports facilities
- Local amenities

Demographics

This section provides an overview of past, existing, and projected demographic conditions.

Household and Population Characteristics

In 2018, the project study area was home to just over 2,000 residents—approximately six percent of McMinnville’s total population and three percent of the market area. The market area—which is mostly located in Yamhill County—contains about three-quarters of the County’s population.

The study area’s population has grown at the fastest rate versus the city, county, and state, although total numerical growth has been relatively little. McMinnville, in general, has generally experienced significant population growth—particularly from 2000 to 2010.

Table 1. Population Counts

	Study Area	McMinnville	Market Area	Yamhill Co.	Oregon
2000 Total Population	1,536	27,198	59,834	84,992	3,421,399
2010 Total Population	1,856	32,187	69,597	99,193	3,831,074
2018 Total Population	2,086	34,366	75,125	104,675	4,185,014
00-10 Annual Growth Rate	1.9%	1.7%	1.5%	1.6%	1.14%
10-18 Annual Growth Rate	1.5%	0.8%	1.0%	0.8%	1.11%
00-18 Annual Growth Rate	1.7%	1.3%	1.3%	1.2%	1.13%

Source: ESRI and Leland Consulting Group

Selected household characteristics are provided in the following table. Generally, existing households in the Three Mile Lane study area are slightly smaller, have higher incomes, and are significantly older, more diverse, and less educated than McMinnville and the wider region. Further, home values are higher than the City and market area average, yet lower than the county and state, likely because despite there being relatively few homes in the study area, most were built post-2000.

Table 2. Select Demographic and Housing Characteristics, 2018

	Study Area	McMinnville	Market Area	Yamhill Co.	Oregon
Avg. Household Size	2.58	2.65	2.74	2.73	2.50
Median Home Value*	\$291,043	\$277,574	\$292,514	\$307,273	\$301,025
Median HH Income	\$55,460	\$53,456	\$57,553	\$61,863	\$57,902
Per Capita Income	\$27,729	\$26,783	\$27,420	\$28,571	\$31,775
Median Age	40.9	35.7	38.1	38.0	39.7
Non-white Pop	20.6%	17.8%	16.5%	14.6%	16.4%
Bachelor's +	19.0%	24.4%	22.2%	26.3%	33.4%

Source: ESRI and Leland Consulting Group

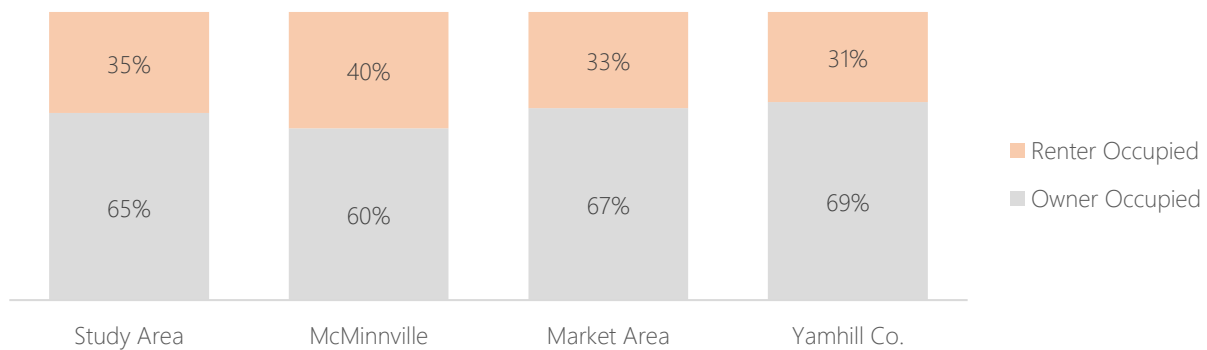
*Owner-occupied housing only

As shown in Figure 5, the study area has a greater proportion of renters compared to market area and county (where owner-occupied households are the norm), but less than the City of McMinnville. This is likely reflective of the higher proportion of older and higher-income households in the study area versus McMinnville.

The Pew Research Center indicates that certain demographic groups—such as young adults, nonwhites, and those with less educational attainment—have historically been more likely to rent than other groups, and rental rates have increased among these groups over the past decade. However, rental rates have also increased among some groups that have traditionally been less likely to rent, including whites and middle-aged adults.⁵

In fact, although renting is most common among young adults, nearly everyone rents at some point in their lives—whether by choice or by necessity. However, rental housing is particularly important for low-income and minority households, about half of whom are renters. As a result, supplying affordable units in a variety of structure types and neighborhoods is a critical national housing policy priority.^{6,7}

Figure 5. Tenure, 2018



Source: ESRI and Leland Consulting Group

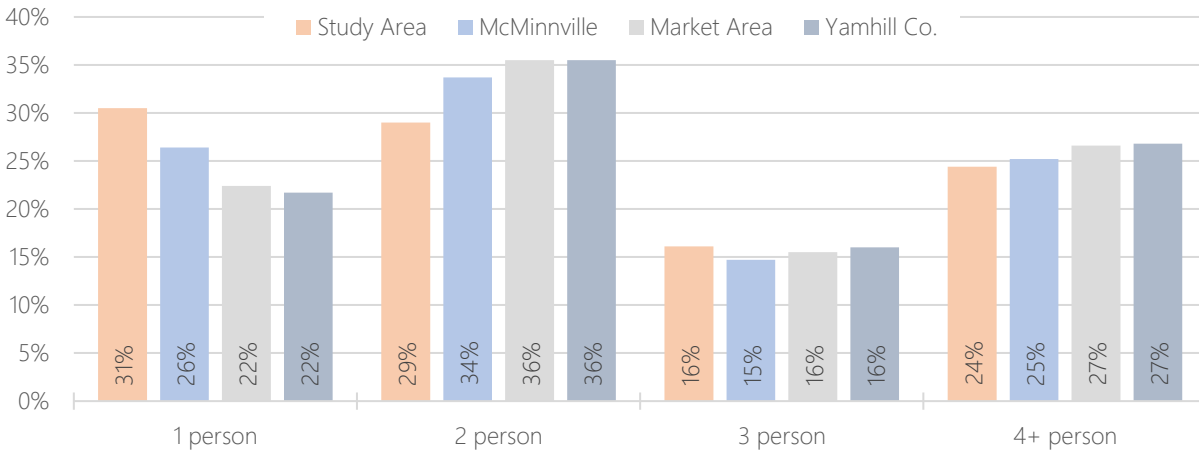
⁵ Pew Research Center, "More U.S. households are renting than at any point in 50 years," 2018, [URL](#)

⁶ From "Renter Demographics" by the Joint Center for Housing Studies of Harvard University, [URL](#)

⁷ At the time of writing, McMinnville was undertaking a Housing Needs Analysis (HNA), the preliminary results of which show housing affordability as a growing challenge in McMinnville.

Figure 6 shows the proportion of households by size for each comparison area. The study area currently has the greatest proportion of one-person households but is consistent with all comparison areas for households with three or more people. Generally, one- and two-person households are the most common household size.

Figure 6. Households by Size, 2010



Source: ESRI and Leland Consulting Group

Residential Forecasts

Population growth is a key indicator and driver of demand for both residential and commercial development, and therefore, population forecasts are critical in estimating future demand. The projected growth—or lack thereof—of the population, households, and employment help to inform future growth rates which are used in the demand analyses presented in this report.

The Population Research Center at Portland State University (PSU) produces annual population estimates for Oregon and its counties and cities, as well as estimates by age and sex for the state and its counties.

The population is projected to grow faster within the limits of the McMinnville UGB than in Yamhill County as a whole. As such, an increasing share of the county’s population is expected to reside in McMinnville over the next 40 years (32 percent in 2018 and 35 percent by 2067).

While McMinnville will have high actual population growth, other cities in Yamhill County have higher projected growth rates over the next two decades. These cities include Dundee (1.84 percent), Newberg (1.81 percent), Lafayette (1.7 percent), Carlton (1.6 percent), and Yamhill (1.2 percent).

Table 3. Population Forecasts, 2017-2040

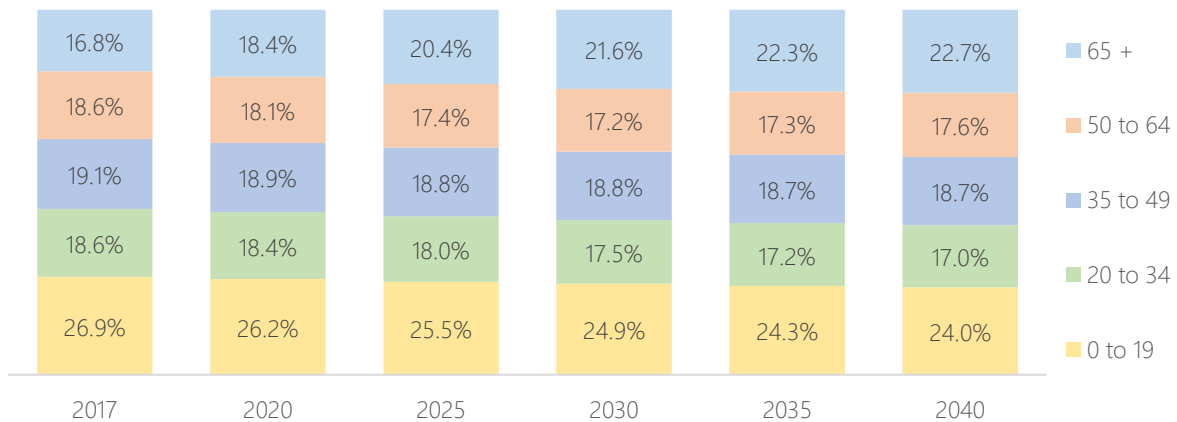
Area / Year	2017	2020	2025	2030	2035	2040
Yamhill County	106,555	111,101	119,339	127,404	135,096	142,311
Annual Growth Rate	N/A	1.40%	1.44%	1.32%	1.18%	1.05%
McMinnville UGB	34,293	35,709	38,437	41,255	44,122	46,956
Annual Growth Rate	N/A	1.36%	1.48%	1.43%	1.35%	1.25%

Source: Portland State University

The 65-and-over age group is projected to experience the most growth in the next two decades as the entire baby boomer generation enters retirement age. After 2030, the millennial presence is projected to significantly

increase the proportion of the population aged between 50 and 64. Access to essential services and a sufficient range of appropriate housing options will be critical in accommodating these aging demographics. These shifting demographics are likely to have a significant impact on residential development. For example, growth in the number of seniors will result in demand for senior housing (age-restricted apartments or assisted living facilities) and small and maintenance-free dwelling units. Growth in the Millennial generation will result in demand for affordable single-family, townhomes, and multifamily housing.

Figure 7. Population by Age, Yamhill County, 2018-2040



Source: Portland State University

Employment

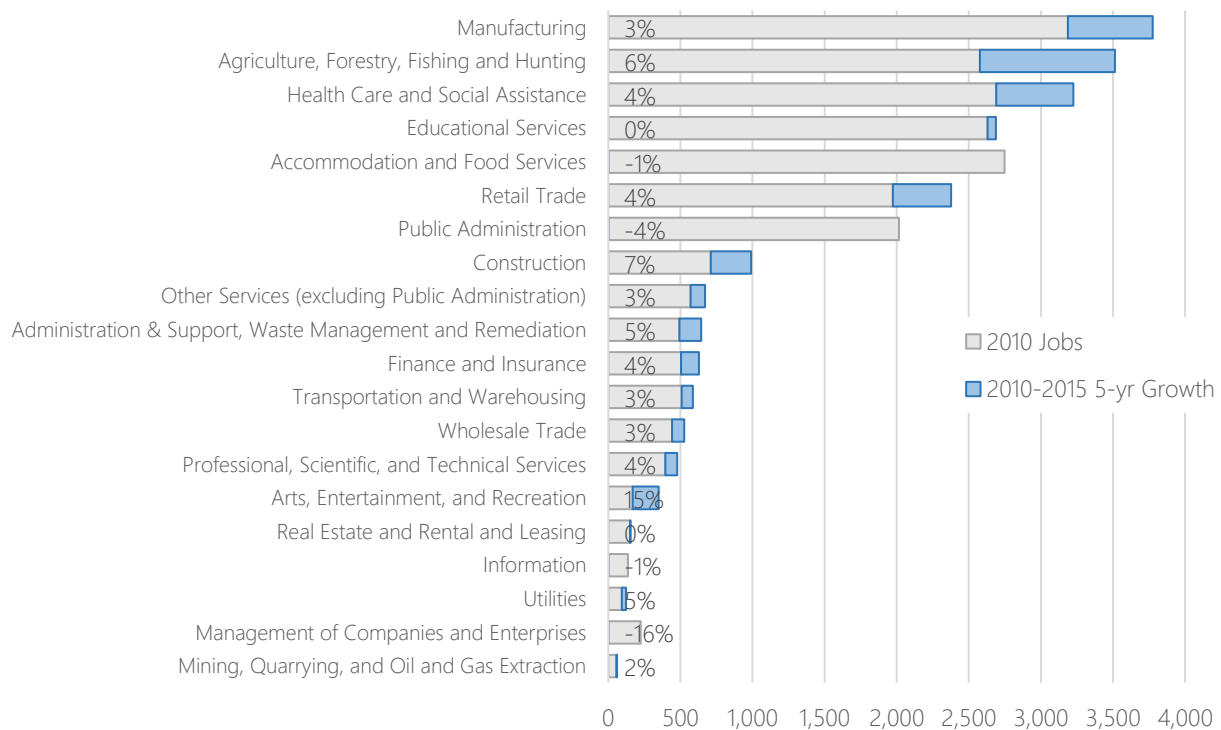
This section provides an overview of past, existing, and projected employment conditions.

Total job counts for 2010 and 2015 and annual employment growth are shown in Figure 8. Employment in the McMinnville market area predominantly consists of jobs in manufacturing, education, healthcare, accommodation and food services, and retail. These five industries were responsible for over 71 percent of all jobs in 2015. Approximately one-quarter of all jobs in 2015 were in the manufacturing industry. Of these top five industries, all but Educational Services experienced high annual growth of over two percent.

- The fastest growing industries between 2010 and 2015 were:
 - Arts and entertainment (15.5% annually). While this sector is relatively modest in size, its growth has been the highest among all other sectors, likely due to the increase in tourism in the area.
 - Construction (6.9% annually).
 - Agriculture, forestry, fishing, and hunting (6.4% annually). Not only in this the third-fastest growing sector in the market area, but it is also the second-largest in terms of total jobs. One of the inputs into this sector is the wine industry, in which McMinnville has continued to experience growth.
 - Administrative & support, waste management & remediation services (5.5% annually)
 - Utilities (5.4% annually)

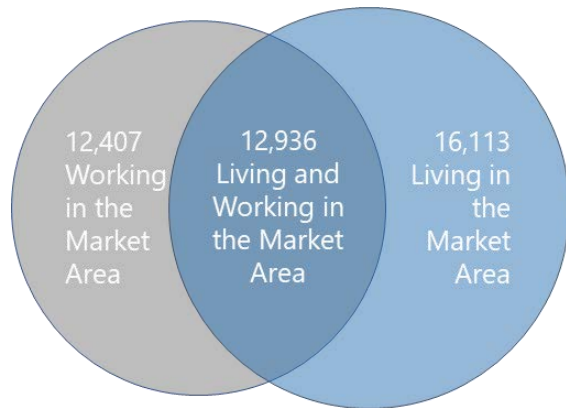
- Finance and insurance (4.5% annually). The majority of speculative office demand is typically generated by this sector and the following sector. This growth improves development prospects for new office development, but in terms of total jobs, these sectors remain relatively minor in the region.
- Professional, scientific and technical services (3.9% annually).
- The only industries to lose jobs in the five-year period between 2010 and 2015 were:
 - Management of companies and enterprises (-15.6% annually)
 - Public administration (-3.7% annually)
 - Information (-1.3% annually)
 - Accommodation and food services (-0.7% annually).

Figure 8. Employment Profile, McMinnville Market Area



Source: LEHD. Percentages shown above are compound annual growth rates for the past five years.

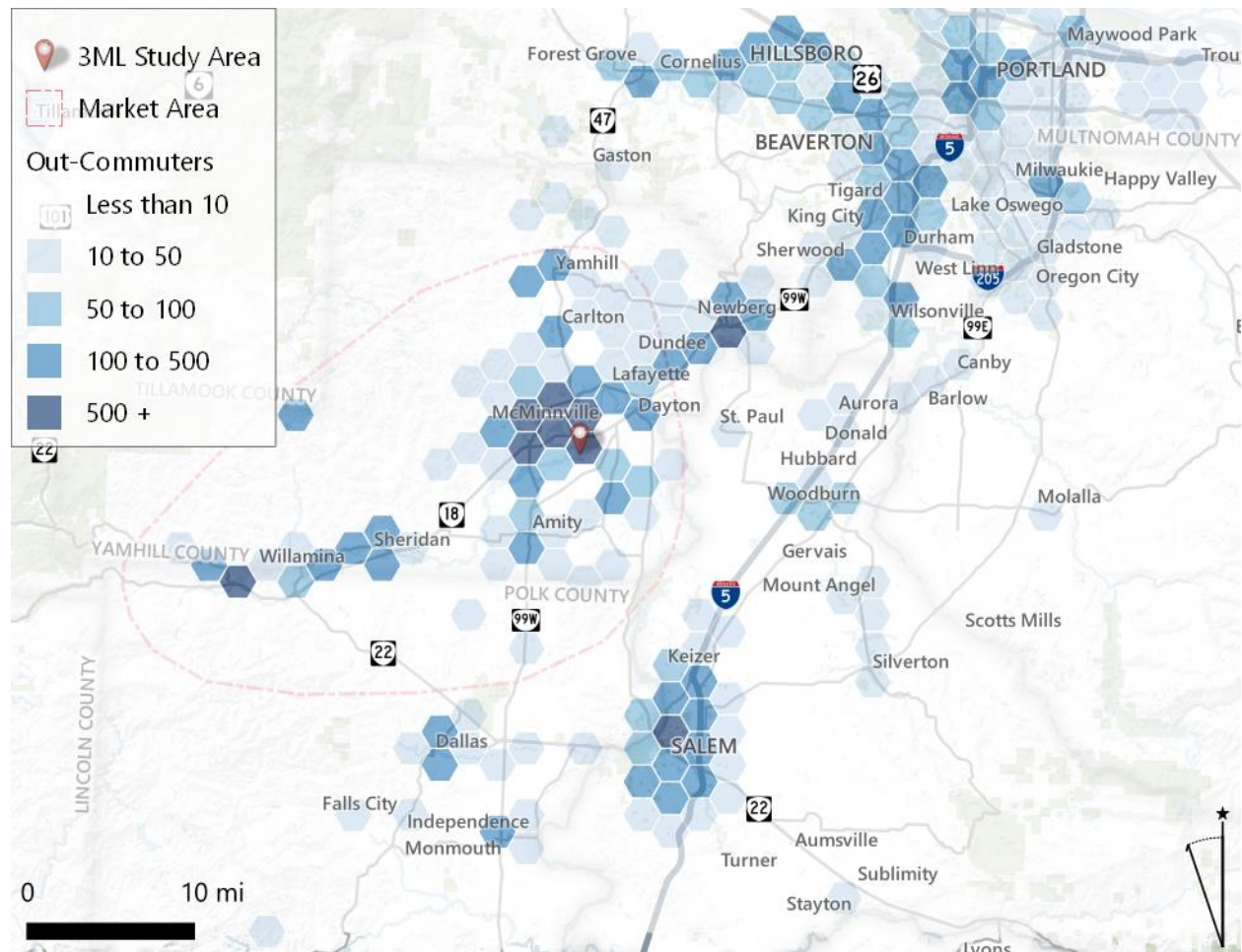
Figure 9. Commute Patterns, Inflow-Outflow, McMinnville Market Area, 2015



The number of people that both live and work in the McMinnville market area generally increased from 2005 to 2015, suggesting that McMinnville’s employment market has strengthened over the past decade. Approximately half of the people working in the market area as of 2015 also live there, up from 41 percent in 2005.

Figure 10 below shows where residents of the market area commuted to work in 2015. The highest concentration of employees living in the market area is within McMinnville. However, a significant number of market area residents commute to Newberg and Salem, as well as further afield to various cities in the Portland metropolitan area. Few residents commute to the coast, although there are small concentrations of employment in cities and towns to the southwest of McMinnville—namely Sheridan and Grand Ronde.

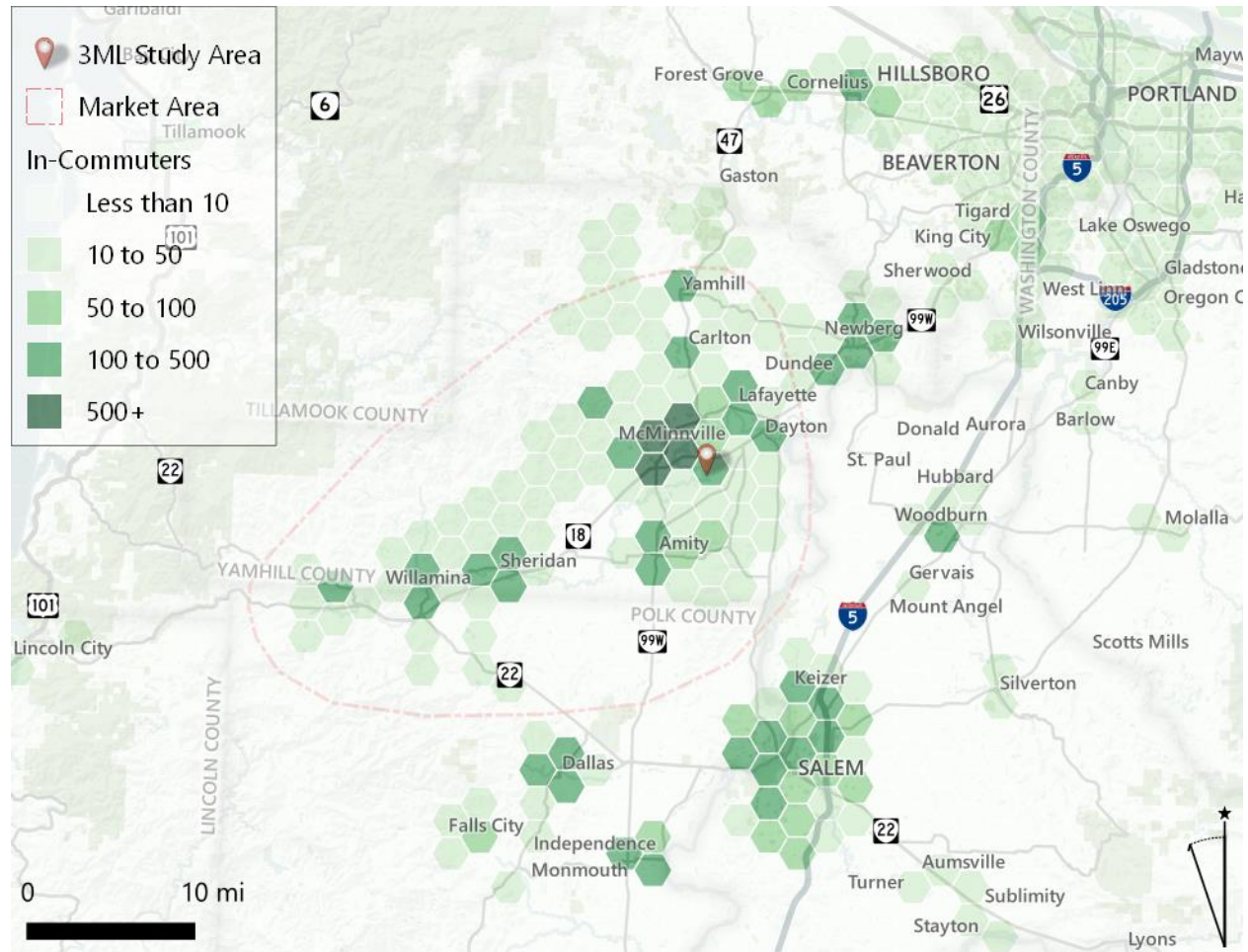
Figure 10. Where Market Area Residents Commute To, 2015



Source: LEHD OnTheMap and Leland Consulting

As the following map shows, there is a significantly greater concentration of employees that also live in the McMinnville area. Few employees working in McMinnville and the surrounding market area live in Salem and even fewer in areas of the Portland Metro.

Figure 11. Where Market Area Employees Commute From, 2015



Source: LEHD OnTheMap and Leland Consulting

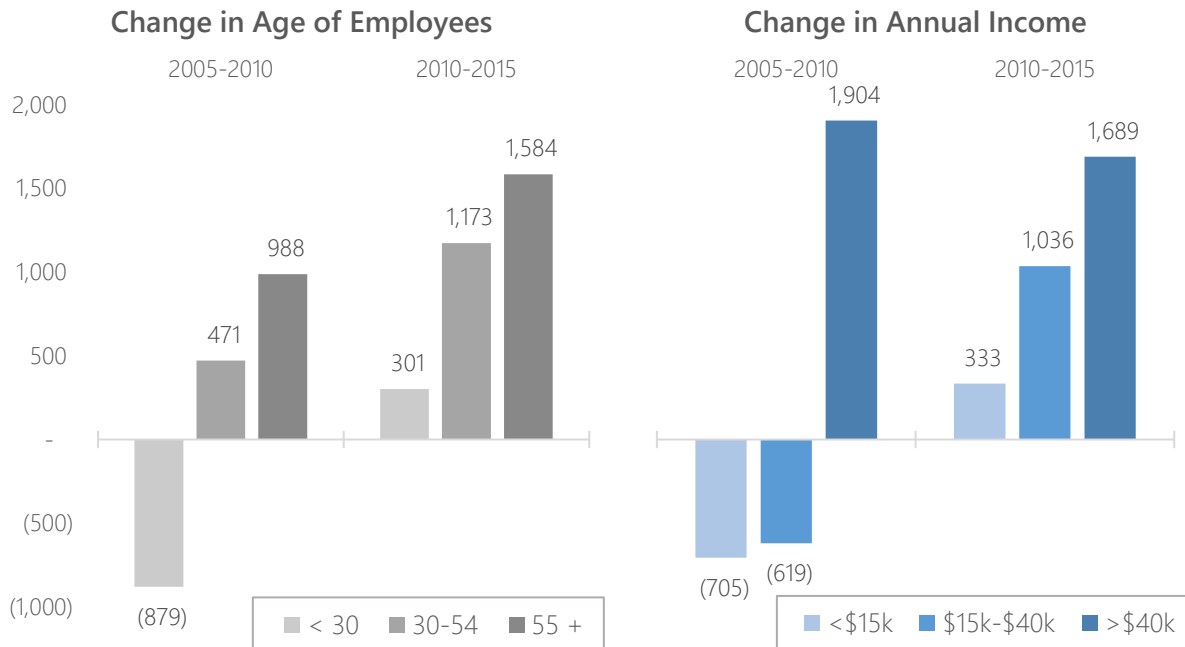
Figure 12 below shows the proportion of market area employees by both age and annual income in 2005, 2010, and 2015. Generally, employees in the market area were significantly older in 2015 than in 2005 but earned significantly more on an annual basis. In fact, employment grew by almost 2,600 jobs in the 55-and-over age category. During this same period, workers in the under-30 age category declined by almost 600.

Some of the key takeaways about McMinnville’s employment associated with both the aforementioned commute data and this trend data is summarized as follows.

- McMinnville as an aging community that is failing to attract or retain its younger workforce. Comparatively, the same data source shows a similar yet less significant trends for the City of Portland.
- People over the age of 55 are moving to McMinnville as they near retirement age, skewing the average employee age upwards. In contrast, almost half of all new employment growth in Portland between 2010 and 2015 was for employees aged between 30 and 54. Similarly, however, the metro

also showed a decline in workers younger than 30 between 2005 and 2010, and only modest growth between 2010 and 2015. Ultimately, this shows Oregon to be an attractive place for workers well into their career already rather than younger, entry-level workers.

Figure 12. Change in Number of Employees by Age and Annual Income, McMinnville, 2005-2015

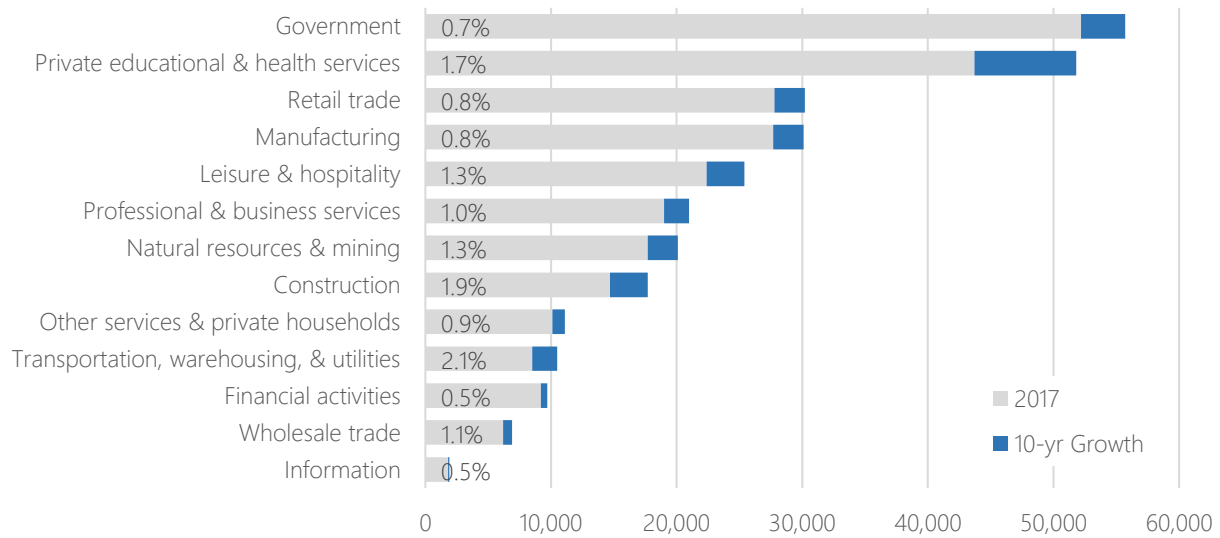


Source: LEHD

Employment Projections

For employment forecasts, we use the State Employment Department’s 10-year projections for each industry. Over half of all projected employment growth is expected to occur in the industries of Educational and Health Services, Government, Construction, and Leisure and Hospitality. The fastest growing industry is Transportation, Warehousing, and Utilities. New, specialized office demand may arise from significant growth in education and healthcare, while employment growth in leisure and hospitality is indicative of the region’s burgeoning tourism presence, particularly with regard to the wine industry.

Figure 13. Projected New Employment Growth, Mid-Valley Region*, 2017-2027



Source: Oregon Employment Department (QualityInfo.org)

*Includes the four-county region of Marion, Polk, Washington, and Yamhill

However, caution is required with these projections. Not only do they apply to a larger geographic area than the residential projections (a four-county region versus the McMinnville UGB), but the employment projections are given by industry, likely resulting in a significant margin of error. As such, it is likely to be just as instructive to consider historical trends (e.g. from the last five to 10 years) in projecting future employment in the market area. The demand estimates for new office and industrial development that are presented later in this report are based on an average of historical and future growth rates.

Real Estate Market

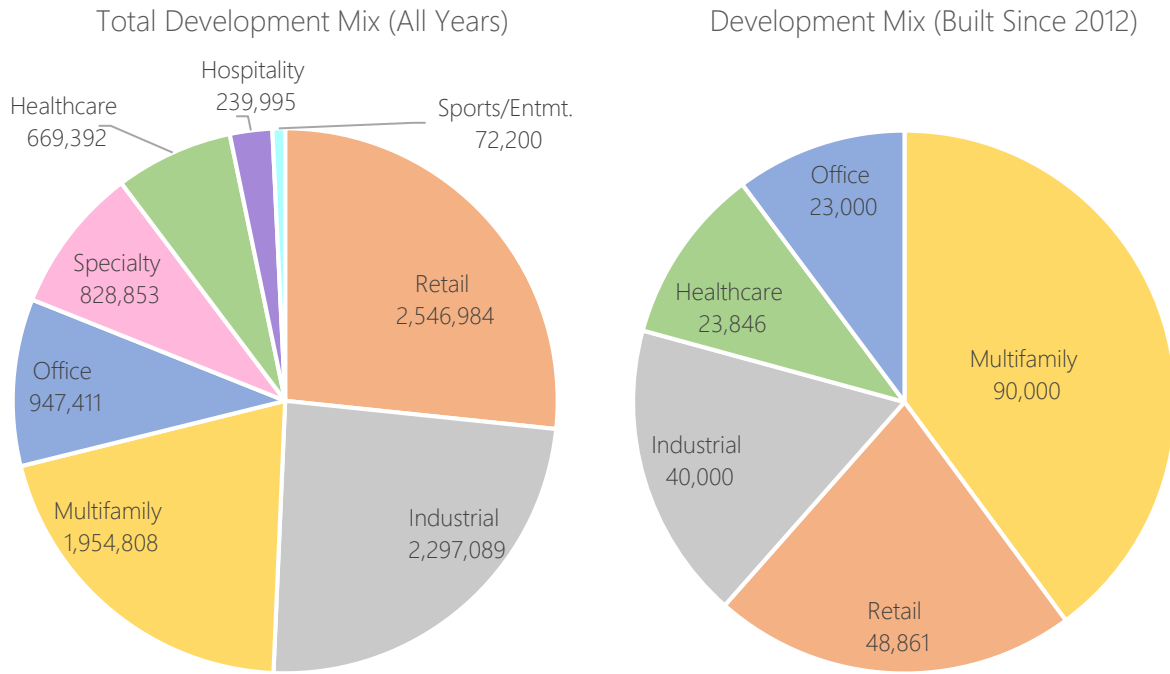
This section covers the residential market, which includes both single-family and multifamily housing; the retail market; and the market for “employment” space, which includes both industrial and office land uses. Market conditions—such as the development pipeline, building vacancies, rents, and other market trends—are critical to establishing the market’s strength and subsequent level of financial feasibility for new development.

However, more recent development in McMinnville has been mostly multifamily residential (predominately apartments), which is consistent with national trends and consumer preferences, despite weaker market conditions. With the growing demand among younger and older generations for apartments, tighter mortgage lending requirements, and many years of limited apartment production, there remains pent-up demand for apartments in most markets. Coupled with a changing commercial market in which office space use is declining every year and retailers are closing at an unprecedented rate in face of e-commerce, multifamily has generally become the dominant type of new development. This trend appears to be applicable to the McMinnville market area as well. With that said, construction costs and increasing land prices continue to increase feasibility barriers. If rents are not high enough to justify new construction to mitigate these barriers, then additional funding will be necessary to bridge the feasibility gap.

Figure 14 shows commercial and multifamily real estate development (excluding institutional and single-family residential) by total square footage within the market area. The chart on the left shows all development built

across all years. The land use mix is relatively evenly spread across many development types, with retail and industrial comprising over half of all development.

Figure 14. McMinnville Market Area Land Use Mix, Commercial and Multifamily Development (Square Feet)

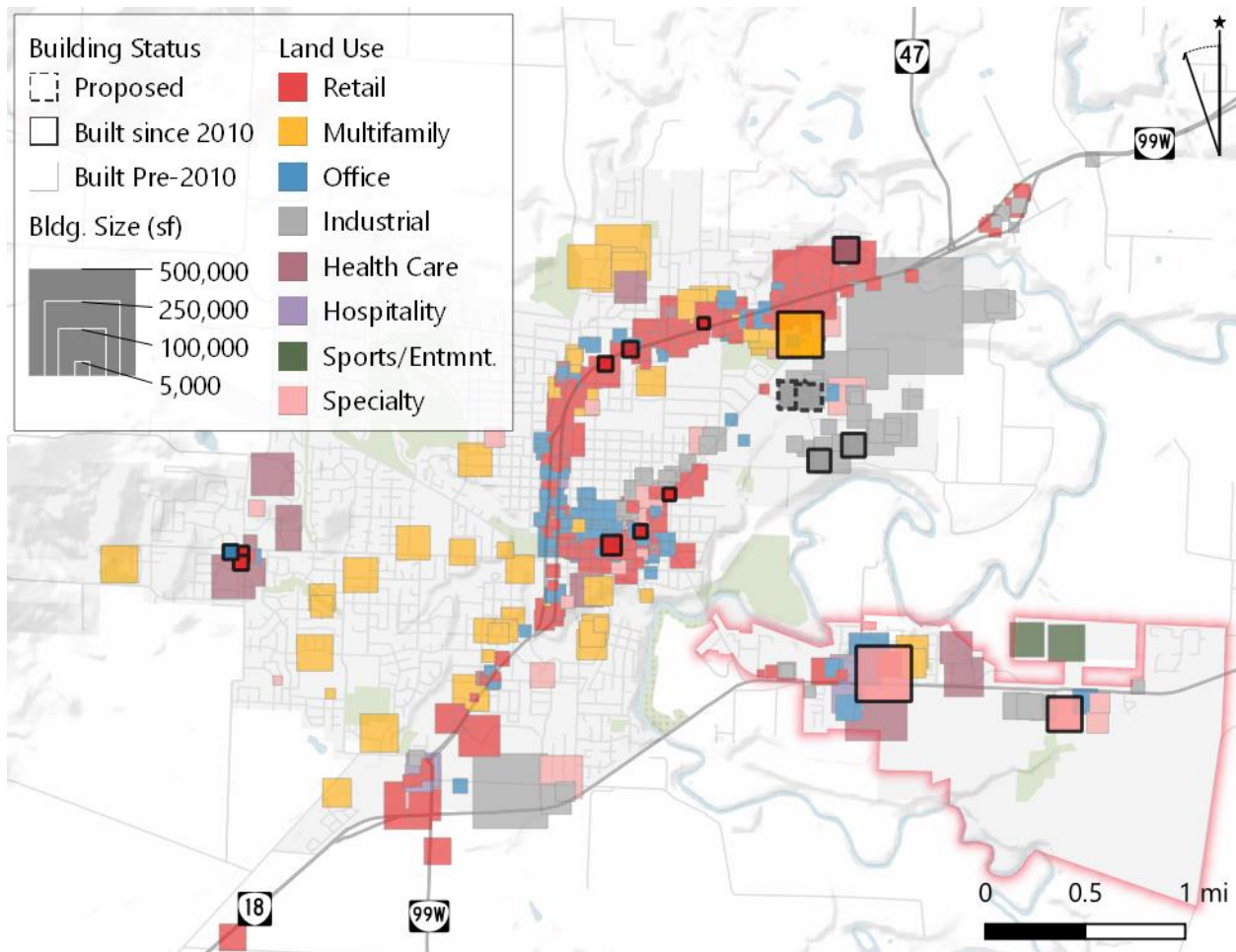


Source: Costar

Figure 15 shows the location and size (by total building square footage) for each land use. Squares with bold outlines indicate recent construction and buildings under construction, while squares with dashed or no outlines indicate proposed projects planned for 2019 or beyond. It is worth noting that some of these proposed projects have been in the pipeline for a long time, such as the proposed retail projects in the Three Mile Lane study area. This analysis—to a certain extent—will identify whether some of these projects are indeed feasible.

There has been relatively little new development in McMinnville, and most recent construction has occurred in the northern sections of the city, with some smaller retail projects along the Highway 99W corridor.

Figure 15. Development by Land Use* and Year Built, City of McMinnville



Source: Costar and Leland Consulting Group
 *Excludes institutional and single-family residential land uses

Residential Market

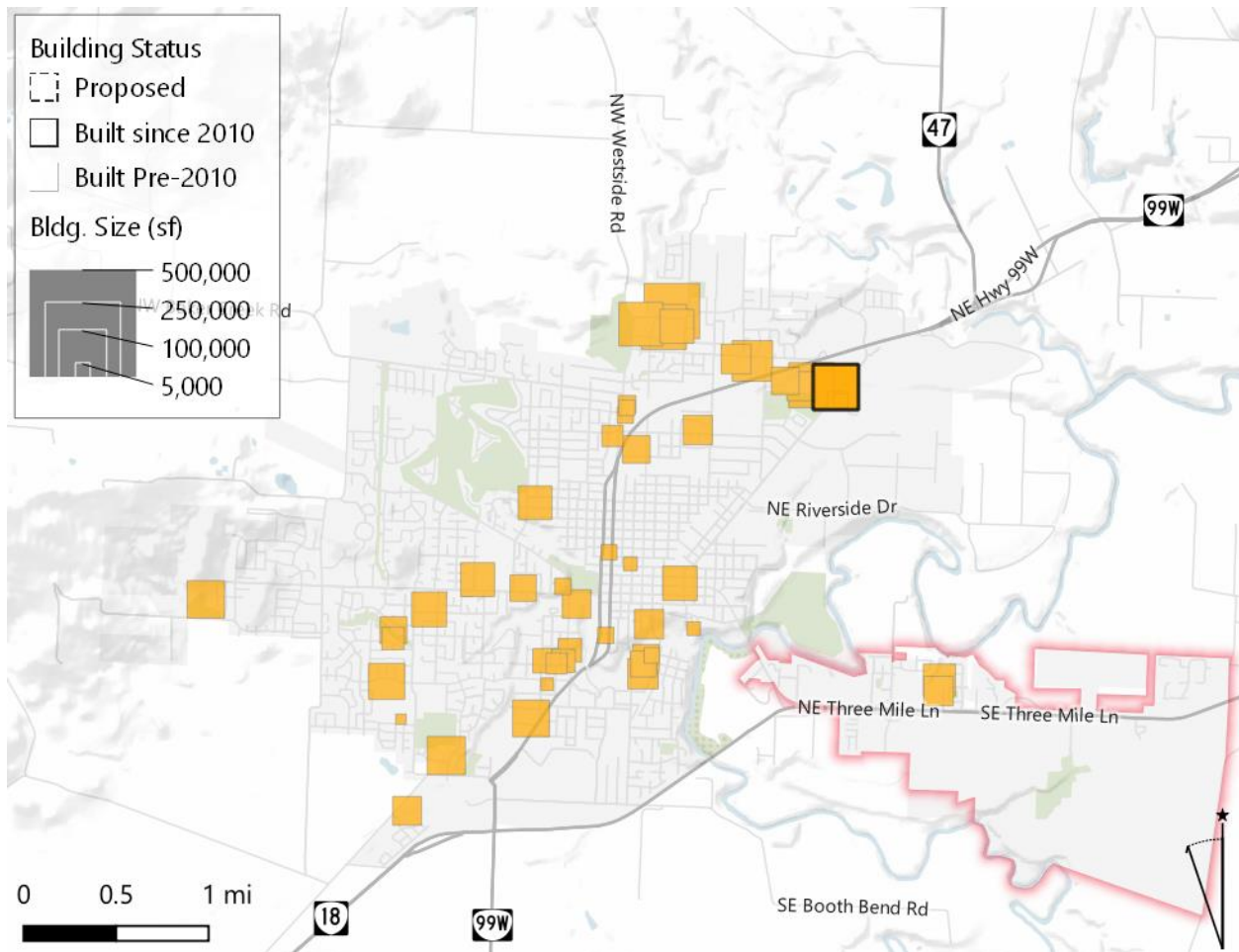
The residential market includes both single-family and multifamily development—both renter-occupied and owner-occupied.

Multifamily Rental Market Summary

Nationally, apartment demand and occupancy remain strong and demographics are favorable to the apartment sector. However, apartment growth tends to be most apparent closer to the center of large metropolitan areas.

The regional market is largely rural and features a sizable proportion of renters, underpinned by demand from students at several local colleges and universities. Deliveries have been limited in this cycle, though lease-up has been rapid in new projects. Generally, there have been tighter vacancies and higher rent growth than in the wider Portland metro region. The primary inventory is for “workforce housing,” and there are no high-end communities (designated by CoStar as 4 or 5 stars) in the submarket. Investment in Yamhill County is limited, with fewer than 10 properties typically trading each year between primarily local firms and investors.

Figure 16. Multifamily Residential Development



Source: Costar, Leland Consulting Group

Within McMinnville, 13 of the 37 apartment buildings with 20 or more units are non-market-rate⁸ (senior or affordable). Market-rate apartments rent—on average—from about \$1.00 to \$1.20 per square foot. The vacancy rate is very low, with the only vacancies near or above five percent in buildings older than 1980. Units in newer buildings typically achieve higher rents.

Only one apartment project has been completed within the market area since 2012—Lafayette Place Apartments. This project is pictured below along with a summary of its key attributes.

Lafayette Place Apartments. A 132-unit market-rate apartment project, completed in 2017, located in north McMinnville. The buildings are wood-frame, three-story “garden walk-ups”. At \$955 for a 1-bedroom apartment (\$1.32 per square foot) and \$1,196 for a 2-bedroom apartment (\$1.26 per square foot), the Lafayette Place Apartments are the highest renting multifamily



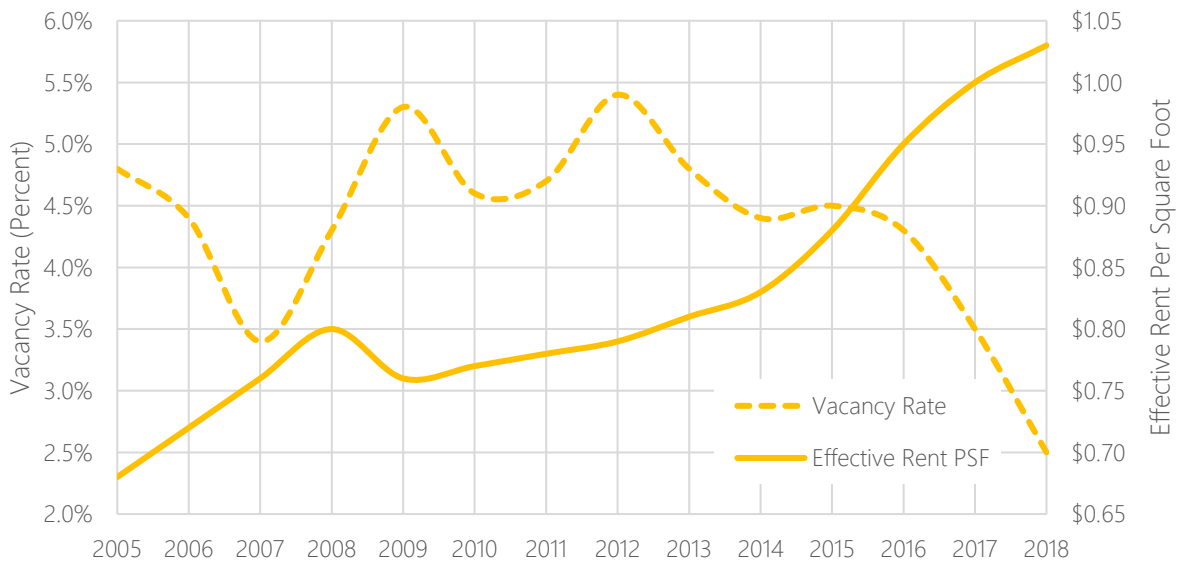
⁸ Market rate housing is an apartment that has no rent restrictions

property in the market area. Parking is 100 percent onsite surface lots.

Figure 17 below confirms that the multifamily market in the McMinnville market area is tight. Average rents have been climbing over the last decade, while vacancies have been very low and have rapidly declined since 2012, indicating demand for new multifamily construction.

In fact, this market strength and potential demand is underlined by the fact that vacancy rates in McMinnville’s multifamily housing market remained low and rent growth was largely positive during the recession—a period of time where most apartments in similar markets saw the exact opposite trends occurring.

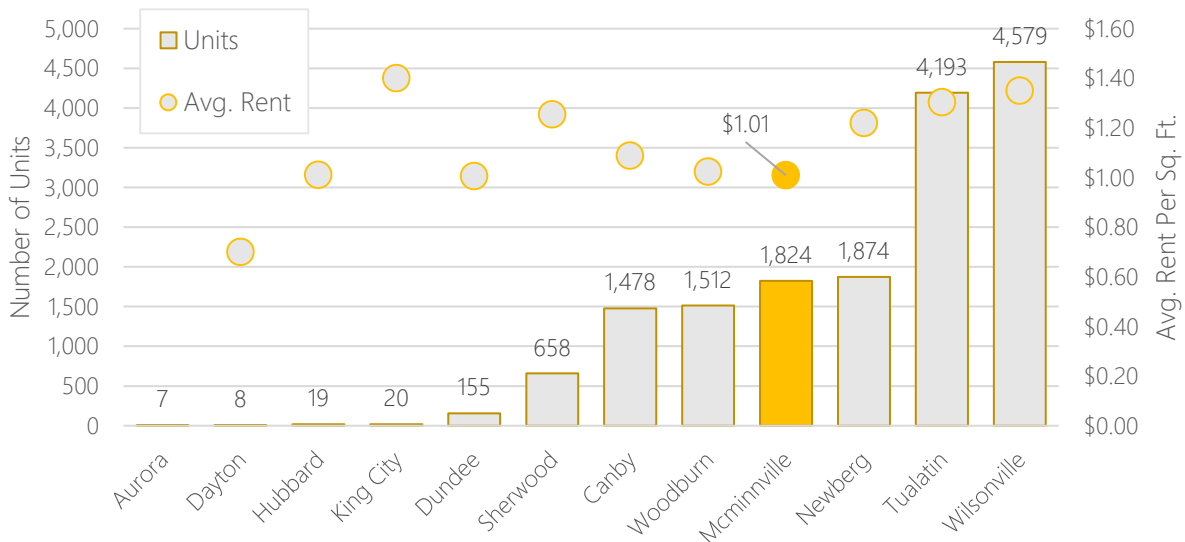
Figure 17. Market Area Multifamily Rent and Vacancy Trends, 2005-2018



Source: Costar, Leland Consulting Group

However, the average rent per square foot for multifamily apartments in McMinnville is lower than those in Newberg, Tualatin, and Wilsonville, which benefit from their proximity to the larger job centers in Portland and Washington County. Some of McMinnville’s newer or higher quality multifamily properties, however, have seen rents higher than the historical average. For market-rate properties only, the average rent increases to about \$1.11 per square foot.

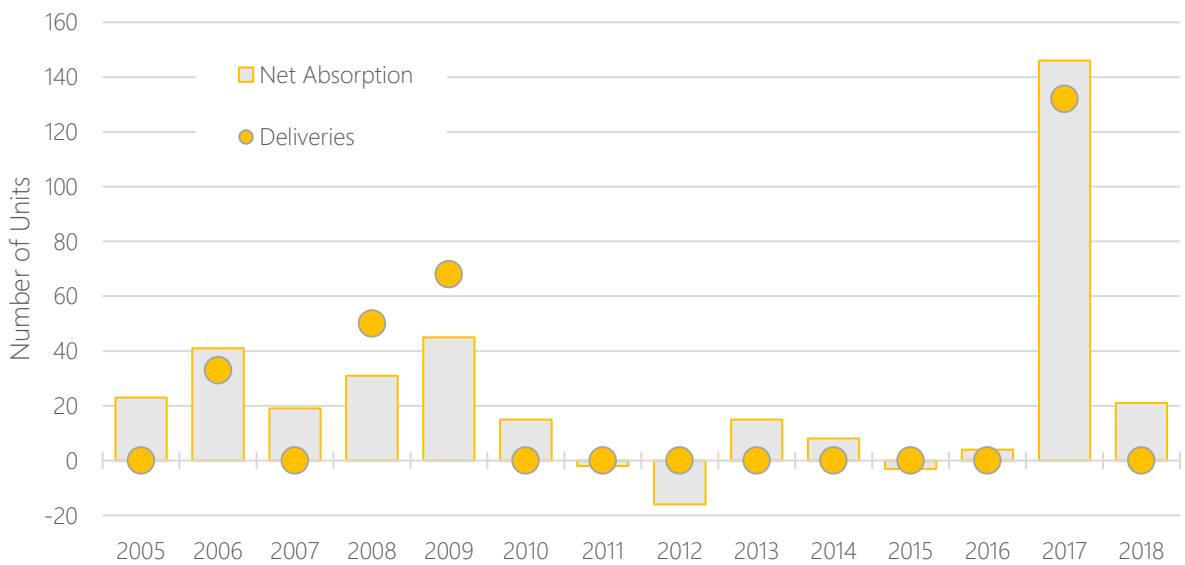
Figure 18. Regional Multifamily Residential Summary



Source: Costar, Leland Consulting Group

Vacancies decreased gradually and then significantly from 2012 through 2018, despite the completion of the 132-unit Lafayette Place Apartments in 2017, largely due to continued positive absorption. The instant absorption of the first new apartment project in a decade indicates strong demand for new rental housing.

Figure 19. Market Area Multifamily Net Absorption and Deliveries (units), 2005-2018

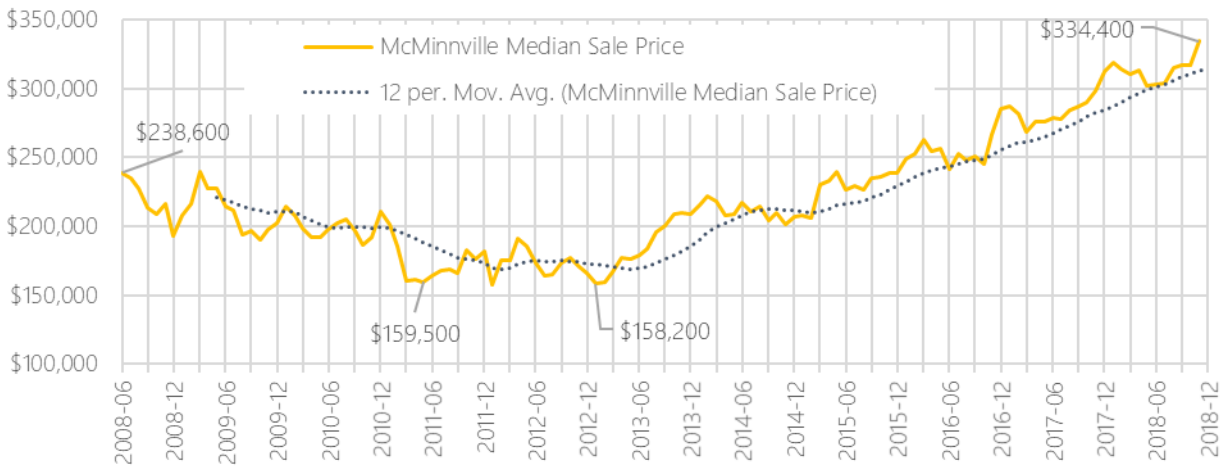


Source: Costar, Leland Consulting Group

Single Family Market Summary

Single-family home prices have been increasing rapidly since the 10-year low of \$158,000 in 2013 Q2. The pre-recession median price of \$239,000 was surpassed going into 2016. Per Figure 20, McMinnville’s single-family market appears strong and hasn’t experienced the same volatility in the market over the past 10 years as many other municipalities.

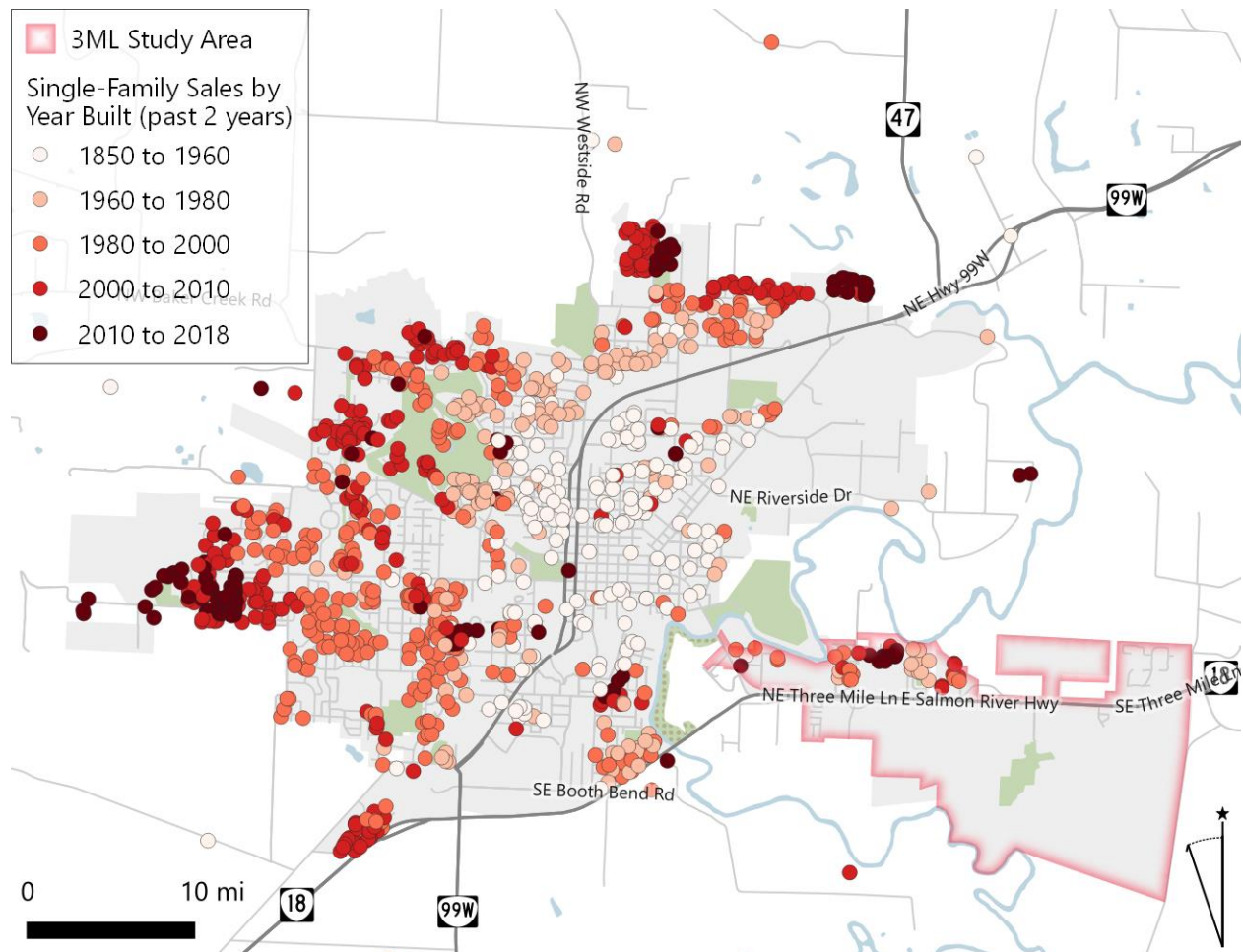
Figure 20. McMinnville Single-Family Median Home Sold Price (2008 to 2018)



Source: Zillow Real Estate Research

Figure 21 shows the location density of residential sales for the past two years. Sales have been driven by new single-family construction in subdivisions, mostly in the western and northern edges of the city. However, some new development has occurred in the Three Mile Lane project area.

Figure 21. Single-family Residential Sales, Past Two Years



Source: Redfin, Leland Consulting Group

Table 4 below shows data relating to single-family sales and absorption for the past 24 months, as well as current for-sale listings, and estimated months of inventory. Months of inventory are often referenced when determining whether it's a seller's market or a buyer's market: If there are zero to four months of inventory, meaning that all current listings can expect to be sold within 4 months, it is considered a seller's market because houses are selling very quickly.

Key findings and general takeaways include:

- Over the last 24 months, approximately 1,127 homes were sold (all new homes and resales), over 92 percent of which were single-family detached homes.
- There are no existing townhomes listed for sale.
- The single-family market is considered tight, with only three months of inventory currently listed for sale. The market for housing under \$400,000 is particularly tight, with very little inventory listed for sale and the highest rate of absorption across all home types and price ranges.

Table 4. Owner-occupied Housing Market Summary, McMinnville, 2018

	Sales in Last Two Years	Percent of Total	Absorption (Units Sold per Month)	Listings	Months of Inventory
Single-Family Homes					
Under \$200k	68	7%	3	0	0
\$200k to \$300k	373	36%	16	9	1
\$300k to \$400k	365	35%	15	31	2
\$400k to \$500k	141	14%	6	43	7
\$500k to \$600k	59	6%	2	12	5
\$600k +	38	4%	2	23	15
Subtotal	1,044		44	118	3
Attached Homes*					
Under \$200k	12	14%	1	0	0
\$200k to \$300k	58	70%	2	0	0
\$300k to \$400k	13	16%	1	0	0
\$400k +	0	0%	0	0	0
Subtotal	83		3	0	0
All Housing					
Under \$300,000	511	45%	21	9	0
Over \$300,000	616	55%	26	109	4
Total	1,127		47	118	3

Source: Redfin and Leland Consulting Group

*Attached includes condominiums and townhomes

The following table—which shows various data for sales over the past 24 months for all housing (all construction years) and new housing (built since 2010) by the number of bedrooms—provides further confirmation of the tight single-family market and relatively strong demand for middle-income, mid-sized, high-quality housing. Housing built since 2010 tends to cost about 22 percent more on average than the local single-family market. New housing—and homes with two and three bedrooms—spend the least time on the market (not including one-bedroom housing, which comprises only one percent of the market).

Table 5. Single-Family Sales Within the Last Two Years by Number of Bedrooms

Number of Bedrooms	Percent of Sales	Avg. Price	Avg. Price per Sq. Ft.	Avg. Size (sq. ft.)	Avg. DOM	Avg. Year Built
All Construction	100%	\$333,904	\$185	1,865	370	1985
1	1%	\$263,451	\$255	1061	188	1971
2	9%	\$254,814	\$205	1,276	374	1962
3	62%	\$315,474	\$188	1,710	368	1985
4	23%	\$393,456	\$173	2,303	375	1992
5	5%	\$424,828	\$156	2,772	382	1997
6	1%	\$498,520	\$151	3,344	351	1984
Built Since 2010	14%	\$408,298	\$203	2,029	313	2016
1	1%	\$275,000	\$393	700	133	2017
2	2%	\$328,000	\$201	1,648	288	2012
3	33%	\$379,286	\$199	1,902	283	2015
4	49%	\$408,915	\$186	2,202	375	2016
5	16%	\$442,392	\$171	2,590	366	2016

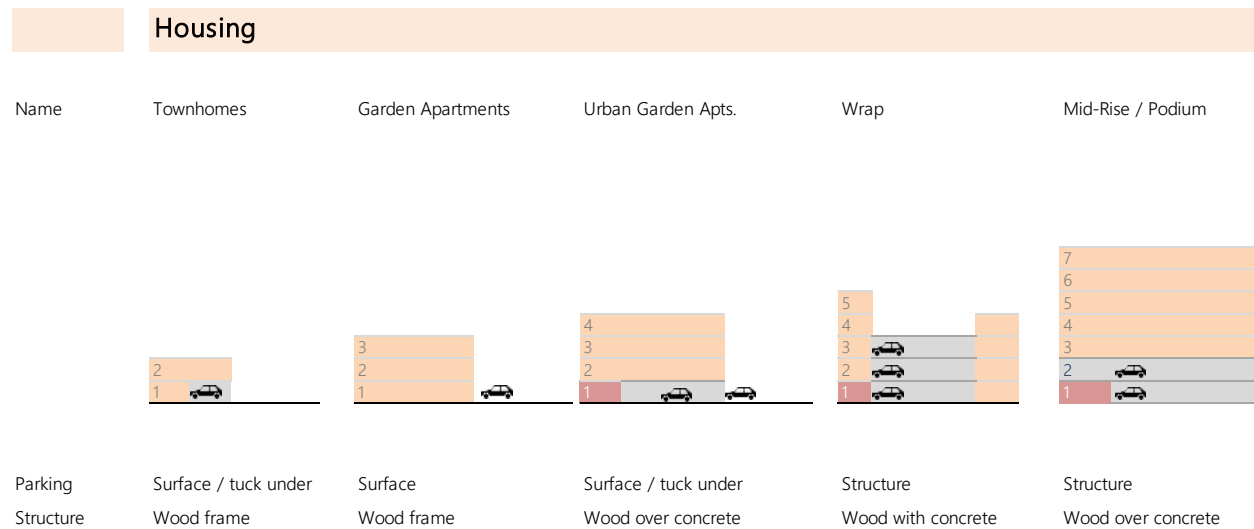
Source: Redfin, as of July 2018

Housing Development Prototypes

Most housing can be categorized within a set of “prototypes,” which are shown below (single-family residential is not included). The prototypes increase in scale and density moving from left to right. Parking is a key factor that affects housing density and financial feasibility. Typical types of parking are surface, tuck under, structured, and below-grade structured. Surface parking is the least expensive and below-grade structured parking is the most expensive. Structured parking can add tens of thousands of dollars of construction cost per housing unit, which often means that only hot housing markets with high rents can accommodate higher-density housing types with structured parking. Construction materials also change as housing density increases. Townhomes, low-rise (garden) apartments, and low-rise apartments with tuck-under parking (urban garden apartments) are typically entirely wood-frame buildings; while wrap and mid-rise/podium structures require concrete construction for parking areas; in addition, steel is sometimes used instead of wood for the apartment areas. The construction complexity and specialization required for these building types also increases costs.

Single-family, townhomes and low-rise apartments appear to be the most financially feasible housing development types in the near- and mid-term. Single-family homes will also be feasible. Urban garden apartments (which include tuck-under parking and sometimes ground-floor retail) may be feasible in the mid- and long-terms. Wrap and mid-rise projects are only likely to be feasible after significant “place-making” improvements have been made, and/or if the market changes. Affordable and/or mixed-income projects can sometimes achieve higher densities than market-rate projects since they have access to additional public funding sources. While the vacancy rate across multifamily apartments is practically zero and net absorption continues to increase, rents remain too low for market-driven high-density developments. However, the tight market may generate significant rent growth, subsequently improving the feasibility of higher density developments.

Figure 22. Housing Development Prototypes



Market Trends

The recession had a profound and lasting effect on the housing market, and while the recovery is now almost over, more people are renting than ever before. For many people, financial barriers such as rising student debts, access to credit, and large down payments have forced them to rent. For many others, the choice to rent is simply a choice. Indeed, it is well established that the two most populous generations—the Baby Boomers (ages 54 to 72) and the Millennials (ages 22 to 37)—are currently the primary drivers of demand for residential units in walkable, urban locations that offer flexibility and a range of amenities.

As Baby Boomers reach retirement age and see the last of their children leave home, they are increasingly attracted to smaller move-down or “lock-and-leave” housing which requires less maintenance and affords more flexibility. As such, age-restricted and senior multifamily housing has risen near the top of the list for best investment choices (per ULI’s “Emerging Trends in Real Estate 2018”).

For Millennials, the situation is more nuanced and difficult to forecast. The common rhetoric for many years was that Millennials desire urban living and will continue to reside in urban cities because of financial conditions and choice. However, while demand for urban rental apartments has remained high among Millennials, they are increasingly forming households and having children, looking at select suburbs and secondary markets because of the quality of life, lower cost, and space and yard availability. Indeed, 70 percent of Millennials expect to be homeowners by 2020, even though only 26 percent own today (per ULI’s “Gen Y and Housing”). With that said, generational trends associated with the next emerging generation—Gen Z (ages 21 and below)—are relatively unknown.

Other reports have recently documented important trends in housing. Findings include:

- Cost of housing, neighborhood safety; proximity to work; K-12 school quality; and community character, ambiance, and visual appeal were the top five critical community features for survey respondents.⁹

⁹ Urban Land Institute (ULI), Gen Y and Housing: What They Want and Where They Want it, 2015

- Urban setting; proximity to shopping, dining, and entertainment; walkability; and availability of mass transit are all also important—but not critical—features in a community.¹⁰
- The more walkable the community, the more satisfied residents are with their quality of life.¹¹
- Access to public transportation is much more important to those earning under \$50,000 per year, while walkability is also more important to those with lower incomes.¹²
- Sixty percent of residents would spend at least a little more for a house in a walkable community.¹³
- Four-in-ten people prefer a walkable community and a short commute. Millennials, in particular, are swayed by a shorter commute.¹⁴

Talk of generational shifts, however, sometimes misses the point. Ultimately, people are waiting longer to make significant life choices, such as buying a home or having children, and quality of place has emerged as a primary desire for almost all prospective residents across all demographic groups. Quality of place is simply the components that make any given place enjoyable to live, such as availability of and access to good schools, parks, quality healthcare, transit, shops, entertainment, and cultural amenities.

Residential Demand

As noted earlier, projected growth rates tend to vary significantly depending on the source and the geography in question. Therefore, it is important to carefully consider the “middle-of-the-road” option and note that actual demand is likely to change. With that said, PSU’s projections for the McMinnville Urban Growth Boundary align with projections for Yamhill County as well as the “baseline” growth rate, which applies the historical household growth rate from 2010 to 2018 in the market area to current households.

For the residential and retail demand forecasts, we assume that actual household growth will be approximately 1.3 percent. Based on this household growth rate, we project market area demand for an additional 3,800 units over the next 10 years within the market area, or about 380 units per year. We anticipate that the most demand for new *rental* units will be from households with incomes less than \$75,000, and the most demand for new owner-occupied housing to be from households earning between \$50,000 and \$150,000. We expect about 32 percent of future housing demand to be for renter-occupied units, resulting in about 1,200 rental units and 2,500 owned units.

¹⁰ Ibid.

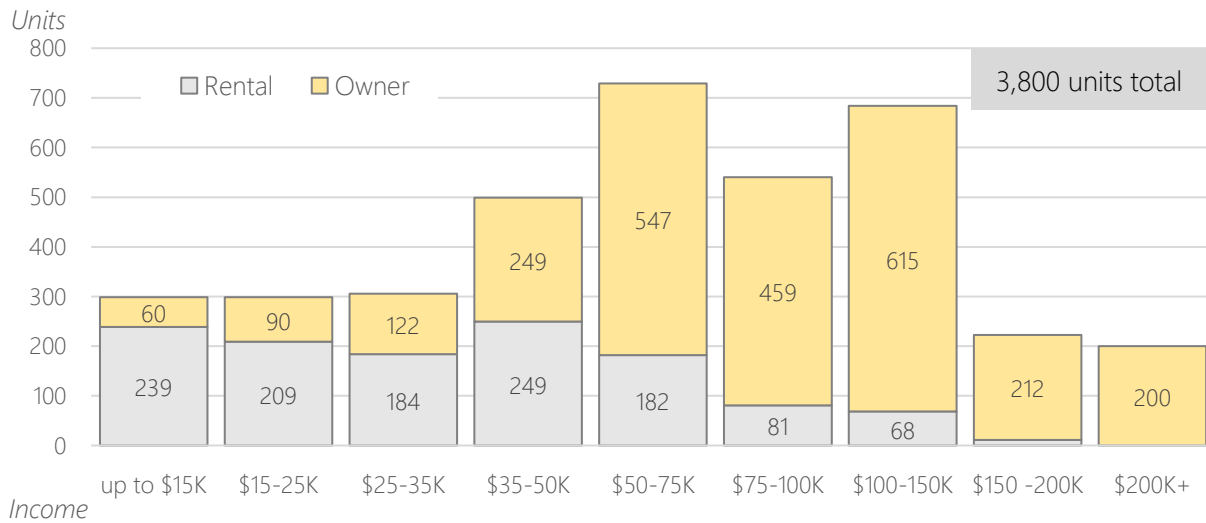
¹¹ National Association of Realtors (NAR), National Community and Transportation Preference Survey, 2018

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

Figure 23. 10-year Market Area Unit Demand



Source: Leland Consulting Group

Table 6. Annual Income Range and Attainable/Affordable Monthly Rent and Housing Price

HH Income	\$15k	\$25k	\$35k	\$50k	\$75k	\$100k	\$150k	\$200k	\$200k+
Attainable Monthly Rent	\$375	\$625	\$875	\$1,250	\$1,875	\$2,500	\$2,500+	\$2,500+	\$2,500+
Attainable Home Price	\$45k	\$75k	\$105k	\$150k	\$225k	\$300k	\$450k	\$600k	\$600k+

Source: ESRI, Leland Consulting

While projected residential growth suggests demand for a total of 1,200 multifamily rental apartments, the past five years has only delivered a total of 132 multifamily apartment units, significantly lower than the necessary rate of development required to get to 1,200 within the next decade. Of course, townhomes and—to a lesser extent—single-family homes may also be renter-occupied, but multifamily apartments will be responsible for the majority of new renter-occupied units. With the trajectory of the past five years, the multifamily market will continue to be constrained, potentially increasing rents and attracting developers to the region. However, the City should explore ways in which to incentivize new housing development and bridge any potential feasibility gaps preventing new construction.

Table 7. Historical and Forecasted Multifamily Residential Trends, Market Area

	Past 5 Yrs.	Next 10 Years
Net MFR Absorption	175 units	275 units
MFR Deliveries	132 units	350 units

Source: Costar and Leland Consulting Group

Three Mile Lane Study Area Absorption

With such a tight single-family and multifamily market, as well as few major tracts of vacant tracts for greenfield development inside urban areas, we expect the project study area to capture a significant amount of new residential demand over the next 10 years.

While the vacancy rate is currently almost zero, development activity should theoretically increase, and we anticipate the multifamily market to subsequently stabilize near five percent vacancy (typically considered the point of market equilibrium for multifamily). For this reason, we anticipate deliveries to be higher in the Three Mile Lane project area than net absorption. This assumes that land supply and zoning is able to accommodate new multifamily development.

For single-family, we anticipate single-family development to build out to the extent allowed. Given the existing industrial zoning, there are few places which could accommodate such residential development. Much fewer single-family units could be accommodated simply due to the density of single-family development and land required relative to multifamily residential.

Retail Market

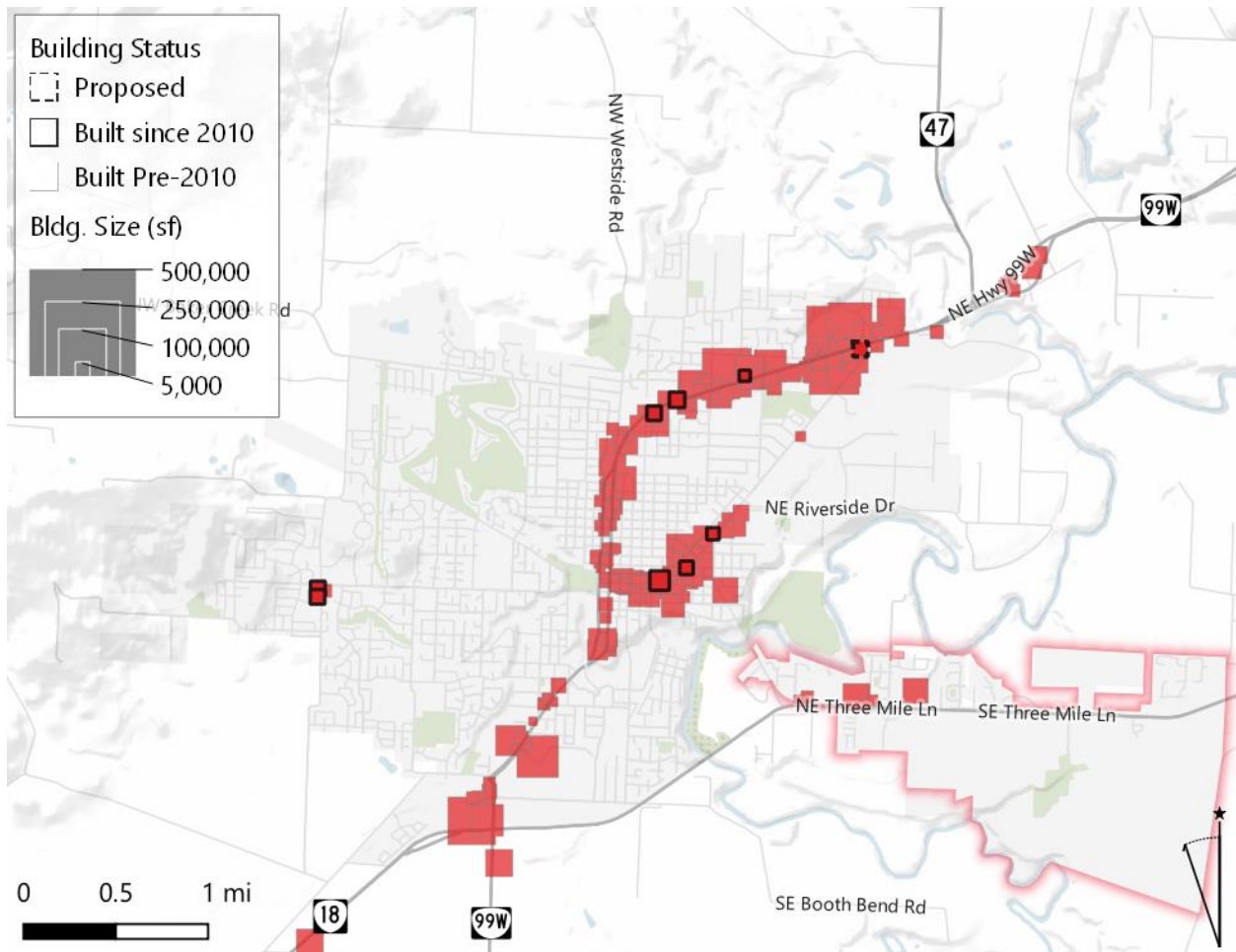
Market Summary

For retail, the analytic goal of defining a “market area” is generally to encompass likely customers whose spending power will fuel a significant majority of sales in future shops and eateries in the study area. Competitive supply (both existing and potential) will also, logically, tend to fall within that same market area. Neighborhood stores such as supermarkets tend to have much smaller market areas than big box stores, which in turn have smaller catchment areas than regional malls or other larger-scale projects.

CoStar reports that the McMinnville market area has 268 buildings totaling 2.5 million square feet of retail space. The market has a low vacancy rate of 1.4 percent. Rents vary widely by retail property type, condition, and configuration. Generally, asking rents for quality retail space range from around \$14 to \$18 per square foot, but a few quality, well-positioned retail spaces are achieving upwards of \$24 to \$30 per square foot triple-net, such as some pad sites along Highway 99W. No comps currently exist for brand new, first-generation retail space.

Figure 24 illustrates the relative size of retail development by total square footage. Retail development is largely concentrated along State Highway 99W. Generally, retail is small-scale—especially along Baker Street and near downtown—while larger neighborhood-serving retail—such as McMinnville Town Center, Lowe’s, Wal-Mart, WinCo Foods, and Bi-mart—is located in the northern and southern areas of the city.

Figure 24. Regional Retail Development



Source: Costar, Leland Consulting Group

Understanding the pattern of retail spending within a community is critical. By looking at estimated demand from existing households and current estimated sales, we can identify the relative strength or weakness of each retail category. Retail sectors in which household spending is not fully captured are called “leakage” categories, while retail categories in which sales are higher than estimated household demand generated by existing residents are called “surplus” categories.

A retail sales surplus indicates that a community pulls consumers and retail dollars in from outside the trade area, thereby serving as a regional market. Conversely, when local demand for a specific product is not being met within a trade area, consumers are going elsewhere to shop, creating retail leakage.

Table 8 shows the current annual retail leakage for various retail categories. Most retail categories show a sales leakage occurring, with Food and Beverage (grocery), Building Materials and Garden Equipment, Health and Personal Care, and Miscellaneous Retailers showing a surplus. This indicates that the McMinnville area is a weak retail market with a lot of spending potential leaving the area. General Merchandise shows the highest leakage, but these retailers—such as Walmart and Target—have large catchment areas and it’s very possible that McMinnville residents travel to larger metros, such as Salem and Portland to shop at these stores.

While leakage usually presents an immediate opportunity to increase new retail development activity and capture some of the demand leaving the area, this may be unlikely for many of the retail categories in the table and following chart below given McMinnville’s proximity to several regionally-significant retail centers. For example, both Bridgeport Village and the Woodburn Outlets—which provide an extensive range of low-cost, high-quality products—are about a 45-minute drive of McMinnville.

Table 8. Retail Leakage Analysis, McMinnville Market Area

	Est. HH Demand	Current Est. Sales	Current Leakage (\$)
Furniture and Home Furnishings	\$25,459,215	\$9,815,869	15,643,346
Electronics and Appliance	\$25,779,334	\$10,205,468	15,573,866
Building Material, Garden Equip	\$56,286,379	\$89,349,237	-33,062,858
Food and Beverage (grocery)	\$132,402,012	\$244,668,336	-112,266,324
Health and Personal Care	\$49,511,435	\$59,825,939	-10,314,504
Clothing and Accessories	\$39,384,538	\$5,785,467	33,599,071
Sporting Gds, Hobby, Book, Music	\$27,981,058	\$12,792,050	15,189,008
General Merchandise	\$138,540,476	\$41,383,114	97,157,362
Misc. Store Retailers	\$38,326,257	\$81,493,693	-43,167,436
Foodservice and Drinking Places	\$83,233,240	\$53,518,658	29,714,582
Other (including cinema, prof./med. office, consumer banks, etc.)	\$92,535,592	\$91,325,675	1,209,917

Source: ESRI

Figure 25. Market Area Retail Demand: Surplus/Leakage

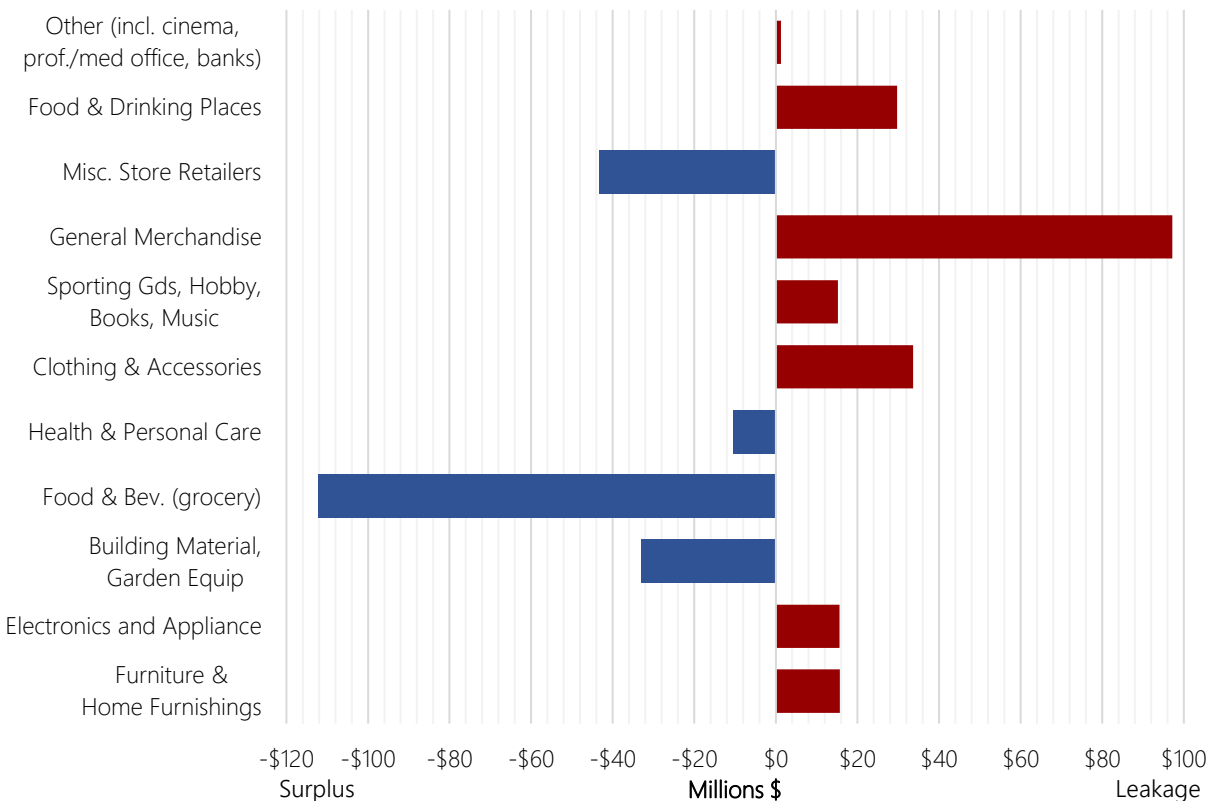
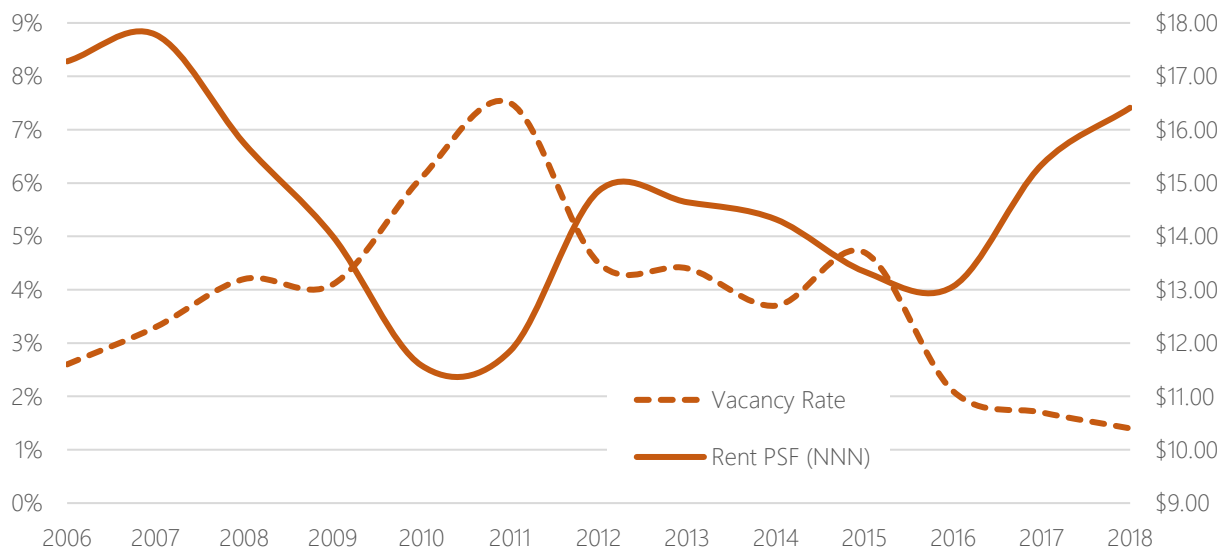


Figure 26 provides rent and vacancy trends for retail development in the McMinnville market area. Rents and vacancies tend to have an inverse relationship, and this has been the case with local retail. Rents were at their lowest rates and vacancy at its highest during the recession, and rents have yet to recover to the 12-year high of almost \$18 per square foot triple-net (NNN) in 2007, despite Costar data showing the vacancy rate at record lows.

While such low vacancies typically suggest demand for new retail development, this may be small-scale. The changing face of the retail sector is resulting in record closures of national retailers, and other large regional retail centers—such as the Woodburn outlet mall and Bridgeport Village—are far more competitive and already established.

Figure 26. Market Area Retail Rent and Vacancy Trends, 2006-2018



Source: Costar

Figure 27, which shows the net absorption and total retail deliveries by year for the past 12 years, demonstrates why the spike in the vacancy rate occurred in 2010 and 2011. Clearly, some major retail space was vacated during and immediately following the recession, but the market appeared to have bounced back in 2012 with a relatively strong year of positive absorption. In terms of deliveries, there have been few significant developments over the past decade.

Figure 27. Market Area Retail Net Absorption and Deliveries (sq. ft.), 2006-2018



Source: CoStar

Market Trends

The goods-based consumer retail industry is undergoing a seismic shift and transformation. Big name retailers are declaring bankruptcy and closing hundreds of stores as online purchases grow and American buying habits change. Last year saw a record number of store closings. This is having a trickle-down effect on communities, as some see their brick-and-mortar retail bases slowly eroding, with impacts felt in shopping centers and along traditional Main Streets.

Planners in some cities and counties are taking proactive approaches to the shifting retail landscape. They're commissioning studies of the marketplace and developing new strategies to maintain and foster better retail environments. Also, many retail-only zoning classifications are being modified to allow a variety of new uses in ground-floor, street-fronting spaces. The idea is to liven up the street with pedestrian activity without relying on retail, with new uses ranging from offices to fitness facilities.¹⁵



Table 9 summarizes the anticipated growth and decline of primary retail types. This information is based on research conducted by commercial real estate company Cushman & Wakefield and reflects changing preferences. Online shopping is having a significant impact on “commodity retail.” Retailers selling products that can easily be ordered and shipped from Amazon or others face a challenging environment and must have a competitive advantage against online competition—whether that is the convenience, experience, customer service, or something else. Commodity retailer categories include electronics, office supplies, and video stores.

By contrast, experiential consumerism is an emerging trend in which retailers offering a special experience, or offering services that cannot be procured online, have the potential to thrive. A prime example is dining—as one retail guru has said, “you can’t eat the internet;” and you certainly cannot dine with family and friends on the internet. Therefore, food and beverage establishments have become a larger and larger part of the retail

¹⁵ [URL](#)

experience, on both main streets and larger shopping centers. Another growing “retail” sector is healthcare. Small, neighborhood-scale providers are moving into both main street and retail center locations.

Table 9. Retail Trends: Growing and Declining Retail

Growing	Declining
	
<ul style="list-style-type: none"> • Retail that offers a special experience • Food! • “Fast Casual,” i.e. Little Big Burger • Food Halls, artisanal markets • Trucks to Bricks • Grocery: Ranging from discount, to organic, to small format, and ethnic • Medical users, incl. ZoomCare • Apparel: Fast fashion, off-price, active sportswear • Sporting clubs • Fitness/Health Clubs • Marijuana dispensaries • Auto repair • Convenience stores • Car dealerships • Home improvement and home furnishings 	<ul style="list-style-type: none"> • Commodity retail • Food: Casual dining, weaker fast food chains • Mid-priced apparel and shoes; children’s • Dollar Stores • Pet supplies • Electronics • Office Supplies • Bookstores • Toy Stores • Video stores • Bank Branches

Source: Cushman & Wakefield, Leland Consulting Group.

The Rise of E-commerce

Between 2001 and 2015, total online retail sales grew at a 21.8 percent annual growth rate and accounted for 22 percent of total retail sales growth. During the same period, brick-and-mortar stores grew at a rate of only 3.7 percent annually, decreasing their share of the total retail market from 98 percent to 89 percent. While still only

a small total market share, estimates indicate that up to 20 percent of total US sales will be attributed to e-commerce by 2019.

The rise of online retail has also had a major impact on the way retailers are doing business. As more people turn to the internet to do their shopping, traditional brick-and-mortar stores are altering their store formats and incorporating an online platform into their business concepts. Omnichannel retail strategies, where a retailer operates through both physical locations and online sales, have proven to be a necessity in today's market.

The list of top online retailers reinforces this point, as many also have a significant brick-and-mortar presence. Of the top 25 companies with the highest online retail sales in 2016, 18 were more traditional brick-and-mortar retailers. These include companies such as Walmart, Best Buy, Macy's Inc., Nordstrom Inc., Target Corp., Gap Inc., and Neiman Marcus.¹⁶ That said, Amazon remains king among online retailers, with almost six times the sales volume of the second-ranked retailer, Walmart.

Employment Market

The McMinnville market area has 97 office buildings with a total of 785,000 square feet of rentable space, comprising entirely of Class B and C buildings. Most are wood-framed buildings built between 1970 and 2000. Office vacancy stands at 3.2 percent according to CoStar; this is down from a 10-year high of 10.5 percent in 2011, indicating demand for new space.¹⁷ Gross office rents currently average around \$18.20 per square foot per year.

There are 85 industrial buildings with a total of 2.4 million square feet of rentable space, although almost one-quarter of this total is from the steel mill in the north of the city. Industrial vacancy stands at 0.4 percent according to Costar, down from a 10-year high of 15.8 percent in 2014. Industrial rents average around \$8.40 per square foot.

Market Summary

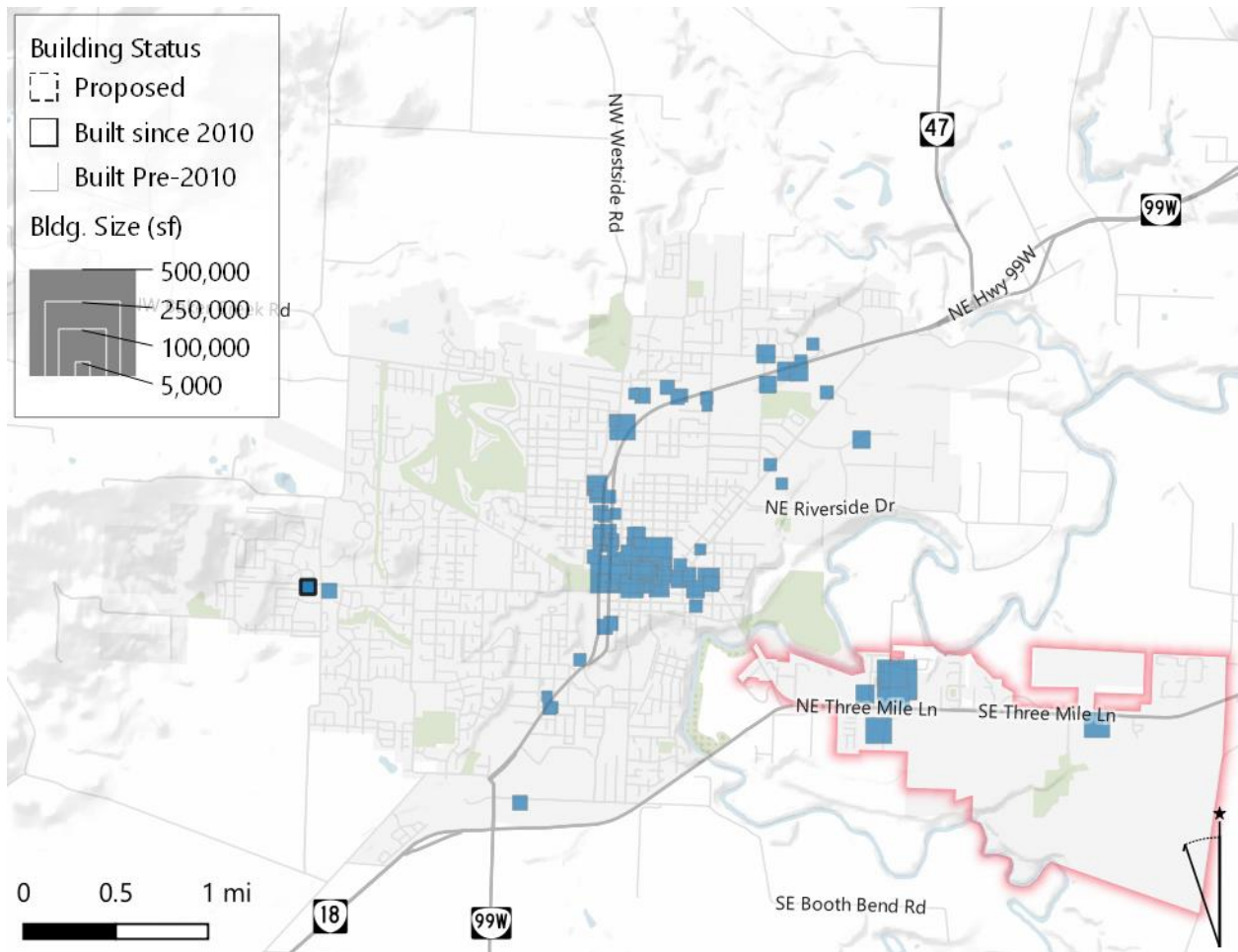
With an economy centered on agriculture, the Yamhill County office market is relatively quiet, and its tenants and investors are predominantly local. The vacancy rate is tight, due in part to moderate absorption but largely because of limited inventory and the lack of new construction. Rents experienced back-to-back years of growth in 2015 and 2016 but contracted in the past year. Over the cycle, the submarket has consistently posted minimal investment activity and nearly no new supply.

As shown in Figure 28, new office construction in the region has been limited to the Portland Metropolitan Area and other close-in cities.

¹⁶ www.wwd.com/business-news/financial/amazon-walmart-top-ecommerce-retailers-10383750/

¹⁷ Anecdotal evidence suggests an immediate need/demand for mid- and large-scale Class A office space, although the extent of which is likely limited, based on projected regional employment growth rates.

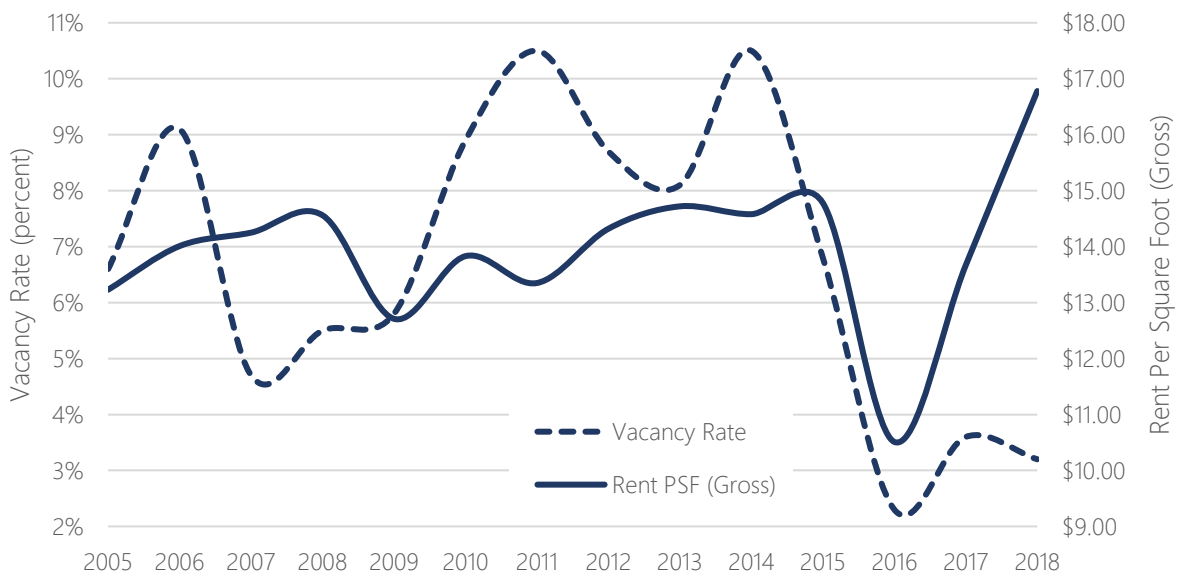
Figure 28. Regional Office Development



Source: Costar, Leland Consulting Group.

There has been little to no rent growth in the market area over the past decade, and vacancy rates have been erratic, declining significantly from 2014 and settling near three percent in 2018. However, the following chart shows the volatility of the office market.

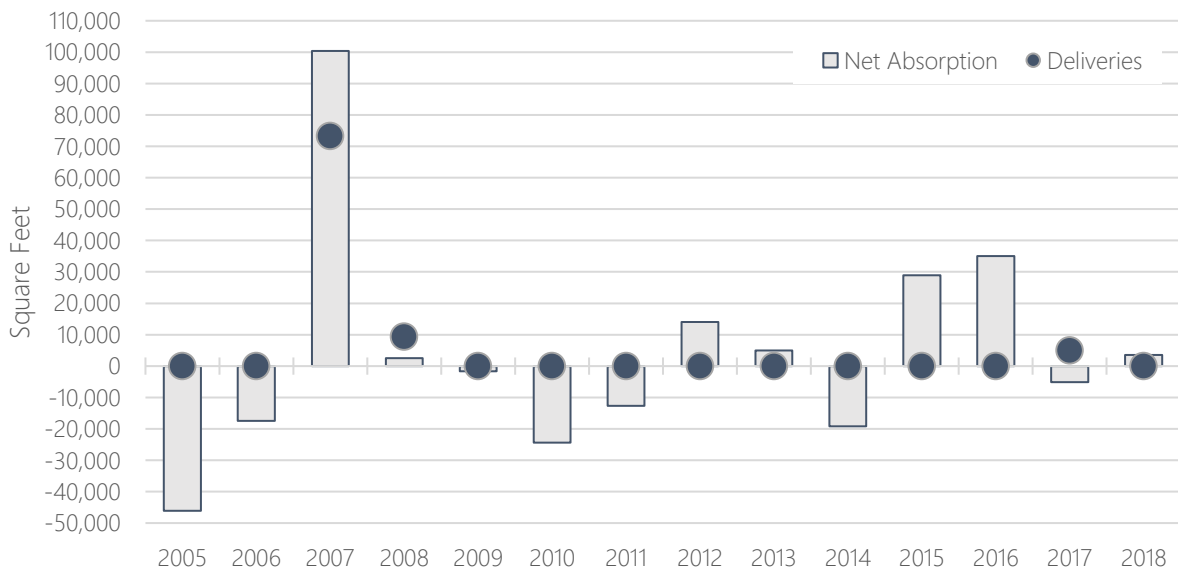
Figure 29. Market Area Office Rent and Vacancy Trends, 2005-2018



Source: Costar

Net absorption of office space has been largely positive, albeit minimal, and essentially no new office space has been constructed in the past decade. This is reflective of the fact that more competitive and significant employment clusters are located elsewhere in the region, largely throughout the Portland Metropolitan Area, such as Wilsonville. However, this may also partially due to the lack of appropriately zoned land for office.

Figure 30. Market Area Office Net Absorption and Deliveries (sq. ft.), 2005-2018



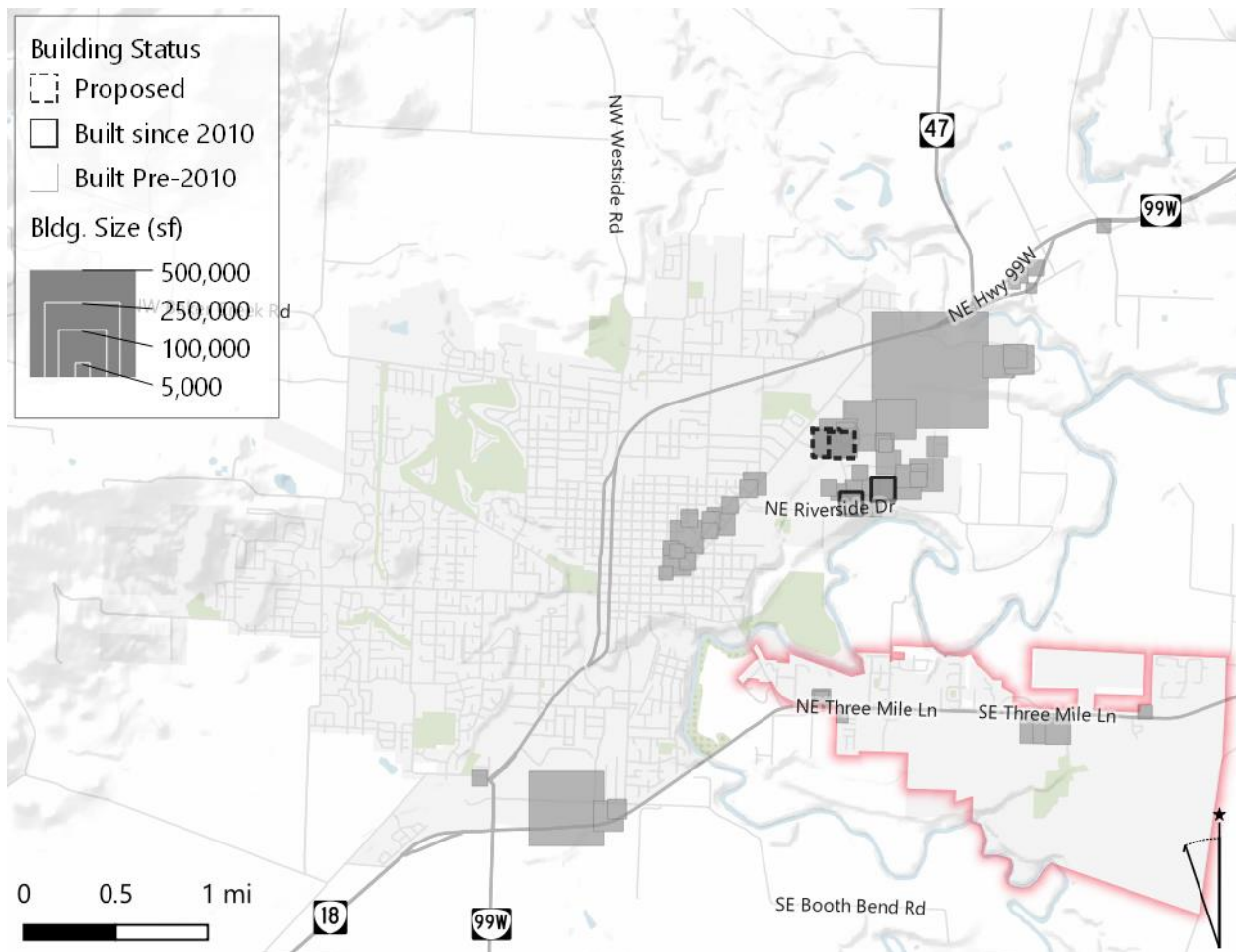
Source: Costar

For industrial, the market is marginally stronger than for office. However, like office, industrial development has also clustered elsewhere in the region in locations that are arguably better suited for continued expansion.¹⁸ Locations such as the Tualatin, Tigard, and Wilsonville benefit from close proximity to Interstate-5 and access to talent in Portland. These locations have rapidly built up their manufacturing industries, among others. While McMinnville has seen recent development, it is unlikely to compete with these other centers.

With that said, Three Mile Lane may have a locational advantage for industrial development due to its proximity and access to the airport. Nationally, many modern airports now generate most of their revenues from sources other than aviation. While small and lacking commercial service, the McMinnville airport may have positive impacts for a hotel (including conference spaces), office space, business parks, industrial development (particularly manufacturing and warehousing), cargo facilities, sports facilities, among others.

Extending the airport runway to accommodate larger aircraft may further improve development prospects and accelerate the rate of development. However, doing so is understood to be challenging as the only place to extend is to the northeast, which would require moving Highway 18.

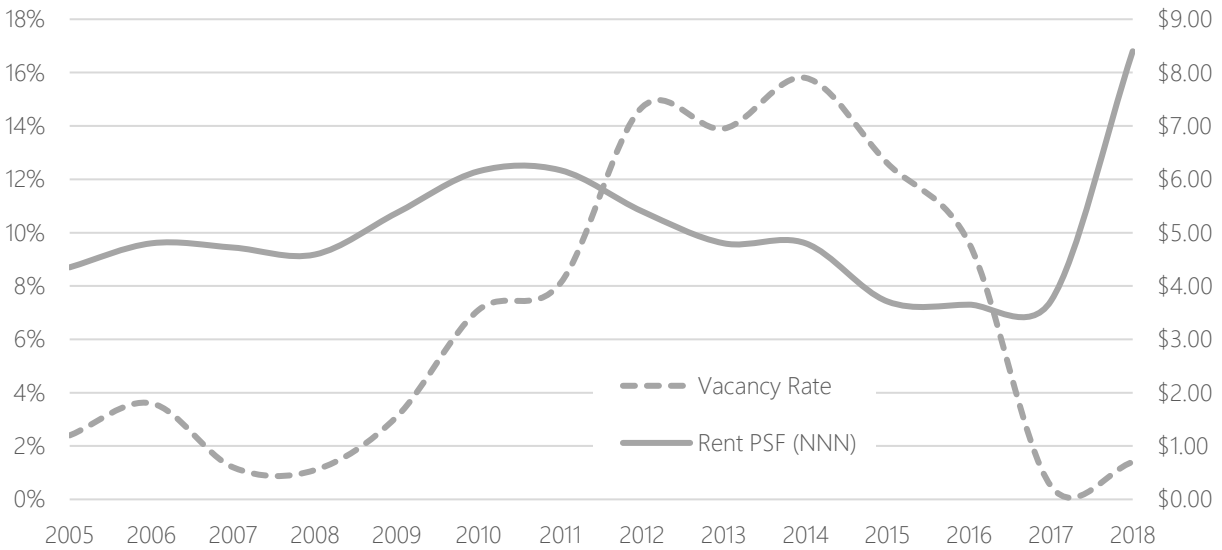
Figure 31. Regional Industrial/Flex Development



¹⁸ The data that populates the corresponding map often neglects to show owner-occupied buildings, such as the Jackson Family Wines building, built in 2017 in the Three Mile Lane corridor.

While the industrial vacancy rate is virtually zero, rents have only just climbed to pre-recession levels. A hike in vacancy rates between 2009 and 2014 resulted in negative rent growth. However, with the wine industry such a significant component of the Mid-Valley industrial market, there is a reason to believe that typical rent and vacancy characteristics may not truly represent the McMinnville market area’s industrial market.

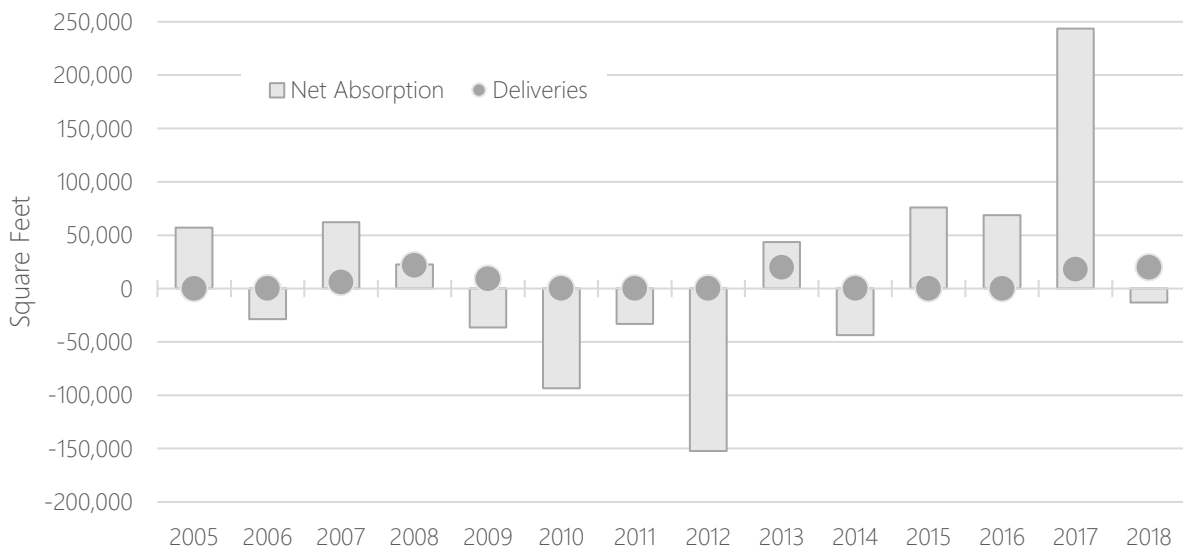
Figure 32. Market Area Industrial Rent and Vacancy Trends, 2009-2018



Source: Costar, Leland Consulting Group

Net absorption has been largely positive since several years of negative absorption between 2009 and 2012—likely as a result of the recession, with a huge surge in absorption in 2017 which has resulted in almost zero vacancies in the market area. There have been few industrial deliveries over the past decade.

Figure 33. Market Area Industrial Net Absorption and Deliveries (sq. ft.), 2005-2018



Source: Costar, Leland Consulting Group

Planned and Proposed Projects

Per Costar, there are only two proposed industrial buildings in the McMinnville area, both of which are planned for either office or industrial. Both buildings are located in McMinnville's industrial district (zoned General Industrial M-2) along a Portland Western Railroad rail spur.

Figure 34. Proposed Industrial Development, McMinnville



Source: Kidder Matthews

Market Trends

While people once followed the jobs, corporations and professional firms are now following people back to the city. These companies have increasingly seen prospective employees choosing to live, work, and play in more interesting—often urban—locations, and now they have realized that attracting these employees requires them to be in these places too. As such, the authenticity of a place has become a sought-after commodity. This is likely one of McMinnville's strongest assets. Companies and workers now look for the genuine, the idiosyncratic, the unique and, most importantly, the personality of a place that matches their own. In fact, a recent Newmark study identified a significant rent premium for office properties with transit access, dining operations, and open floor plans of around 50 percent higher than those with obsolescent characteristics.

For cities, this means that opportunity lies in attracting more investment and focusing on placemaking to make themselves the place where the best and brightest live, work, and shop. This might require updating office and industrial areas to reflect the way we now do business and work day-to-day. And, as the finance, utility, and even government sectors continue to consolidate, cities will need to backfill their buildings with new tenants to keep downtown an interesting and lively place.

Location Preferences

Across the United States, traditional office development is increasingly considered obsolete in today's shifting market. Since the Great Recession tenant preferences have shifted to central, walkable, amenity-rich locations as companies find it tougher to recruit the Millennial and emerging Gen Z workforce to sterile, single-use buildings and in auto-dependent neighborhoods. These locations have typically been in inner-city areas, but more recently office investors have been refocusing their attention to suburban communities that increasingly offer a better value for investors than urban products, mainly in areas where developers are creating live-work-play environments. The migration of millennials to the suburbs should ease investor concerns about demand for suburban office space.

Workplace Trends

General trends impacting the office workspace include a steady decline in the number of square feet per employee, the increase in standardized workspaces and non-dedicated (shared) office space with more

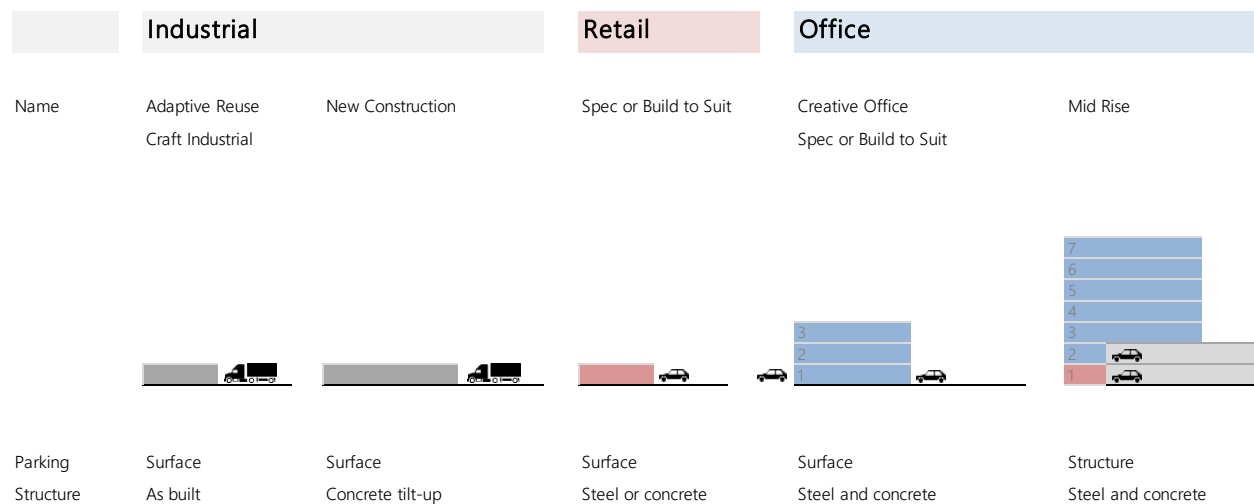
amenities, more tolerance for telecommuting and collaborative workspaces, and a greater emphasis on higher space utilization, innovation, and productivity. Within the private sector, Class A office space continues to be the primary driver of new office demand, yet “creative” office environments—the repositioning of established office space (typically Class B) to open, modern workspaces—are becoming ever more popular. Real estate investors are wondering whether the office sector is next in line for a painful shakeup, as tenants continue to use office space more efficiently.

The impact of tenants’ push for greater space efficiency has created winners and losers within the office market. Fitting more employees into less space has enabled office tenants to sign smaller leases or afford higher-end space. This is a particularly compelling tradeoff in the current market, as tenants are increasingly relying on amenity-rich office environments to help recruit the highly skilled workers who are now in short supply.

Commercial Development Prototypes

Commercial development prototypes are shown below. Once again, parking is a major driver of building form. Only one commercial development prototype—mid-rise office—includes structured parking; this building type is unlikely to be feasible due to the high cost of structured parking.

Figure 35. Commercial Development Prototypes

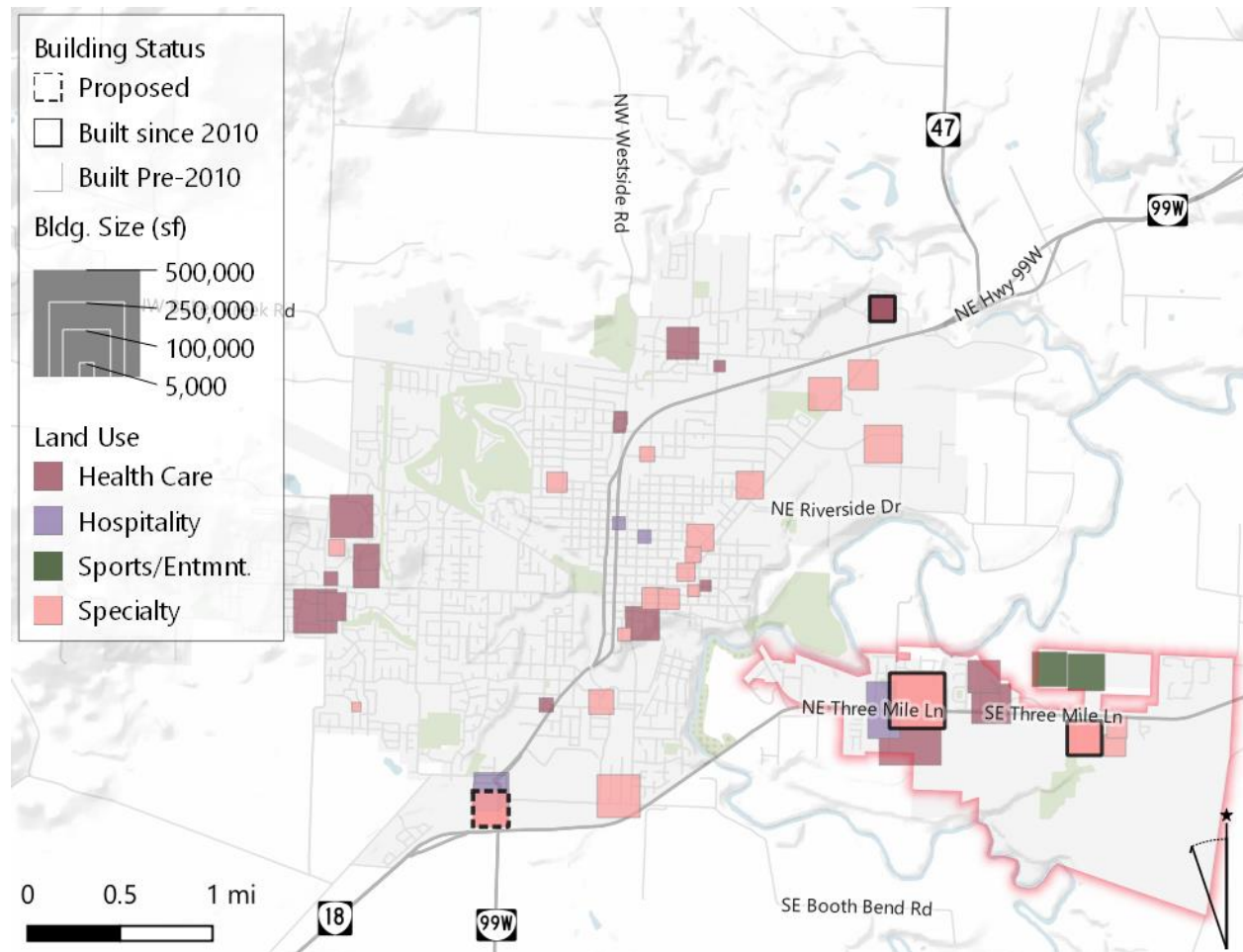


Lodging, Hospitality, Specialty, and Recreation

Development Summary

Since 2010, there have been only a handful of new properties built in these categories, including one health care facility (skilled nursing facility/assisted living), and two specialty properties (Chemeketa Community College and an airplane hangar).

Figure 36. Regional “Other” Development



Source: Costar, Leland Consulting Group

Tourism

The tourism region of the Willamette Valley includes Benton, Linn, Marion, Polk, Yamhill and portions of Clackamas and Lane counties. The region stretches from the crest of the coast range to the crest of the Cascade Range. The Willamette Valley offers more than 500 wineries in 150 miles, historic towns and cities, craft breweries, farm stands, and hiking, paddling, and cycling.

The region continues to be a big draw for locals and tourists alike, with tourism rates in Oregon rising 54 percent in the last three years¹⁹ (as of December 2018). In 2018, the Willamette Valley was the second-most visited destination in Oregon for overnight tourists, attracting almost 20 million visitors (Portland was first with 26.4 million, and the Oregon Coast was third with 18 million)²⁰. New wine country restaurants and boutiques have made the area even more appealing.

¹⁹ <http://www.wweek.com/culture/2018/10/09/two-oregon-natives-are-opening-a-bougie-new-hotel-in-downtown-mcminnville/>

²⁰ <http://industry.traveloregon.com/content/uploads/2018/05/Dean-Runyan-FINAL-2018.pdf>

The wine industry has brought new economic activity and tourism, and industry growth, bringing more jobs, increased tourism, and international recognition, and growing support of arts and culture opportunities.

The arts and culture environment in Yamhill County is a growing field of increasing vitality. Artist studios and monthly wine walks increasingly attract visitors from outside the region. Events such as the two annual international wine conferences at Linfield College and monthly art and wine walks provide critical exposure both for area artists and for local vineyards. Key institutions – such as Chehalem Cultural Center, George Fox University and Linfield College – play significant roles in providing robust art and cultural offerings to their communities. The vibrancy of the environment varies across the county, and the accessibility of arts and cultural opportunities may not be equitable across different populations.

High quality of life and robust arts and culture offerings are often considered the most attractive aspects of Yamhill County for residents or businesses considering the location. They are also tourism draws. Other attractors include the region’s natural beauty, small-town feel, good schools, and quality higher education institutions. The area’s proximity to Portland while remaining rural and independent is also a positive attribute.

The following table provides high-level tourism data for the Willamette Valley.

Table 10. Willamette Valley, Direct Travel Impacts, 2012-2018

	2012	2018	Change
Direct Employment	18,830	21,890	16%
Employee Earnings (\$M)	\$385	\$522	36%
Visitor Spending (\$M)	\$1,423	\$1,629	14%
Taxes (State/Local) (\$M)	\$59	\$79	34%

Source: Dean Runyan, *Oregon Travel Impacts, May 2018*

Per the Oregon 2015 Regional Visitor Report for the Willamette Valley Region,²¹ approximately seven percent of all overnight trips in 2015 were for business, 53 percent were to visit friends or relatives, and 40 percent were considered “marketable” (i.e. leisure). Of these marketable trips, most people were visiting for the outdoors, a special event, or touring—and mostly during the spring and summer months. In terms of spending, 30 percent of the \$706 million spent in the region was on lodging, and 27% was on restaurant food and beverage.

The Willamette Valley attracts visitors that are typically older, higher-income, and often childless or retired individuals and couples. The average age of overnight visitors to the Willamette Valley was 49 in 2015, older than the state average of 46. A significantly greater proportion of visitors aged 45 and over visit the Willamette Valley (61 percent of all visitors versus 49 percent).

Lodging & Hospitality

Near Term Hotel Development Prospects.

The primary demand driver for hotel development include:

- Tourism and tourist destinations,

²¹ <http://industry.traveloregon.com/content/uploads/2016/11/Oregon-Willamette-Valley-Region-2015-Visitor-Final-Report.pdf>

- Entertainment activities,
- Business activity (number of jobs and businesses),
- Business conferences and conventions, and
- Travel patterns (visibility).

McMinnville’s Three Mile Lane arguably possesses three of the five drivers listed above, which is a positive sign for future lodging and hospitality development. Despite this, in the near term (zero to five years), hotel development in Three Mile Lane will be difficult for the following reasons:

- **Distance from downtown amenities.** Visitors to the hotel would probably drive, not walk, to the restaurants, wine-tasting, boutiques, retail, and other amenities in downtown. There are no commercial amenities at the Three Mile Lane today and therefore a hotel at the Three Mile Lane would need to create its own sense of place and stand on its own. This would require a significantly higher level of investment, potentially in place making amenities, restaurants, meeting facilities, etc.
- **The current setting is somewhat industrial.** This is not a highly desirable hotel setting. Uncertainty about what will happen to the Evergreen properties and the surrounding area will also make hotel developers more reluctant to invest.
- **Land constraints** impact the ability of the market to support the development of moderate-cost hotels, which are needed to support the burgeoning tourism industry.

Long Term Hotel Development Prospects.

In the long term, this could be an excellent site for a hotel. Numerous amenities would improve prospects for hotel development, including:

- Additional parks, open spaces, and festival venues.
- Restaurants and retail.
- Wine tasting and wine-related uses.
- Other residential and commercial development.

The more that a hotel developer needs to create these amenities “from scratch,” the more difficult the economics will be.

Many of the new hotels recently built in the region are unique and interesting, with amenities oriented to local tourism draws—such as the wine industry. Some of these new hotels are profiled below.



The Allison, Newberg, Oregon. The Allison is an 85-room, 5-star resort hotel in Newberg, Oregon which opened in 2010. Room rates average between \$435 and \$475 per night.

Located in the Willamette Valley in 35 acres of grounds, this luxury spa resort is within 10 miles of dozens of wineries and 2 miles from Chehalem Glenn Golf Course. Amenities include an upscale restaurant and wine cellar, a spa offering wellness treatments, an indoor pool and hot tub, and yoga classes.



Atticus Hotel, McMinnville, Oregon. Atticus is a new 36-room luxury boutique hotel in downtown McMinnville, at the corner of N.E. 4th St. and N.E. Ford St. The property—which takes the place of a vacant parking lot—is a 22,640 square-foot, four-story building, and was developed by the Odd Fellows Building (OFB) LLC. It is leased in its entirety by Live McMinnville LLC., which will operate the Atticus Hotel.

Eighteen wineries and tasting rooms are located within walking distance along the town’s quaint and historic downtown stretch. The Atticus offers a variety of studio and one-bedroom suites from \$300 per night, as well as a 2-bedroom 2.5-bath penthouse. The hotel features amenities including a conference room, exercise facility, business center, private dining space, and a restaurant and bar. Guests can expect a full accoutrement of services, including valet parking, in-room dining, 24-hour concierge, and group sales coordination.



The Hotel at Independence Landing, Independence, Oregon. A boutique hotel is expected to open in Independence, Oregon in May 2019. The developer, Tokola Properties, was selected by the City of Independence after they bought the waterfront property in 2015 and sent out a request for qualifications for developers to outline their vision for the site.

The Independence hotel, featuring "warm and contemporary" architecture that compliments the historic downtown area, will have 75 rooms.

Embarcadero Hospitality Group will manage the hotel. Seasonal rates for rooms will range from around \$125 on winter weekdays up to \$300 or more for certain suites during summer weekends, developers said.

Recreation & Open Space

Infrastructure—the physical facilities and systems that support economic activity—is a key driver of real estate investment and development. Historically, real estate was influenced by the quality and location of roads, bridges, and other forms of auto-oriented infrastructure. The Interstate Highway System, for example, was a critical factor in the growth of suburban America.

More recently, transit-oriented development has become a common term in the lexicon of real estate and transportation officials. Transit-oriented development is characterized by compact, mixed-use, residential, and commercial development that is clustered around a transit stop or a rail station. Today, bike trails, bike lanes, bike-share systems, and other forms of active transportation infrastructure are helping spur a new generation of "trail-oriented development." This trend reflects the desire of people around the world to live in places where driving an automobile is just one of a number of safe, convenient, and affordable transportation options. The Urban Land Institute’s America in 2015 report found that, in the United States, over half of all people (52 percent) and 63 percent of millennials would like to live in a place where they do not need to use a car very often; half of U.S. residents believe their communities need more bike lanes.

Active transportation was, until recently, an overlooked mode of travel. However, in recent years, investments in infrastructure that accommodates those who walk and ride bicycles have begun to reshape communities.

Shared themes among active transportation projects include the following:

Active transportation infrastructure can catalyze real estate development. Trails, bike lanes, and bicycle-sharing systems can improve pedestrian and bicyclist access to employment centers, recreational destinations, and public transit facilities, thereby enhancing the attractiveness of developments along active transportation corridors. In some cases, former industrial districts and towns outside urban cores have benefited from active transportation infrastructure due to improved walking and cycling connectivity.

Investments in trails, bike lanes, and bicycle-sharing systems have high levels of return on investment. Regions and cities have found that relatively small investments in active transportation can have outsized economic returns due to improved health and environmental outcomes and reduced negative externalities, such as automobile traffic congestion and poor air quality.

Bike-friendly cities and towns are also finding that bicycle facilities boost the tourism economy and encourage extended stays and return visits. Tourism is one of the world's largest industries. The U.S. Travel Association explains that U.S. residents spend over \$800 billion a year on travel and recreation away from home.

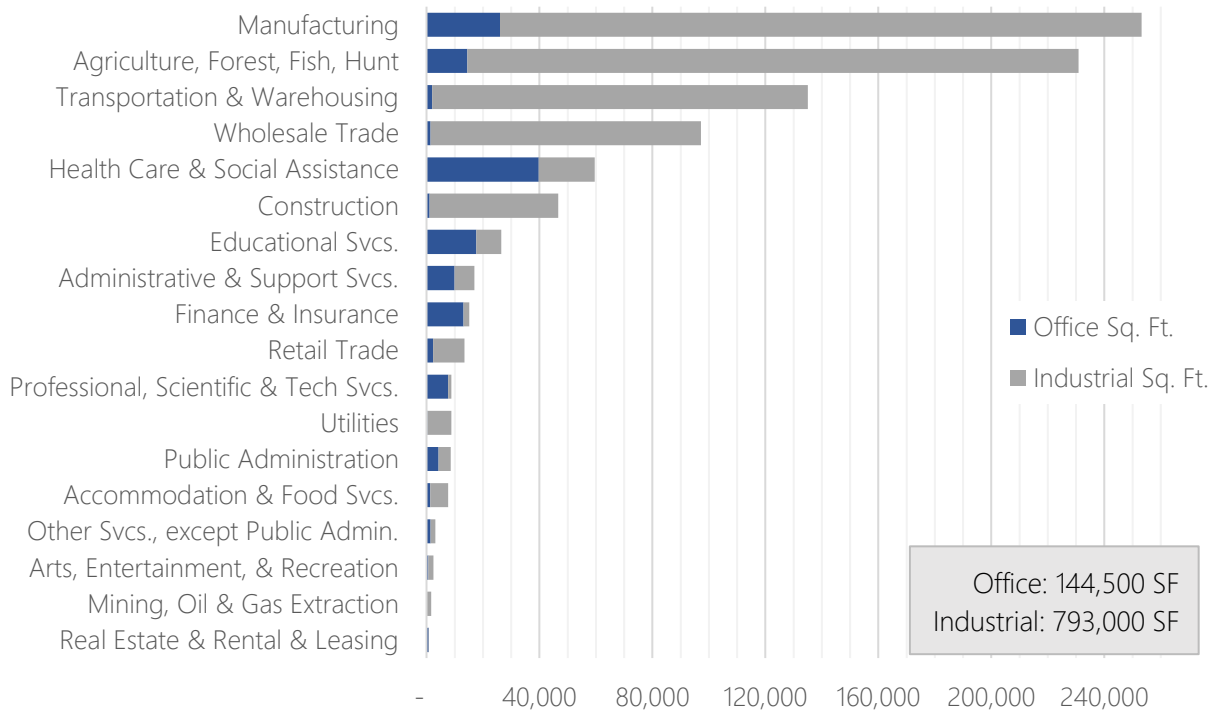
Demand for Commercial/Employment Development

This section provides an estimate of future 10-year market demand for residential development, office and industrial development, and retail development.

Office and Industrial Demand

Based on the respective strength of the office and industrial markets, most employment-based demand for new development is likely to be in the industrial sector, specifically manufacturing and agriculture (tied to the wine industry). With that said, this is largely dependent on McMinnville's ability to compete with other cities in the region where industrial development has been more prevalent. Figure 37 shows LCG's office and industrial development forecast for the market area, based on job growth forecasts made by the U.S. Census.

Figure 37. 10-Year Office and Industrial Demand



Source: Leland Consulting Group

For office, employment growth in the industries of healthcare and social assistance and educational services can be expected to drive most of the demand for new office development.

However, the Census’ employment forecast likely overstates demand for industrial and office space. The following table shows historical employment growth rates along with historical office and industrial deliveries documented over the past decade. These historical trends are useful in suggesting office and industrial construction for the next decade in the market area.

Because little new office space has been built (despite the addition of several thousand new employees), it is possible that there will be little to no demand for office space in the next decade; however, the limited development may be due to a limited supply of appropriately zoned land. Likewise, the total demand for new industrial space may be lower than would be projected using employment forecasts.

Three Mile Lane may be a prime location for **light or craft industrial** which could align with the City’s vision for the area and provide secondary tourism benefits if new development includes experiential or retail components. This is discussed further in the following “Retail Absorption” section. Larger or heavy industrial users are likely to be attracted to existing business and industrial parks, such as that in the north of the City.

Table 11. Historical and Forecasted Office and Industrial Trends, Market Area

	Past 5 Years	Next 10 Years
Net Office Absorption	48,102	70,000
Office Deliveries	5,000	75,000
Net Industrial Absorption	82,500	175,000
Industrial Deliveries	58,000	200,000

Source: Leland Consulting Group

Three Mile Lane Office Absorption

While employment is projected to continue to grow in the market area, the industries projected to experience the most growth and dominate future employment are not traditionally significant office users. This is also true of the past five years, during which time very little new office space was built, suggesting a limited office market outside of healthcare.

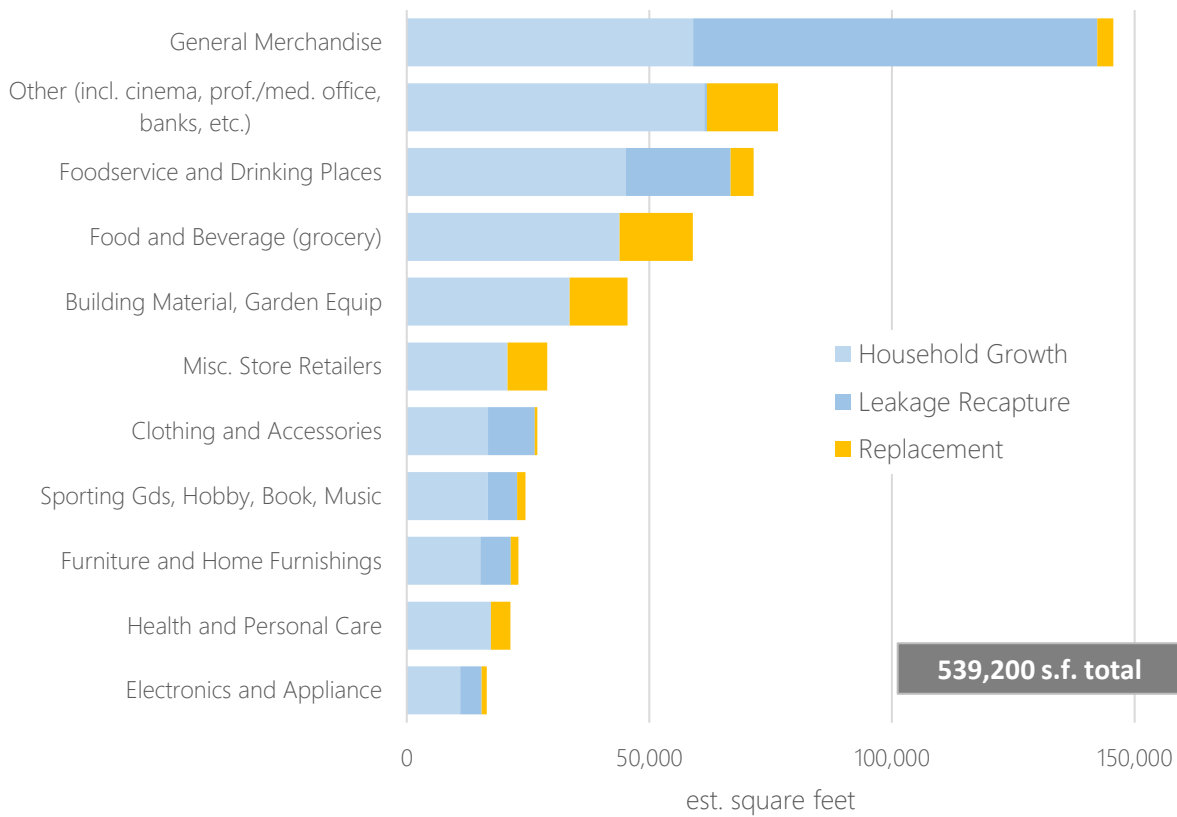
As office rents are too low to justify the high costs of new, high-quality speculative office development, new construction is only likely if large office users can be attracted to the area, or if one or more tenants are looking for a special site and campus environment, particularly near existing health care facilities. McMinnville’s high quality of life, business incentives, and proximity to the Portland metro region may indeed be sufficient in attracting these larger companies, but this is almost impossible to forecast. Additionally, target users could include existing companies looking to expand.

Speculative office development is therefore likely to be minimal or nonexistent in the Three Mile Lane area in the near- and mid-term. On the other hand, recent trends for owner-occupied (often called build-to-suit) buildings in the Three Mile Lane corridor are positive indicators for both the office and industrial markets. The recent presence of two large companies—Jackson Family Wines (industrial/flex) and The Springs Living (office/flex)—in the corridor prove that a market exists for new space, reinforced by the very low vacancy rate in both markets. However, as build-to-suit opportunities are typically less driven by traditional market forces—because they are often to fill specific niches in the market and rent growth is less important—new build-to-suit opportunities are more challenging to forecast than speculative office.

Retail Demand

Using the household growth projections and leakage analysis described earlier, we forecast demand for approximately 529,000 square feet of additional retail development within the market area over the next decade. The general merchandise, “other” (cinema, medical and professional office, etc.), and foodservice and drinking places (restaurants and bars) retail categories are responsible for about half of total demand. Grocery demand would likely support one or two additional stores.

Figure 38. 10-year Market Area Retail Demand by Source



Source: Leland Consulting Group

The following table shows total retail absorption and development for the past five years, and forecasted development based on the same historical trends. Note that these forecasted numbers are significantly lower than those presented above. This is merely to highlight that there may be pent-up demand well into the future if the development trends of the past continue. Increasing the rate of development may, therefore, require significant public interventions.

Table 12. Historical and Forecasted Retail Trends, Market Area

	Past 5 Yrs.	Next 10 Years
Net Retail Absorption	117,900	200,000
Retail Deliveries	40,300	150,000

Source: Costar, Leland Consulting Group

Three Mile Lane Retail Absorption

The Three Mile Lane project area is relatively well-positioned for retail development due to high visibility, ease of access, high traffic counts along Highway 18, and there are few alternative urban areas between McMinnville and the coast, providing opportunities to capture spending from those visiting the Oregon coast.

Additionally, as one of the few locations in the market area with large, contiguous, vacant tracts of land within city limits, Three Mile Lane should be able to capture a significant portion of market area demand over the next 10 years.

However, significant challenges remain, including:

- Existing retail in the project area is virtually non-existent;
- Many retailers—particularly bars, restaurants, and other small-format stores—are likely to prefer a downtown location, where there is existing activity, authentic and interesting buildings, and less risk; and
- There are many other large, successful retail centers within a reasonable drive-time with which any major retail development would compete.

As such, retailers in Three Mile Lane are likely to be auto-oriented, with convenience and general merchandise retail potentially feasible in the short-term. Significant household growth in the area—as projected—is likely to generate demand for further dining and grocery options over the longer term, but not in the near-term as current retail spending data indicates a major surplus of grocery stores in the region.

The tourism and wine industry, especially, is burgeoning, increasing opportunities for development that would leverage the wave of visitors to the area during the warmer months. Specifically, this may take the form of experiential or “destination” retail and commercial uses. Commercial tenants in this category include restaurants, wine-tasting and wine sales, unique Willamette Valley food growers and vendors, other food and beverage vendors (coffee, ice cream, bakeries), and outdoor recreation suppliers. Secondary commercial tenants can fill space alongside these “anchor” tenants. Indeed, a larger building with production, warehousing or light manufacturing in the back and a front-facing retailer—such as a tasting room or craft store—would fit the existing industrial, auto-oriented character of the Three Mile Lane study area while increasing activity in the corridor.

Conclusion

This market analysis assessed the market conditions for residential, commercial, office, and industrial development, and subsequently identified opportunities for the Three Mile Lane corridor based on existing land assets.

Projected residential and employment growth over the next 20 years will drive demand for new residential, commercial, and industrial development. Potential development in the Three Mile Lane corridor is likely to be driven by these market forces, as well as more nuanced needs for housing and retail in particular. Existing market conditions indicate that development will likely remain low-density and surface parked, at least until rents increase and development feasibility of higher-density building types improves. For residential uses this may translate in the near-term to townhomes and apartments up to four stories, as well as single-family and multiplexes. Based on projected demand, retail development is likely to be surface parked, low-rise, and community-serving (potential grocery store, restaurants, etc.), and as part of mixed-use residential and/or office developments over a longer time period.

The growing tourism industry, airport activity, and existing needs for meeting space should drive demand for hotel. However, with speculative office demand relatively low in comparison to housing and retail, hotel prospects are reliant on existing employment and tourism.

With few large flat land tracts left in the area and moderate to high employment growth projected in the industries of manufacturing, agriculture, transportation and warehousing, and wholesale trade, there is strong industrial demand. However, a housing-focused vision for the area is likely to be incompatible with significant

industrial development. Less impactful industrial—light or “craft,” particularly if retail or experiential components are included—would be compatible with adjacent land uses and help generate a live-work-play environment.

In short, opportunities for new development are prevalent given the prevalence of large, greenfield sites in the study area. As such, it is positioned to capture a significant share of regional demand for retail and commercial development, as well as housing, industrial, and other mixed uses.



Land Use and Transportation Facility Options and Evaluation McMinnville Three Mile Lane Area Plan

DATE August 5, 2019

TO Heather Richards and Jamie Fleckenstein, City of McMinnville

FROM Darci Rudzinski and Andrew Parish, Angelo Planning Group
Ken Pirie, Walker Macy
Chris Zahas and Sam Brookham, LCG
Andy Mortensen, DEA

CC Michael Duncan, ODOT

INTRODUCTION

Purpose

The goal of the McMinnville Three Mile Lane Area Plan planning project is to create a long-range, 20-year+ plan guiding future growth in the eastern-most area of the City. This memorandum introduces and evaluates three land use concepts for the McMinnville Three Mile Lane area. These land use concepts are the result of several rounds of public outreach, meetings of the project's advisory committees, and discussions between City staff and the consultant team. They are informed by a series of technical memoranda that are available on the project website, www.threemilelane.com. The concepts provide three distinct approaches for the buildout of new land uses, local street networks, and amenities.

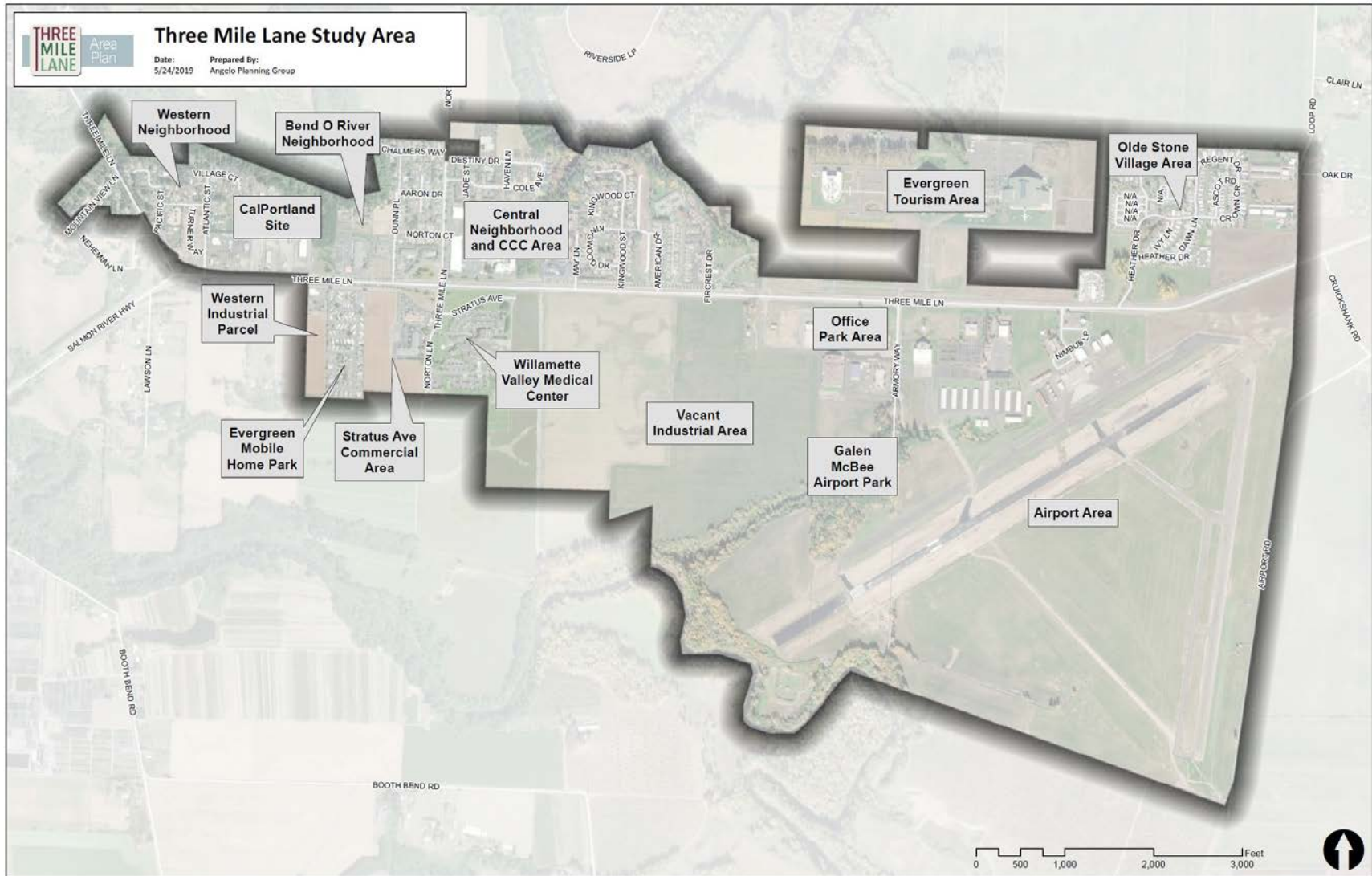
The purpose of this evaluation is to identify benefits and drawbacks of these alternatives, rather than to simply pick the highest-scoring concept. After review from the project advisory committees and broader public, it is likely that the best-performing attributes from all three concepts will make their way into a hybrid, preferred land use option.

Exploring alternatives for the future design of Three Mile Lane (OR 18) is also part of this evaluation effort. The Facility Design Options section of this report describes two design options for OR 18. Both facility design options are expected to service and support any of the three land use concepts, including connectivity with the local street networks contained within each concept.

Project Area and Existing Conditions

The Three Mile Lane area is shown in Figure 1. The study area includes a wide range of land uses. South of Three Mile Lane, the study area is dominated by the McMinnville Municipal Airport, the Willamette Valley Medical Center, and vacant industrially-zoned land. A few commercial and manufactured home uses are also identified to the west. North of Three Mile Lane, the uses are more mixed, with fewer large parcels except for the Evergreen Aviation & Space Museum complex. The north side includes single-family and multi-family uses, mobile homes, and commercial, industrial, and vacant uses.

Figure 1. Three Mile Lane Study Area



The City of McMinnville owns a significant portion of the study area—mostly around the airport, but also the two vacant properties at the east end of Three Mile Lane, as well as the public parks. The two large vacant sites to the west of the airport are privately owned. Chemeketa Community College owns the commercial center in which its campus sits. The Falls at McMinnville LLC owns the Wings & Waves Waterpark and The Falls Event Center sites, but the Evergreen Aviation & Space Museum site is owned by Affordable Mid Coast Housing LLC. The museum itself is a nonprofit, and leases out the buildings. Other major landowners include Olde Stone Village, Baker Rock Resources West LLC (CalPortland site), and Habitat for Humanity, which owns the Aspire Subdivision in the Western Neighborhood Subarea.

Existing conditions are discussed in greater detail in the Existing Conditions Booklet and Technical Memorandum #1.

Project Goals and Evaluation Criteria

An aspirational vision statement, community goals and objectives, and potential criteria to evaluate land use and transportation options for the Three Mile Lane area were developed early in the project.¹ They were created in order to articulate the Three Mile Lane Area Plan’s desired outcomes and help in the evaluation of options for the area. These materials were discussed in project advisory committee meetings and the subject of an online survey and a public open house.²

A revised set of evaluation criteria tied to the goals and objectives was used to evaluate the options in this report, as detailed in Appendix A. The evaluation criteria used to test the three land use concepts are derived from the project’s goals and objectives; the project goals are described below.

GOAL 1: Support and enhance the district's economic vitality and marketability

This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism. Alternatives will be evaluated qualitatively for how well they address the area's development/redevelopment potential.

¹ See Memorandum #4 Evaluation Criteria.

² See Memorandum #5 for an overview of project public involvement to date and feedback received on content in Memorandum #4.

GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.

The study area contains several existing residential neighborhoods, including assisted-living and manufactured home residences, as well as major employers and tourism destinations. This plan aims to provide a mix of land uses that support one another to create a unique part of the city. McMinnville has recently adopted a set of “Great Neighborhood Principles” that have been used to evaluate land use concepts for the Three Mile Lane area.

GOAL 3: Enhance multi-modal connections throughout the district

This plan aims to create a complete, multimodal transportation network that serves the north and south sides of Three Mile Lane within the district, and that connects the business community, the hospital, residential neighborhoods and tourism amenities to each other and to the city center. Alternatives will be evaluated through criteria measuring transportation safety and performance for all modes of travel: pedestrian, bicycle, transit, freight, and personal vehicles.

McMinnville’s Great Neighborhood Principles

- 1. Natural Feature Preservation.** Great neighborhoods are sensitive to the natural conditions and features of the land.
- 2. Scenic Views.** Great neighborhoods preserve scenic views in areas that everyone can access.
- 3. Parks and Open Spaces.** Great Neighborhoods have open and recreational spaces to walk, play, gather, and commune as a neighborhood.
- 4. Pedestrian Friendly.** Great Neighborhoods are pedestrian people for people of all ages and abilities.
- 5. Bike Friendly.** Great Neighborhoods are bike friendly for people of all ages and abilities.
- 6. Connected Streets.** Great Neighborhoods have interconnected streets that provide safe travel route options, increased connectivity between places and destinations, and easy pedestrian and bike use.
- 7. Accessibility.** Great Neighborhoods are designed to be accessible and allow for ease of use for people of all ages and abilities.
- 8. Human Scale Design.** Great neighborhoods have buildings and spaces that are designed to be comfortable at a human scale and that foster human interaction with the built environment.
- 9. Mix of Activities.** Great Neighborhoods provide easy and convenient access to many of the destinations, activities, and local services that residents use on a daily basis.
- 10. Urban-Rural Interface.** Great Neighborhoods complement adjacent rural areas and transition between urban and rural uses.
- 11. Housing for Diverse Incomes and Generations.** Great Neighborhoods provide housing opportunities for people and families with a wide range of incomes, and for people and families in all stages of life.
- 12. Housing Variety.** Great Neighborhoods have a variety of building forms and architectural variety to avoid monoculture design.
- 13. Unique and Integrated Design Elements.** Great Neighborhoods have unique features, designs, and focal points to create a neighborhood character and identity.

GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville

The study area is a primary gateway to the City of McMinnville. Alternatives will be evaluated qualitatively for how well they provide an identity for the district, reflect McMinnville’s intrinsic character, and highlight the landscape features of the district. Because the land use concepts are fairly high-level, urban design considerations explore aesthetic elements that could be applied in the area. Later stages of this project will also present options for an actual gateway feature or monument to further highlight the entry to the City.

Alternatives Creation and Evaluation Process

The creation of the land use concepts and the criteria by which they are evaluated are the result of a public process that has included:

- Participation of the Three Mile Lane Area Plan’s Advisory Committees, which consist of technical and agency members as well as landowners, members of the public, and others.
- A series of stakeholder interviews and hands-on workshops with property owners to discuss options for large vacant parcels within the study area.
- Creation of project goals and objectives, and an online survey to evaluate them.
- Market analysis and case studies prepared by the project’s consultant team, focusing on large vacant parcels in the study area.
- An open house held on April 10, 2019 at Chemeketa Community College to provide information to the public on existing conditions and gather feedback regarding the project’s goals and objectives.

Additional detail about this process is provided below.

Market Analysis

Early in the project, a market analysis was conducted to assess regional conditions for residential, commercial, office, and industrial development and to identify specific development opportunities within the Three Mile Lane corridor by leveraging the land assets to their highest and best use. The market analysis identified significant household and employment growth in the region over the next 20 years, which will drive demand for new housing, commercial, and industrial construction. The area is positioned to capture a significant share of this regional demand given the presence of large greenfield sites within the area—a situation which is relatively rare in the broader region.

The market analysis highlighted the most feasible development typologies based on rents and development trends. Generally, these typologies share similar characteristics, such as surface parking and a low-rise scale. Higher density development—such as mid-rise buildings—may face feasibility challenges and are not expected to be developed in the Three Mile Lane area during the planning horizon.

- **Residential demand** is strong for both single-family and multifamily housing, with rising home values, household incomes, sales volumes, absorption, and construction activity throughout McMinnville. The quantity of what would be built in the study area depends largely on the City’s vision for the area, applicable zoning, infrastructure capacity (and the ability for new development to pay for new infrastructure), and buildable land. Townhomes,

apartments up to four stories, single-family homes, and multiplexes are all residential development types that would likely be feasible in the study area.

- **Retail demand** is also strong, particularly for general merchandise—which is typically large-format retail—and neighborhood-serving retailers that will support existing and future households and tourism. The changing market for retail development due to e-commerce may present both challenges and opportunities for novel development in the area.
- **Lodging demand** exists due to the burgeoning tourism industry, potential airport activity, and existing needs for meeting space, although the limited office market means the bulk of lodging demand will fall during the summer months when tourism activity is highest.
- Market conditions reflect strong **industrial demand** due to the growth of agriculture, food and beverage production, and manufacturing, with potential pent-up demand because of the lack of appropriate—particularly large—industrial sites. The Three Mile Lane area is poised to accommodate large industrial users, but heavy industrial may negatively impact prospects for other land uses such as lodging and multifamily. However, the area could also capture a proportion of regional demand by focusing on “craft” or light industrial users, which may or may not include retail components.
- The **office market** is potentially strong but limited. Opportunities may arise because of McMinnville’s high quality of life and the corridor’s proximity to the airport and institutional users such as healthcare and education.

Case Study

In order to refine the feasibility of the market study findings on a real-world site, a redevelopment analysis for three largely vacant properties in the Three Mile Lane study area totaling approximately 180 acres was conducted. Referred to as a “case study,” this analysis involved an evaluation of site conditions for these properties and the surrounding area, an assessment of opportunities and constraints, the development of three building programs based on the market analysis, conceptual graphics of each program alternative, and an economic analysis that assesses the impact of each alternative on jobs, assessed property value, and other key indicators.³

Each case study scenario represents a different exploration of how the market-driven land uses could be arrayed across the sites in ways that support the community’s values and the goals, objectives, and criteria developed through the planning process. A property owner workshop was held to review findings and background information collected to date—including the market analysis—and included a broader discussion of visions, criteria, and principles.

The three case study scenarios illustrated distinct opportunities for large vacant parcels in the south side of the Three Mile Lane area to develop with new uses and new public infrastructure. They show that a wide range of opportunities is possible, allowing property owners and developers to react to changing market conditions. The concepts would significantly add jobs and tax base to McMinnville, ranging from 1,100 to 5,800 jobs and \$128 to \$386 million in added taxable value. Given the strong growth occurring throughout the region and McMinnville’s constrained land

³ The Case Study Report is available on the project website, www.threemilelane.com.

supply, this is a unique opportunity for McMinnville to capture economic growth while simultaneously providing needed community services, housing, and jobs.

Based on this information and input, and building from the case study land use alternatives, the consultant team created three land use concepts for the wider Three Mile Lane study area. The Concepts described in this report are intended to explore and evaluate different use mixes, urban design options, and transportation improvements across the entire study area.

LAND USE CONCEPTS

Three land use concepts were developed to illustrate how the goals and objectives for the Three Mile Lane area could be achieved. They have their origins in the development scenarios created for the case study focused on large, vacant parcels south of OR 18. The major elements of the case study scenarios logically have implications for the viability of land uses and transportation networks throughout the study area, and the land use concepts for the wider area were crafted to compliment the outcomes envisioned through the case study process.

Elements common to all three of the land use concepts, followed by a description of significant differences, are described in this section.

Common Elements

There are notable elements common to all three concepts. These include several transportation improvements and other items as discussed below.

- **Urban Growth Boundary (UGB).** No change is assumed to the City of McMinnville UGB, which surrounds the study area. For the purposes of this planning study, the agricultural uses and rural residential uses outside of the UGB are assumed to remain, while land within the UGB is assumed to eventually develop with urban uses and at urban densities.
- **Developable Land.** There is roughly 400 acres of developable land in each option⁴. Most of the existing employment land uses are expected to remain and the fundamental structure of built-out neighborhoods north of Three Mile Lane are not expected to change within the planning horizon. Constant in all three concepts is the assumption that there is some opportunity for higher density residential south of the highway, in the southwest corner of the study area.
- **Three Mile Lane (OR 18).** This evaluation looks at the long-term transportation needs of people traveling within and through the study area. The second half of this report contains a specific evaluation of two facility design options for Three Mile Lane, each of which would support the three land use concepts.
- **Local Transportation Network.** Needed transportation connections on the City's arterial and collector network are common between the alternatives, including:
 - Connecting Cumulus Avenue to SW Norton Lane through or adjacent to the Chemeketa Community College campus.

⁴ This figure does not include potential developable area near the McMinnville Municipal Airport.

- Collector and conceptual local street connections through new developments south of Three Mile Lane.
 - An improved Three Mile Lane bridge with better bicycle and pedestrian facilities.
 - New and improved bicycle and pedestrian connections throughout the study area.
- **Urban Design.** As part of this process, the City is considering updating the Three Mile Lane overlay to include design requirements that ensure new development has a cohesive, context-sensitive and sustainable aesthetic. These requirements may address tree planting/landscape design, pedestrian- and bike-friendly site design, views, protection of natural resources, and off-street parking, including others. This memorandum describes some of the elements expected to be incorporated into the Three Mile Lane Area Plan, but they are not distinguishing factors between the concepts presented.
- **Airport.** Airport-related uses are expected to be permitted according to existing City code requirements. The area adjacent to the airport is expected to continue to develop as an airport-oriented commercial and industrial center in all options, reflecting the economic value and potential of this infrastructure. The vacant property on the north side of Three Mile Lane at the eastern edge of the study area is within the Airport Approach zone and will remain undeveloped.
- **Natural Areas.** The northern and southern edges of the study area feature the riparian corridor and floodplain for the South Yamhill River, which provides a natural transition to current and future development, adding a sense of place and potential recreational access. In all concepts these natural features are intended to be preserved and enhanced for the enjoyment and benefit of all.
- **Gateways.** Each alternative proposes different locations for the consistent idea of new gateway elements or treatments, whose design will be determined at a later date. Conceptually, these elements could include large-scale welcome signage, vertical art pieces or sculptural elements or significant landscape designs or patterns.
- **Vehicle Trip Generation.** Each of the alternatives represent a change in land use that increases the number of future trips using and crossing OR 18. A Trip Generation Evaluation was performed to identify the level and location of new trip generators within the study area, comparing and contrasting the three land use concepts. The results of the assessment are summarized for each land use concept and detailed in Appendix A.
- **Facility Design Options.** Two options for the design of Three Mile Lane are discussed later in this memorandum, which have implications for multimodal connectivity through and across the highway. These options are separate from the three land use concepts.

Land Use Concept 1 – Industrial Campus

This concept is most similar to existing zoning south of Three Mile Lane. It allows for a large industrial user, potentially engaged in manufacturing or warehousing, in close proximity to retail services, Three Mile Lane, and other supportive or ancillary uses to the primary industrial employment use. Large flat ‘greenfield’ parcels may be very attractive to industrial users seeking space for large buildings and associated parking and loading.

Due to the emphasis on industrial development, Concept 1 is likely to result in the largest overall building square footage of the options. However, the overall economic impact of the plan area is contingent on the types of industrial uses that ultimately locate in the area. Low-intensity uses such as warehousing would generate fewer jobs, lower tax revenue, and less opportunity for high-quality amenities than high-intensity uses such as manufacturing and flex space.

Gateways. This concept includes specific gateway features for westbound traffic on Three Mile Lane associated with a future interchange at Cumulus Avenue, and at the western edge of the study area for eastbound traffic on 18.

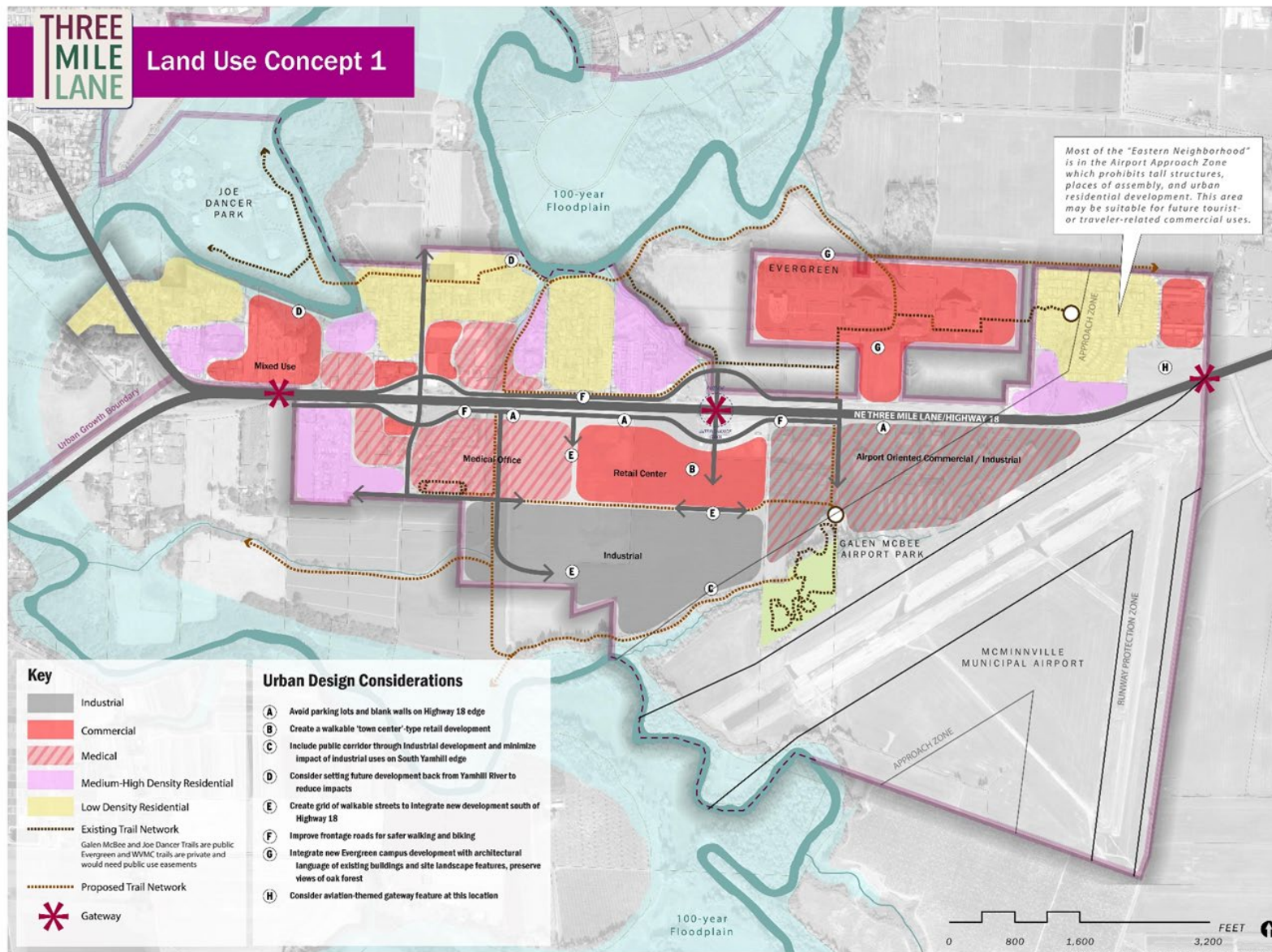
Parks and Trails. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. New connections to McBee Airport Park will be provided primarily via roadways and sidewalks as properties south of Three Mile Lane develop. North of OR 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond.

Evergreen Tourism Site. No changes to the site from existing conditions are assumed for Concept 1, other than the establishment of a more formalized trail loop network.

Willamette Valley Medical Center Area. This concept envisions a cluster of new medical office space near Norton Lane on both sides of Three Mile Lane, building off the central attractor of the Medical Center. This could include space for expansion of the Medical Center.

Cal-Portland Site. In this concept, the Cal Portland site is changed from its current industrial designation to a mixed-use designation, allowing for a mix of commercial and residential development. On the north side of this parcel, protection of the South Yamhill river edge, potentially with public access, is a key urban design goal.

Figure 2. Land Use Concept 1



Retail “Town Center.” This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR 18 with additional smaller retail uses. While serving as a regional retail attractor, it would also function as an important local amenity, providing convenient access to shopping and services for adjacent office and residential development. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process.⁵ Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville’s downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development.

Eastern Neighborhood. In this concept, a mix of new housing in the R-4 designation and commercial development is added in the eastern portion of the study area, including a Crossroads Commercial development at the corner of SE Loop Road and OR 18, designed to recognize its position at the eastern gateway to McMinnville, with significant landscape, gateway signage and context-appropriate buildings.⁶

CCC Campus. Potential for infill commercial uses to replace existing inward-facing buildings, in new buildings or renovated retail structures that have more of an active street presence on the visible Norton Lane frontage.

Vehicle Trip Generation. The greatest number of new vehicle trips in Option 1 are generated by planned commercial and multi-story medical office developments on the south side of OR 18, between the Willamette Valley Medical Center and Cumulus Avenue. New commercial lands at the eastern end of the study area and along Cumulus Avenue (Baker Rock site) will also generate significant vehicle trips. Industrial land at the southern edge of the study area is not expected to generate significant vehicle traffic.

⁵ Early design considerations have been provided. Design standards should be applied to this development to ensure that the architectural language is consistent with and respectful of regional agricultural and historic forms and scale. The entire retail center should include shade trees and lush landscape, which is consistent with other high-quality retail centers. The design of the edges of the center should also be carefully considered, so that travelers on Three Mile Lane are not viewing the loading docks and blank walls of an internally-focused center.

⁶ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

Land Use Concept 2 – Corporate Campus

The most significant feature of this concept is a sizable commercially-zoned “corporate campus” and a mix of office/industrial uses south of Three Mile Lane, which would add a significant amount of new office space. The balance between housing, commercial, and office) development in Land Use Concept 2 makes this scenario less dependent on one particular land use type. In this scenario, much of the job and development growth is driven by the corporate campus, so finding a good user for this space is key.

Gateways. This concept includes three gateway features; at the eastern edge of the Evergreen Campus, , and at the future interchanges of SW Cumulus and SW Norton Lane.

Evergreen Tourism Site. The Evergreen Tourism Site is envisioned to include a new hotel, retail, and event space in this concept, as infill development on undeveloped land within the current boundaries of the campus.

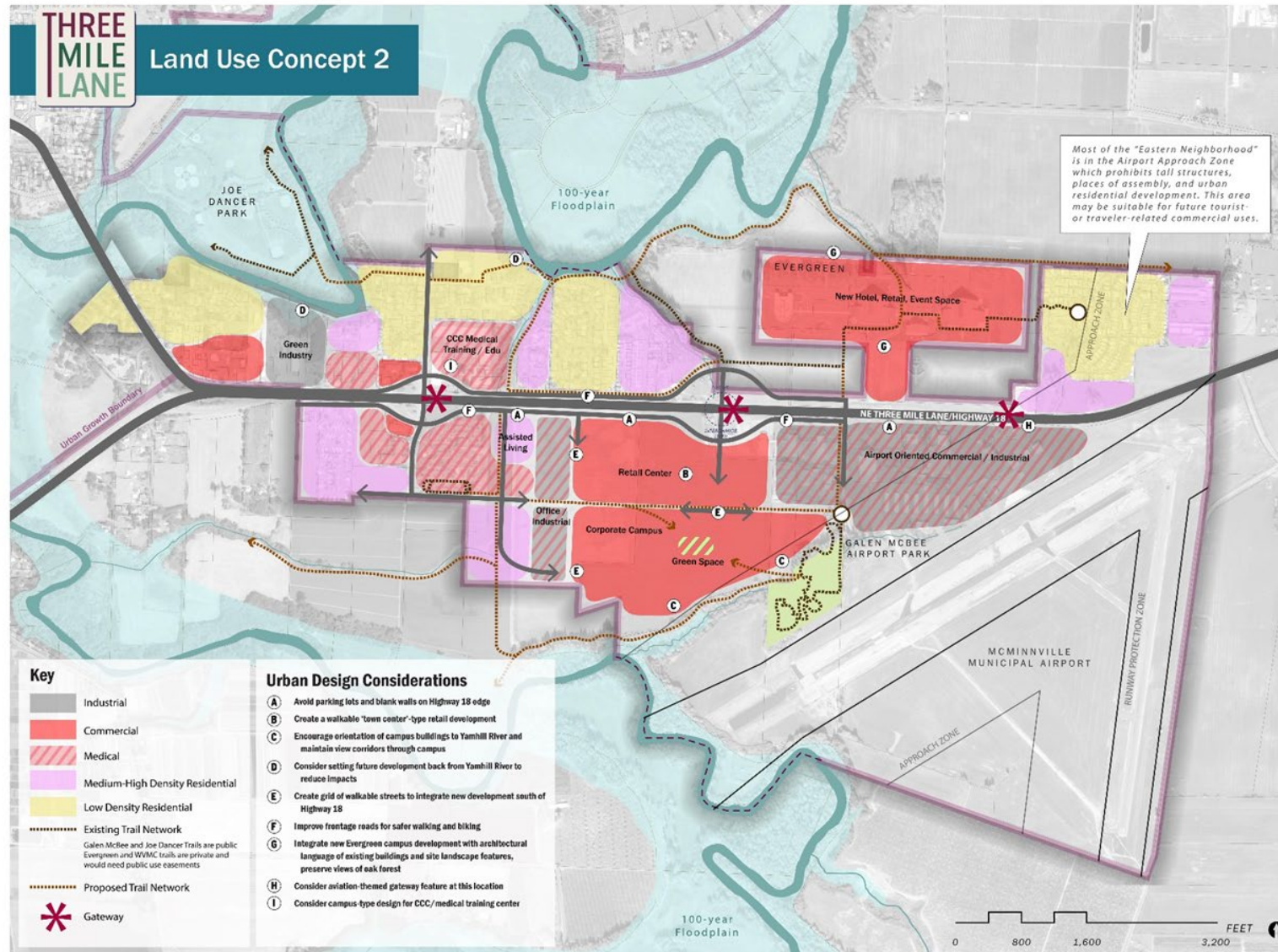
Parks and Trails. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. New connections to McBee Airport Park will be provided primarily via roadways and sidewalks as properties south of Three Mile Lane develop. North of 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond. This concept includes a new park as a central gathering space for the corporate campus area, connected to Galen McBee Airport Park via a trail system.

Willamette Valley Medical Center Area. This concept includes new medical office space near Norton Lane on both sides of Three Mile Lane. This concept also includes additional R-4 land for assisted living facilities near the Willamette Valley Medical Center—these two uses are complementary and can benefit from co-location. Chemeketa Community College’s focus on health and medical-related education is strengthened with complementary uses, including potential outpatient clinics that include training for students.

Retail “Town Center.” This concept includes a significant retail center south of Three Mile Lane at Cumulus Avenue. This could take the form of a large-format retail anchor that would take advantage of traffic on OR 18 with additional smaller retail uses. Considerations for how this center is designed, and how it relates to existing commercial centers such as the Third Street/Downtown District, will need to be examined in further detail at a later phase of the process.⁷ Depending upon its design and other factors, a new retail center could provide services for residents and employees in the Three Mile Lane area without directly competing with existing businesses in McMinnville’s downtown. The core of the center should be walkable if possible, with extensive pedestrian connections through associated parking lots to ensure safe circulation. Parking lots should be designed in a way that does not forgo future redevelopment with more mixed uses, reflecting the uncertain future of retail development.

⁷ Design considerations are similar to those of Land Use Concept 1.

Figure 3. Land Use Concept 2



Corporate Campus. A roughly 90-acre corporate campus is proposed in the southern portion of the study area, which could take advantage of highway access and the nearby municipal airport. The scale of this parcel could make it attractive to a growing tech company that seeks to attract employees to a more affordable community with great natural amenities as well as access to an airport with corporate jet capacity. This campus would be a walkable hub of activity for many employees and could drive demand for additional business services in the surrounding retail and industrial areas. As part of this campus, a new public park is proposed with trail connections to the Galen McBee Airport Park and the campus could be oriented south to the river, to mountain views and the scenic backdrop of agricultural lands beyond. A ‘layer’ of office/industrial use to the west of this corporate campus could be a complementary use for smaller office development that seeks to be close to the larger company campus.

Cal-Portland Site. In this concept, the Cal Portland site remains in an industrial zoning designation but transitions to a greener industry that is a better neighbor to residential uses with a green edge to the South Yamhill River to the north.

Eastern Neighborhood. In this concept, a mix of new housing in the R-4 designation is added in the eastern portion of the study area.⁸

Vehicle Trip Generation. The total new vehicle trip generation is slightly larger in Option 2 than it is in Option 1, though more of the traffic is generated by commercial lands, located near (north and south of OR 18) and focused on Cumulus Avenue. Residential land at the eastern end of the study area will also generate new vehicle trips.

⁸ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

Land Use Concept 3 – South Yamhill Neighborhood

The most significant feature of Concept 3 is the inclusion of residential land in the southern portion of the study area. Along with a greater number of housing units comes a greater need for amenities such as parks, trails, and services to serve the population. Concept 3 provides the most diverse mix of uses in all parts of the study area. The City's Housing Needs Analysis (HNA) emphasized housing affordability as a challenge in the city. Providing a range of housing types and densities, as envisioned in this option's South Yamhill Neighborhood, is one way of addressing this need.

Gateways. Four potential gateway locations are included in this concept; at the eastern entrance to the study area and city, at the SW Cumulus and SW Norton overpasses and at the western end of the study area, where Three Mile Lane splits north from OR 18.

Parks and Trails. This concept includes an expanded Airport Park to serve residences throughout the study area, with new trail connections west to new residential development. Sports fields and active play space are envisioned. A new trail is proposed along the north side of the South Yamhill River, connecting to Galen McBee Airport Park. North of 18 new trails are proposed along two drainages that extend north to the South Yamhill River, connecting with a riverfront trail that links to a loop around the Evergreen Campus. A new bridge is proposed over the South Yamhill River at the west end of NE Chalmers Way, connecting to Joe Dancer Park and downtown McMinnville beyond.

New connections to Galen McBee Airport Park will be provided via roadways and sidewalks as properties south of Three Mile Lane develop, as well as a "greenway" trail through the south of the Three Mile Lane area.

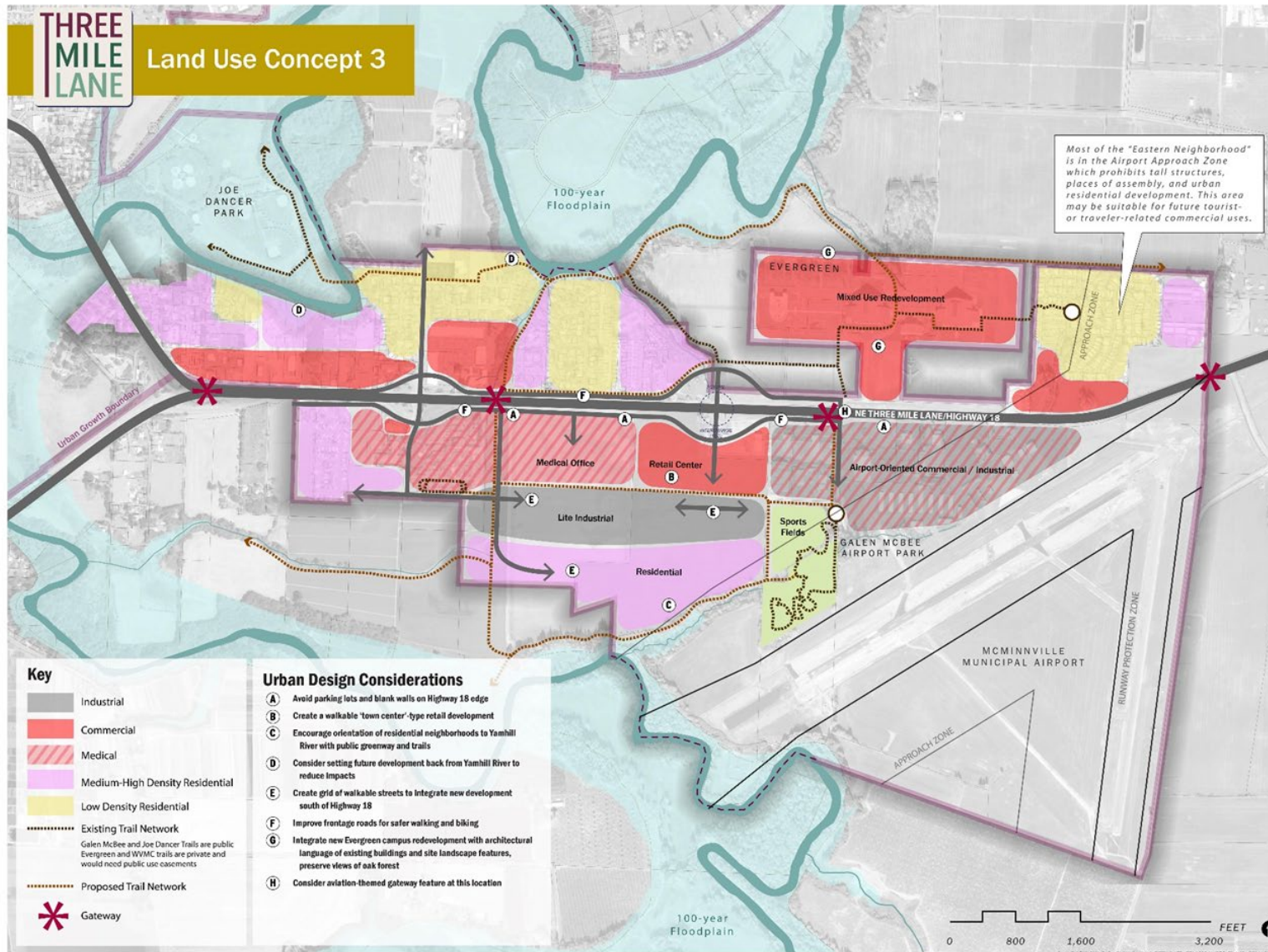
Willamette Valley Medical Center Area. This concept roughly doubles the area for medical office space and potentially new hospital facilities near the Willamette Valley Medical Center south of Three Mile Lane.

Evergreen Tourism Site. A mixed-use redevelopment of the Evergreen Tourism Site is envisioned in this scenario, including a mix of residential uses (likely multifamily or townhomes), office uses, and retail. This differs from Concept 2 in the sense that redevelopment is envisioned to be uses that are less determined by the actual Evergreen destination.

Cal-Portland Site. In this concept the Cal Portland site is redeveloped with commercial frontage on Cumulus Ave and residential uses to the north along the Yamhill River, matching the overall pattern of the rest of the neighborhood north of Three Mile Lane.

Retail "Town Center." This concept includes a somewhat smaller (~28 acre) retail center south of Three Mile Lane at Cumulus Avenue, but retail center design considerations similar to Concepts 1 and 2 should be applied where possible.

Figure 4. Land Use Concept 3



Light Industrial Area. This concept includes a light industrial area south of Three Mile Lane that could include warehousing, food and beverage-related industry, light manufacturing, or other uses. It could take advantage of nearby medical offices, the airport, and highway access. A grid of walkable streets through this area is important for overall connectivity south of the highway. The southern edge of this area will abut a new residential neighborhood (see below) so the southern edge should include buffer landscape and uses that minimize noise, traffic and night-time activity. As an employment base, there should also be walking and biking links to the residential uses.

New South Yamhill Neighborhood. This concept includes a 55-acre new neighborhood at the southern end of the study area, capitalizing on access to the river, nearby employment, and amenities. With the potential for several hundred homes, it would likely include a mix of attached and detached housing types such as single-family homes, townhomes, and apartments at a range of price points. Parts of the neighborhood could include elements that honor the agricultural heritage of McMinnville, with ‘agrihood’ features including community gardens or barns serving as central community space. The new neighborhood could include a grid of low-speed, walkable and bikeable streets, with homes served by rear alleyways to foster a more cohesive, walkable streetscape. While the neighborhood will be adjacent to an expanded McBee Airport Park, there could be additional smaller pocket parks dispersed through the neighborhood, including some that serve as overlooks or trailheads adjacent to the South Yamhill River.

Eastern Neighborhood. In this concept, the southern edge of the eastern neighborhood is developed with commercial uses.⁹

Vehicle Trip Generation. Concept 3 focuses more on retail-related lands within the Evergreen Aviation site, and eastern end of the study area (north of OR 18) and along Cumulus Avenue west of Norton Lane. New trip generation by medical office use near Willamette Valley Medical Center is the largest under Concept 3. Residential lands at the southern edge of the study near the airport will also generate a sizeable number of new vehicle trips. Concept 3 presents a higher total new vehicle trip generation than Concepts 1 or 2.




⁹ Potential conflicts related to new residential uses in close proximity to the Airport will need to be considered.

EVALUATION OF LAND USE CONCEPTS




The three land use concepts described in this memorandum represent high-level concepts for potential future land use, transportation, and design elements in the Three Mile Lane area. The goals for the area, included earlier in this memorandum, and specific objectives associated with each, are met in each of the land use concepts to a greater or lesser degree. To help assess how alternatives meets community goals and objectives, evaluation criteria were suggested earlier in the planning process.¹⁰ These are included in Appendix A, as well as a preliminary assessment of how the alternatives address each criterion.




The Concept Evaluation table included in this section mines from this larger comparison exercise and focuses on criteria that can help evaluate the merits of each of the land use concepts as compared to each other. The table includes specific objectives related to individual project goals and indicates how the land use concept performs, relative to the other concepts. The table is not exhaustive but is intended to include criteria that present notable differences in the concepts in order to help the project’s advisory committees and broader community evaluate the three options.




Table 1: Concept Evaluation

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
<i>GOAL 1: Support and enhance the district's economic vitality and marketability</i>			
Amount and Type of Employment Land	A greater amount of industrial land	Large amount of commercial land south of Three Mile Lane	A smaller amount of commercial land on the south side of Three Mile Lane.
Opportunities for Additional Goods and Services in the Area	Mixed use area in NW, new retail center may provide goods and services.	Retail center, Evergreen Site provide goods and services	Evergreen site, commercial in NW, and smaller retail center provide goods and services
Relationship with and Impacts To the McMinnville Municipal Airport	Potential large industrial user of airport	Potential commercial campus user of airport	No single dominating user of airport – but an increased use compared to today due to greater activity

¹⁰ See Memorandum 4.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
Compatibility of uses adjacent to airport	Moderate amount of residential use near airport	Significant amount of medium-density residential in NE portion of study area (near end of runway)	Significant amount of new residential in southern portion of the study area, potential conflict.
Support for existing and new tourism opportunities	Preserves aviation complex. No significant increase of tourism capacity elsewhere	Significant commercial opportunities throughout district, and tourism-focused development of Evergreen site	Smallest amount of land for commercial of the three, but preserves aviation complex for continued tourism growth
<i>GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.</i>			
McMinnville Great Neighborhood Principles	New residential uses are limited primarily to infill development in this option.	This option includes smaller amounts of new residential uses focusing on assisted living. These pockets may be less able to utilize the great neighborhood principles purely due to their size and specialized purpose.	This option includes a large new residential neighborhood, which should be designed with McMinnville’s Great Neighborhood Principles in mind.
Residential uses, mix, and location	~1,400 new units, primarily in mixed use and multi-level mid-rise areas	~1,900 new units, located primarily in the far eastern and southern portions of the study area.	~2,500 new units, located primarily in the southern portions of the study area.
Transit-supportive land uses	Major new job and retail centers and high-density housing can help support transit.	Major new retail, corporate campus, and tourism areas, as well as high-density housing, can help support transit.	New residential neighborhood, Evergreen redevelopment, and medical office areas can help support transit.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)			
GOAL 3: Enhance multi-modal connections throughout the district			
Impacts to OR 18 as a key intercity/freight route.	<i>Specific impacts to OR 18 will be evaluated as part of more detailed analysis for the preferred land use alternative.</i>		
Vehicular connectivity through land use types (street density)	<i>Each of the alternatives can accommodate vehicular connectivity on the local street system through the study area. See DESCRIPTION OF LAND USE OPTIONS in this memorandum.</i>		
Bicycle/pedestrian connections to key locations outside of the study area	<i>Each of the alternatives accommodate enhanced bicycle and pedestrian through the study area. See DESCRIPTION OF LAND USE OPTIONS in this memorandum.</i>		
GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville			
Gateway features	One gateway feature located in interchange area, where it is likely to be auto-oriented in nature. Two others have the potential to be oriented toward other modes.	Two gateway features are located within interchange areas, which are more likely to be auto-oriented in nature. One other has the potential to be oriented toward other modes, but it is located at the edge of the study area away from much of the likely pedestrian/bicycle activity.	All gateway features are located outside of interchange areas, making them more likely to have human-scale design and orientation.

Evaluation Criteria	Land Use Concept 1	Land Use Concept 2	Land Use Concept 3
 + (positive, better meets criterion)  0 (neutral, no significant change)  - (negative, under-performs)	<p>All concepts have the potential for design requirements to be implemented through an overlay zone, however industrial structures tend to have lower values and special industrial needs that can conflict with these requirements.</p>	<p>Due to a lesser amount of industrial land in this concept, it may be able to better implement specific building design requirements.</p>	<p>Similar to Concept 1, industrial areas may be less able to incorporate some design requirements; however the new residential neighborhood may make these requirements even more important and be able to improve the aesthetics of the area generally through good neighborhood design.</p>
<p>Landscaping and Street Trees</p>	<p>Similar to the above topic, industrial land is less likely to provide high-quality street trees and other landscaping elements than other use types.</p>	<p>The corporate campus, retail center, and other uses are very compatible with high-quality landscaping.</p>	<p>New residential areas are envisioned to have a high quality network of street trees and other landscaping. The light industrial area may also be required to provide quality landscaping.</p>

FACILITY DESIGN OPTIONS

The consultant team developed two alternative facility designs for the section of Highway 18 within the study area to support the land use concepts. The study evaluation for OR 18 defines two distinctive facility design options:

- **Facility Option 1 - Interchanges** - focuses local access through two major interchanges, and one roundabout
- **Facility Option 2 - Roundabouts** - provides access through one interchange and three roundabouts

Both facility design options are expected to service and support the three land use options, including connectivity with the local street networks contained within each land use option (see Description of Land Use Concepts). The typical cross-sections of OR 18 described under each facility design option meet Oregon Highway Design Manual guidance for median, travel, and shoulder lane widths. Under both facility design options, notable design features or issues that may require further consideration are also described.

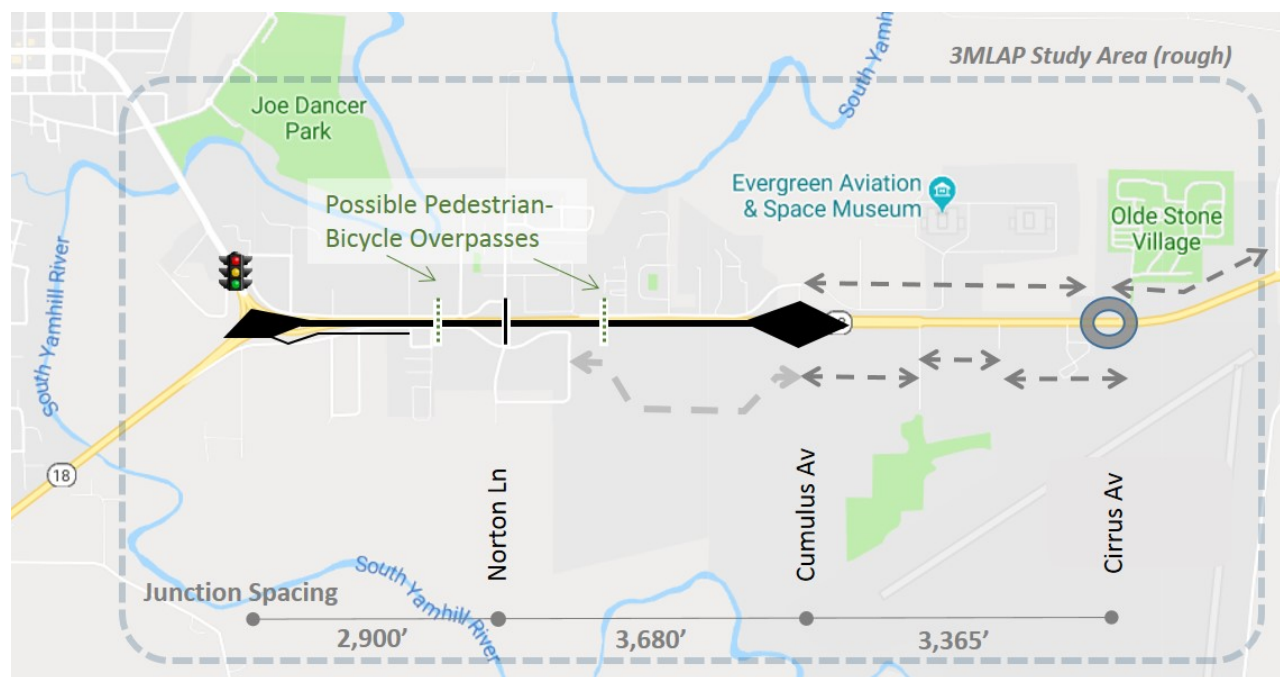
Facility Option 1 - Interchanges

Option 1 generally assumes that major interchanges on OR 18 are the primary junction design intended to balance local area access, circulation, and regional highway through-movement mobility. The interchanges and roundabout in Option 1 are connected by a series of parallel frontage streets. The Option 1 interchange location and spacing is similar to the 1996 Corridor Refinement Plan.

Long-Term Capacity Enhancements

Option 1 assumes that at some time in the future, more significant capacity improvements will be needed to provide local land access in the study area and maintain OR 18 mobility targets. Figure 5 illustrates this long-range interchange facility design option and depicts a series of interim intersection enhancements that could be constructed in advance of major interchange development. Option 1 also includes possible pedestrian-bicycle overpasses of OR 18 (east or west of Norton Lane) to better link study area neighborhoods.

Figure 5. OR 18 Interchange Facility Design Option 1 – Sketch Map



As shown, the interchange facility design option includes the following features:

- Replacement of the OR 18/Three Mile Lane interchange, including a new connection from Stratus Avenue¹¹, providing a more direct, local street (vehicle, bicycle and pedestrian) connection from the south study area to downtown McMinnville.
- Lowering the grade of OR 18 to better facilitate north-south street connectivity.
- New Norton Lane bridge over OR 18 (replacing the existing traffic signal), and possible pedestrian-bicycle bridges either east and/or west of Norton Lane.
- New OR 18 interchange at Cumulus Avenue (replacing the existing traffic signal).
- Possible pedestrian-bicycle only bridges over OR 18, located either east and/or west of Norton lane, providing greater study area connectivity.
- New roundabout on OR 18 at Cirrus Avenue, providing local land access in lieu of driveway closures.
- A series of parallel, east-west local access streets with connections to the future Cumulus interchange, Cirrus roundabout and Norton Lane. Loop Road is re-aligned to the Cirrus roundabout. The existing Loop Road and other local driveway connections to OR 18 in the study area are closed.

The plan view of the OR 18 interchange facility design option is illustrated in Figure 6. The reconstructed OR 18/Three Mile Lane interchange includes a direct connection to Stratus Avenue.

¹¹ Reconstruction of interchange and new Stratus Avenue connection will require a minor adjustment to the Urban Growth Boundary – for transportation facilities only.

As an alternative to OR 18 and Cumulus Avenue, the new Stratus Avenue link provides more direct connectivity between areas south of OR 18 and downtown McMinnville.

Two-way cycle tracks are added to Cumulus Avenue (north side) and Stratus Avenue (south side), with buffered treatments from adjacent vehicle travel lanes. These cycle tracks will provide better connectivity within, and from, the study area to downtown McMinnville, supporting a wider range of cycling residents and visitors. Wider sidewalks and planter strips along Cumulus and Stratus Avenues are also assumed under the interchange facility design option.

Figure 6. OR 18 Interchange Facility Design Option – Plan View / Corridor
West Section



East Section

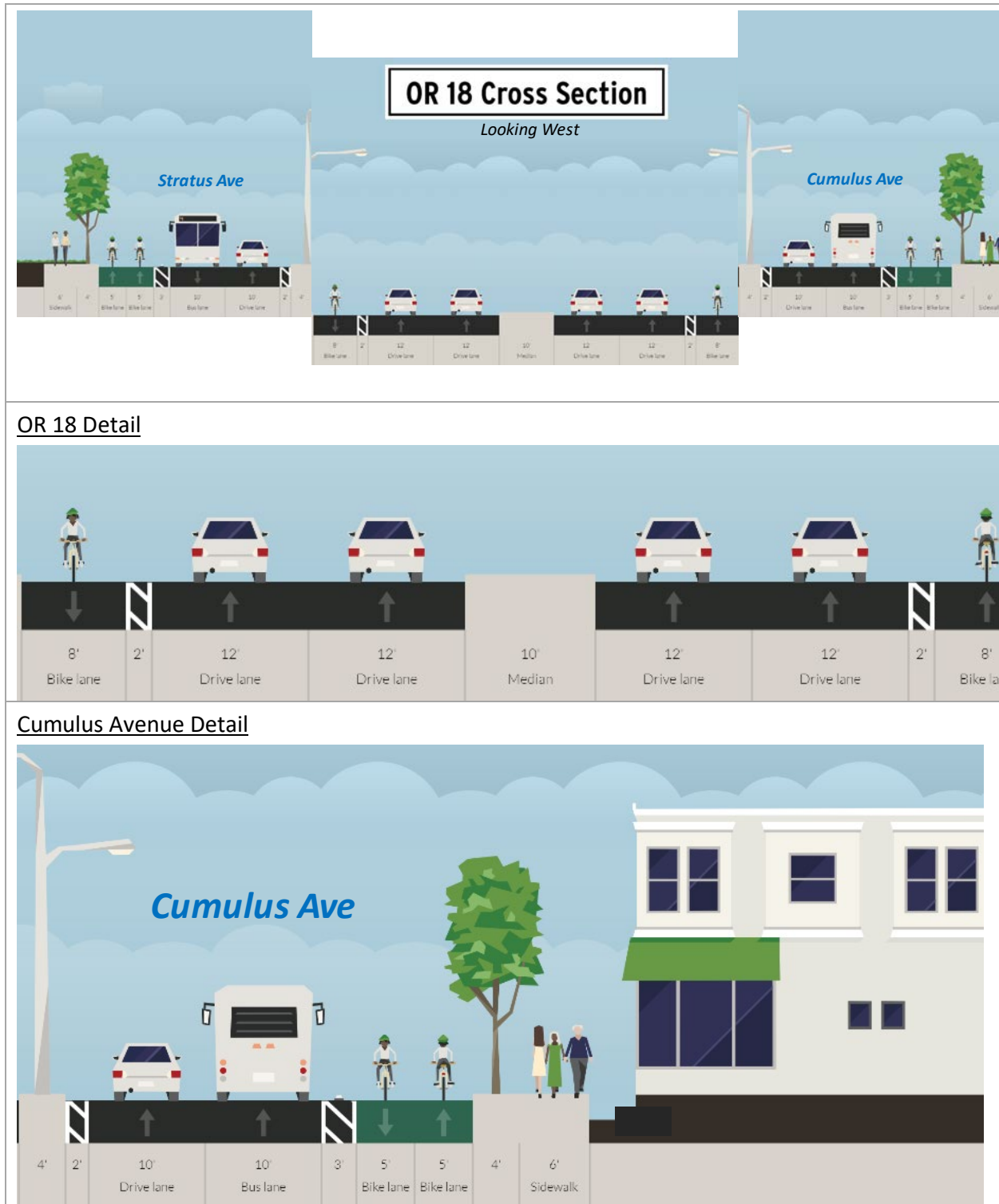


The profile view of OR 18 and Cumulus and Stratus Avenues is illustrated in Figure 7. As shown, the grade of mainline OR 18 is lowered, and both Cumulus and Stratus Avenues are widened to fit new, two-way cycle tracks, and buffered planting strips and wider sidewalks.

McMinnville gateway design treatments can be integrated into each of the major interchanges, overcrossings, and roundabout.

Plan views of more detailed design concepts for individual interchanges and junctions included as part of Option 1 are found in Appendix B.

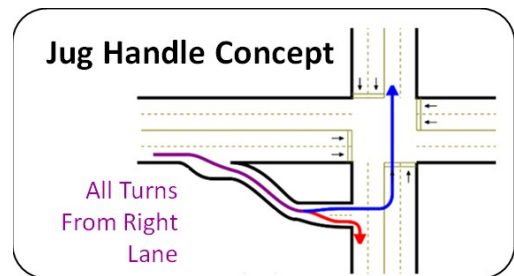
Figure 7. OR 18 Interchange Facility Design Option 1 – Profile View



Interim Capacity Enhancements

As noted in the Existing Transportation Operations and Safety Analysis Memorandum, the OR 18 signalized intersections at Norton Lane and Cumulus Avenue currently have an underutilized capacity for vehicular traffic. A combination of minor intersection improvements and the development of a frontage street network along OR 18 may also provide additional capacity. These capacity improvements may help achieve OR 18 mobility targets and provide local land use access within the 20-year planning horizon.

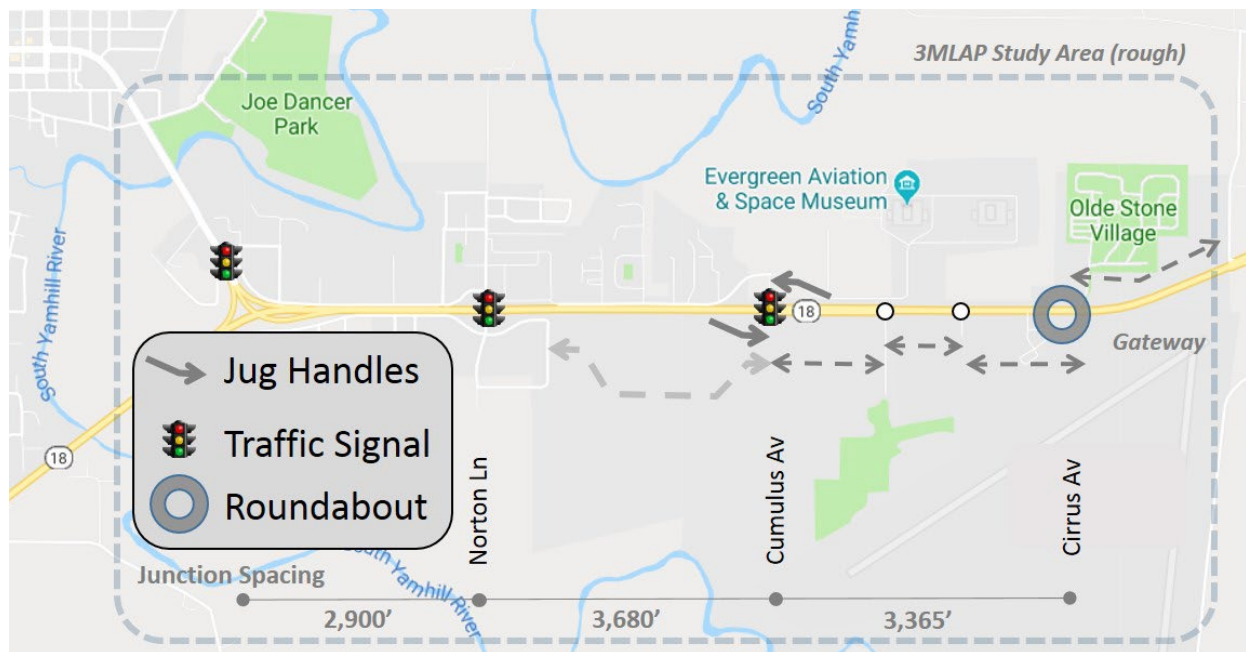
As shown in Figure 8, interim capacity enhancements may include the construction of “Jug Handle” right turn lanes on OR 18 at Cumulus Avenue (westbound and eastbound) and a roundabout at Cirrus Avenue. The Jug Handle turn lanes shift all turns from OR 18 to Cumulus Avenue, which may increase capacity and reduce delay for OR 18 through-movements at the Cumulus Avenue traffic signal.



The Jug Handle concept removes all turn movements from the major highway and shifts them to the cross-street via a right-turn lane.

The combination of these interim capacity enhancements may provide sufficient capacity to meet the Oregon Highway Plan mobility targets for OR 18 within the next 10-20 years.

Figure 8. Interim Intersection and Frontage Street Capacity Enhancements – Sketch Map



Concept Design Features for Further Consideration

Design features or issues related to Facility Option 1 that may require further consideration following the study include the following:

- Subsurface Water Table - Evaluation of subsurface water table and substrata to determine the suitability of lowering the mainline grade of OR 18, thus minimizing the height of new

structures within the study area. These measures help minimize the grade of future pedestrian and bicycle crossings of OR 18, reduce the visual impact of future structures, and reduce the height of new structure and street lights within the McMinnville Airport impact area.

- OR 18 Bicycle Facility Design – The shoulder lanes on OR 18 will require attentive design for future bicycle travel along OR 18, particularly through the on and off-ramp transition zones.
- Local Street Bus Stops - Potential additional right-of-way and design features to accommodate future bus stops along Cumulus Avenue (eastbound) and Stratus Avenue (westbound).
- Cycle Track Transition to New Yamhill River Bridge –The transition from two-way cycle tracks (Cumulus and Stratus Avenues) to the proposed bicycle and pedestrian facility design on the new Yamhill River Bridge requires further design considerations.
- Single-point Urban Interchange – Consideration of a more compact interchange form rather than tight-diamond (as depicted at Cumulus Avenue) to potentially reduce right-of-way impact.
- Roundabout Design – See Facility Option 2 below.

Facility Option 2 – Roundabouts

Option 2 generally assumes that a series of roundabouts on OR 18 is the intended primary junction design to balance local area access, circulation and regional highway through-movement mobility.

As shown in Figure 9, Facility Design Option 2 includes three new, dual-lane roundabouts along OR 18 within the study area: two replacing the current traffic signals at Norton Lane and Cumulus Avenue, and one at Cirrus Avenue (McMinnville Airport access). The general purpose of roundabout concept designs as part of Option 2 is to facilitate relatively continuous movement of OR 18 through-traffic, while providing local land use access to, and across, OR 18.

Each roundabout is presumed to include two-lane approaches on OR 18 (eastbound and westbound), two-lane approaches on Norton Lanes, and single-lane approaches on Cumulus and Cirrus Avenues. Spacing between the roundabouts is well over one-half mile. The OR 18 target design speed is assumed to vary under Option 2, from 55 mph at the study area's eastern entrance, to 30-45 mph within the study area.

Combined pedestrian and bicycle pathways are assumed around each roundabout, with designated crossings of OR 18 and the local street connectors. Median islands are assumed at each pedestrian-bicycle crossing as a refuge and safety feature.

Option 2 also assumes that the replacement of the existing OR 18/Three Mile Lane interchange with a dual-lane roundabout may not meet future OR 18 mobility standards. Option 2 assumes the same improvements to the OR 18/Three Mile Lane interchange as Option 1, including local street, pedestrian and bicycle connector enhancements along Cumulus and Stratus Avenues.

Figure 9. OR 18 Roundabout Facility Design Option – Sketch Map

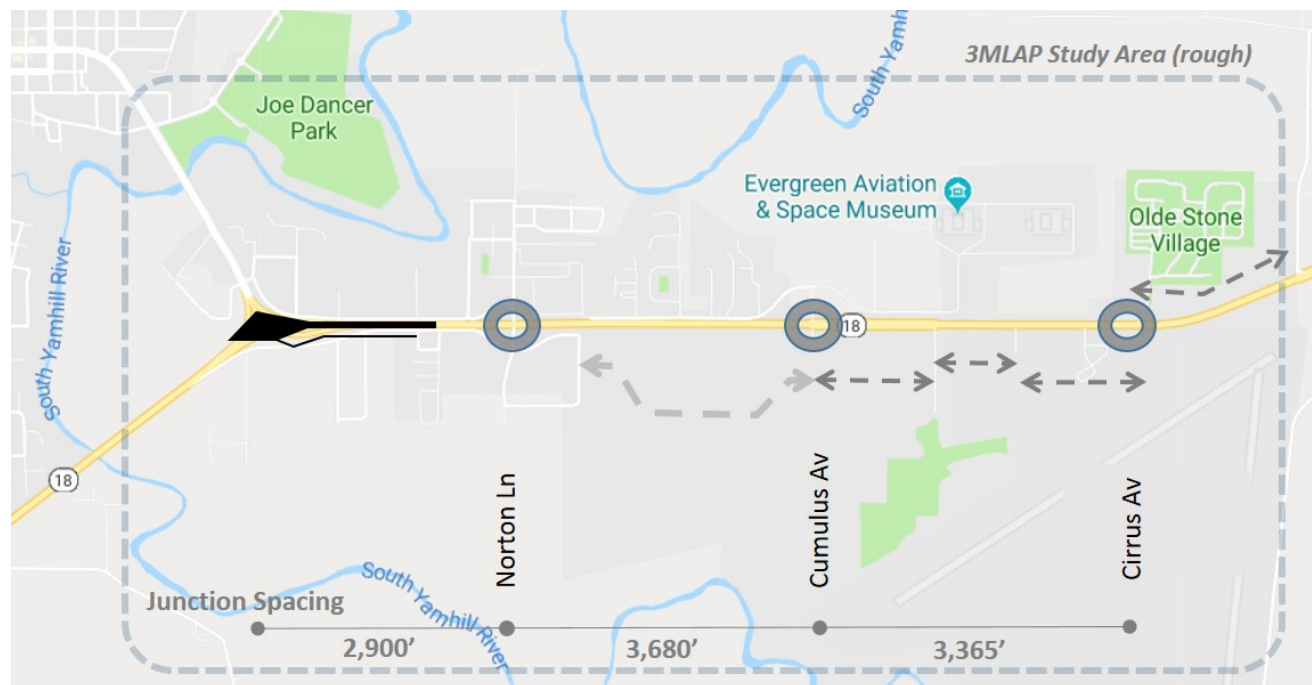


Figure 10 illustrates the plan view of the OR 18 roundabout facility design option. The existing Cumulus and Stratus Avenue intersections on Norton Lane are extremely close to OR 18, making it very difficult to fit a dual-lane roundabout on OR 18. It is more likely that both Cumulus Avenue and Stratus Avenue will require realignment further away from OR 18 under Option 2, as shown in Figure 6. A northern realignment of Cumulus Avenue to Norton Lane at Tanger Court will impact a number of residential and commercial properties.

In general, the existing OR 18 cross-section is retained between the roundabouts under Option 2.

Local street, pedestrian and bicycle connectivity within the study area across OR 18 is confined to the three roundabouts and Three Mile Lane interchange. McMinnville gateway design treatments can be integrated into the interchange and each of the three roundabouts, especially the eastern roundabout at Cirrus Avenue.

Plan views of more detailed design concepts for individual interchanges and junctions under Option 2 are included in Appendix B.

Figure 10. OR 18 Roundabout Facility Design Option – Plan View

West SectionEast Section**Concept Design Features for Further Consideration**

Design features or issues related to Facility Option 2 that may require further consideration following the study include the following:

- Inscribed Circle Diameter – The inscribed circle diameter of the concept roundabouts are conservatively assumed to be 250 feet, exceeding the Oregon Highway Design Manual guidance (200 feet minimum). The roundabout concepts also assume an 18-foot wide inside shoulder to assist truck maneuverability.

- OR 18 Design Speed and Design Vehicle – The targeted design speed of OR 18 will affect optimized roundabout operations and safety design. The target design speed may vary by OR 18 segment, from 55 mph at the study area’s eastern entrance, to potentially 30-45 mph within the study area. The target design vehicle for each roundabout concept design is WB-67.
- Roundabout Design Features – Other specific roundabout design features that require further examination (beyond this study) include approach lane deflection, roundabout radii, truck vehicle paths, pedestrian-bicycle pathways, splitter islands and many others.
- Pedestrian and Bicycle – Design features that best accommodate anticipated north-south pedestrian and bicycle crossings of OR 18 through the proposed roundabouts.

EVALUATION OF FACILITY DESIGN OPTIONS

The evaluation criteria used to test the two facility design options are derived from the project’s goal and objectives, as defined through the study’s public process.¹² Table 2 summarizes the evaluation criteria and ratings for each of the facility design options.

Table 2: Facility Design Option Evaluation Criteria and Ratings

Evaluation Criteria	Highway 18 Facility Design Options:	
	1 - Interchanges	2 - Roundabouts
Facility Design Features Help:		
Foster Economic Development*		
Ease of Access** to Existing and Planned Land Use	Interchange at Cumulus Avenue and Norton Lane overcrossing reduces direct accessibility to Willamette Valley Medical Center and other Norton Lane destinations.	Multiple, dual-lane roundabouts provide more direct access to existing and planned land uses both north and south of Highway 18.
Land Uses are Visible from Three-Mile Lane	Land uses are less visible from Three Mile Lane (Highway 18), when highway is lowered to fit interchange and overcrossings.	Land uses are more visible when highway is at-grade
Sustain Highway 18 as a Key Intercity Freight Route		
Desired Travel Speed on Highway 18	Limited access highway with single roundabout at Cirrus Avenue and interchange at Cumulus Avenue facilitates desired travel speed along Highway 18.	Multiple, dual-lane roundabouts (modestly) impede desired speed along Highway 18.
Highway 18 Truck Maneuverability	Limited access highway with single roundabout at Cirrus Avenue and interchange at Cumulus Avenue facilitates intercity truck maneuverability.	Multiple, dual-lane roundabouts impede intercity truck maneuverability.
* Within the Three-Mile Lane Study Area ** Auto, Truck, Pedestrian, Bicycle and Transit		
Enhance Multimodal Connectivity		
Within the Three-Mile Lane Study Area	Overcrossing at Norton Lane, interchange at Cumulus Avenue, roundabout at Cirrus Avenue and potential ped-bike overcrossings provide good vehicle (including transit), pedestrian and bicycle connectivity across Highway 18.	Evenly-spaced roundabouts provide good vehicle (including transit), pedestrian and bicycle connectivity across Highway 18. Dual-lane roundabouts may intimidate north-south pedestrian and bicycle connectivity, especially as Highway 18 traffic increases in the future.
Between Study Area and City Center	Replacement Three Mile Lane interchange with new Stratus Avenue connection, and new two-way cycle tracks and sidewalks along Cumulus and Stratus Avenues, significantly improve connectivity between the study area and city center.	Replacement Three Mile Lane interchange with new Stratus Avenue connection, and new two-way cycle tracks and sidewalks along Cumulus and Stratus Avenues significantly improve connectivity between the study area and city center.
Minimize Rights-of-Way And Cost Requirements***		
Rights-of-Way	ROW requirement for diamond interchange at Cumulus Avenue is greater than roundabout (Option 2).	ROW requirement for dual-lane roundabout at Cumulus Avenue expected to be less than tight diamond interchange (Option 1). Roundabout at Norton Lane will require additional ROW and impact several homes and possible businesses to re-align Cumulus and Stratus Avenues.
Cost (conceptual)	Costs are significant: new interchange at Cumulus Avenue, lowering Highway 18, and overcrossings at Norton lane and possible pedestrian-bicycle crossings.	Cost of roundabout at Cumulus Avenue is modest. Cost to re-align Cumulus and Stratus Avenues at Norton Lane is significant.

*** As differentiated between Options 1 and 2

Option 1 (Interchanges) is the most likely of the two options to positively impact and achieve desired travel speeds along OR 18 in the future, while minimizing adverse impacts on truck maneuverability. Option 2 roundabout junction designs will likely help maintain OR 18 through-movement traffic flow, but at a less than desirable or ideal speed than Option 1. Roundabouts are also likely to negatively impact truck maneuverability in the study area along OR 18.

Both facility design options are anticipated to help reduce serious crashes at key junctions within the study corridor.

¹² See Memorandum #4.

DISCUSSION AND NEXT STEPS

All of the alternatives presented in this memorandum will help the City of McMinnville meet the goals established for the Three Mile Lane area to some extent – the main differences are those of emphasis and degree. The information and analysis describe how the three distinct land use concepts and the two facility design options further the City’s goals. As described, the land use options meet most project objectives to some degree; Table 1 in this report uses select evaluation criteria to show how the alternatives match up, as compared to each other. The Facility Design options for OR 18 also largely meet project objectives, as demonstrated in Table 2, and can support the ultimate preferred land use option.

The next step of the project is to identify elements of the land use concepts and supporting transportation options that best meet the community’s goals and expectations in order to develop a Preferred Land Use Option and Facility Design Alternative. Project participants and stakeholders are asked to consider the following when envisioning an optimal future, or “preferred alternative,” for the Three Mile Lane area:

- Projects goals and objectives that are the most important and how they can best be reflected in existing and future land uses and transportation design.
- The overall character of the Three Mile Lane area and how it will be impacted by the use of the large vacant properties.
- The kinds of design guidance that will be important to create a high-quality environment given the wide range of uses existing and planned for the area.

As the process moves from the high-level concepts explored here to creating a preferred alternative and outlining its implementation, the project team will address the following:

- Consistent with project objectives, the preferred land use option will incorporate multi-modal design and allow for safe, efficient ways of traveling through and within the area. The high-level land use concepts described in this memorandum can all accommodate enhanced multi-modal connections if they are appropriately designed.
- Creating a walkable “town center” retail development with good multi-modal connections to other parts of the Three Mile Lane area.
- Creating a grid of walkable streets to integrate new development south of Three Mile Lane.
- Improving frontage roads for safer walking and biking.
- Orienting new residential areas toward existing and new trails and pathways to encourage walking and biking.
- Using design standards to prohibit long blank walls and reduce setbacks in pedestrian oriented areas.

Appendix A – Detailed Evaluation Tables

	Concept 1 - Industrial Campus		Concept 2 - Corporate Campus		Concept 3 - South Yamhill Neighborhood	
	Score	Notes	Score	Notes	Score	Notes
Goal 1: Support and enhance the district's economic vitality and marketability						
<i>This plan aims to support development of significant industrial and commercial parcels within the study area, enhance existing business by diversifying goods and services available in the area, and increase tourism. Alternatives will be evaluated qualitatively for how well they address the area's development/redevelopment potential.</i>						
Amount of Commercial Land	0	Moderate amount of commercial land compared to other options	+	Largest amount of commercial land of all options	0	Moderate amount of commercial land compared to other options
Amount of Industrial Land	+	Largest amount of industrial land of all options	-	Least amount of industrial land of all options	+	Significant amount of light industrial land
Estimated number of new employment uses.	0	Somewhat limited mix of employment types relative to the other options	+	Wide diversity of employment zone types	+	Wide diversity of employment types in a finer grained mix of zones
Estimated number of new jobs, economic development and business opportunities.	0	Midpoint of the three alternatives	+	Corporate campus arguably will produce the greatest job density of the three concepts	-	Residential component reduces employment capacity
Opportunity for additional goods and services for employees in the study area.	+	Mixed use area in NW, new retail center may provide goods and services.	+	Retail center, Evergreen Site provide goods and services	+	Evergreen site, commercial in NW, and smaller retail center provide goods and services
Improved multimodal access of property	+	Proposed new criterion (not in Memo 4). More trails and assume most streets will be MM.	+	More trails and assume most streets will be MM.	+	More trails and assume most streets will be MM.
Improved airport access for business and tourism.	+	No difference	+	No difference	+	No difference
Economic feasibility of potential development scenarios for large contiguous vacant sites.		Reference to case study report.				
Support for physical expansion and increased capacity of airport.	+	Industrial user takes advantage of airport	+	Potential airport concerns about more residential in NE. Corporate campus takes advantage of airport	0	Airport concerns re: residential nearby
Preserves the functional integrity of Highway 18 for freight movement.	0	See facility option comparison - no difference between land uses.	0	See facility option comparison - no difference between land uses.	0	See facility option comparison - no difference between land uses.
Opportunity for enhanced or new tourism opportunities within the area. Includes multi-modal access and visibility.	0	Preserves aviation complex. No significant increase of tourism capacity elsewhere	+	Significant commercial opportunities throughout district	0	Smallest amount of land for commercial of the three, but preserves aviation complex for continued tourism growth

GOAL 2: Provide opportunities for a complementary mix of land uses, consistent with the vision of a diverse and vibrant district.					
<i>The study area contains several existing residential neighborhoods, including assisted-living and manufactured home residences, as well as major employers and tourism destinations. This plan aims to provide a mix of land uses that support one another to create a unique part of the city.</i>					
Furtherers McMinnville Great Neighborhood principles.	0	This scenario will introduce a greater mix of activities, some additional housing, while protecting Least number of new residential units	+	this scenario introduces a new park, new housing that may be multifamily near the medical center, and the	+
Estimated number of new residential units accommodated in study area.	0		0	Mid-point of the three alternatives	0
Residential housing mix.	+	Some Multifamily in NE, mixed use on Cal Portland, modest infill with some multifamily elsewhere.	+	Multifamily near medical center. Modest infill in NW. Cal portland site is partially multifamily. NE edge is multifamily.	+
Number of existing and proposed residential units with multi-modal access to parks/natural areas and goods/services.	0		0		+
Provides transit-supportive land uses.	+	All options provide some basic transit-supportive land uses (job centers and higher density residential developments). Concept 1, with a larger piece of industrial land, may be less transit-supportive	+	All options provide transit-supportive land uses (job centers and higher density residential developments)	+
Access to amenities	+	Improves access to amenities through mixed use in NW and retail center.	+	Improves access to amenities through evergreen retail and retail center.	+
Visual and physical access to natural resources	0	Greater amount of units close to Joe Dancer, fewer close to south fork and airport park	0	Lesser amount of residential (especially multifamily) in proximity to Joe Dancer via existing or proposed bridge. Greater number of MF units in proximity to south fork and airport park.	+

GOAL 4: Create an aesthetically pleasing gateway to the City of McMinnville						
<p>The study area is a primary gateway to the City of McMinnville. Alternatives will be evaluated qualitatively for how well they provide an identity for the district, reflect McMinnville's intrinsic character and highlight the landscape features of the district.</p>						
Gateway Features	+	One gateway feature located in interchange area, where it is likely to be auto-oriented in nature. Two others have the potential to be oriented toward other modes.	0	Two gateway features are located within interchange areas, which are more likely to be auto-oriented in nature. One other has the potential to be oriented toward other modes, but it is located at the edge of the study area away from much of the likely pedestrian/bicycle activity.	+	All gateway features are located outside of interchange areas, making them more likely to have human-scale design and orientation.
Building Design	0	All concepts have the potential for design requirements to be implemented through an overlay zone, however industrial structures tend to have lower values and special industrial needs that can conflict with these requirements.	+	Due to a lesser amount of industrial land in this concept, it may be able to better implement specific building design requirements.	+	Similar to Concept 1, industrial areas may be less able to incorporate some design requirements; however the new residential neighborhood may make these requirements even more important and be able to improve the aesthetics of the area generally through good neighborhood design.
Landscaping and Street Trees	0	Similar to the above topic, industrial land is less likely to provide high-quality street trees and other landscaping elements than other use types.	+	The corporate campus, retail center, and other uses are very compatible with high-quality landscaping.	+	New residential areas are envisioned to have a high quality network of street trees and other landscaping. The light industrial area may also be required to provide quality landscaping.

Appendix B - Plan Views of Detailed OR 18 Junctions – Options 1 and 2

Option 1 Plan View – Three Mile Lane Junction



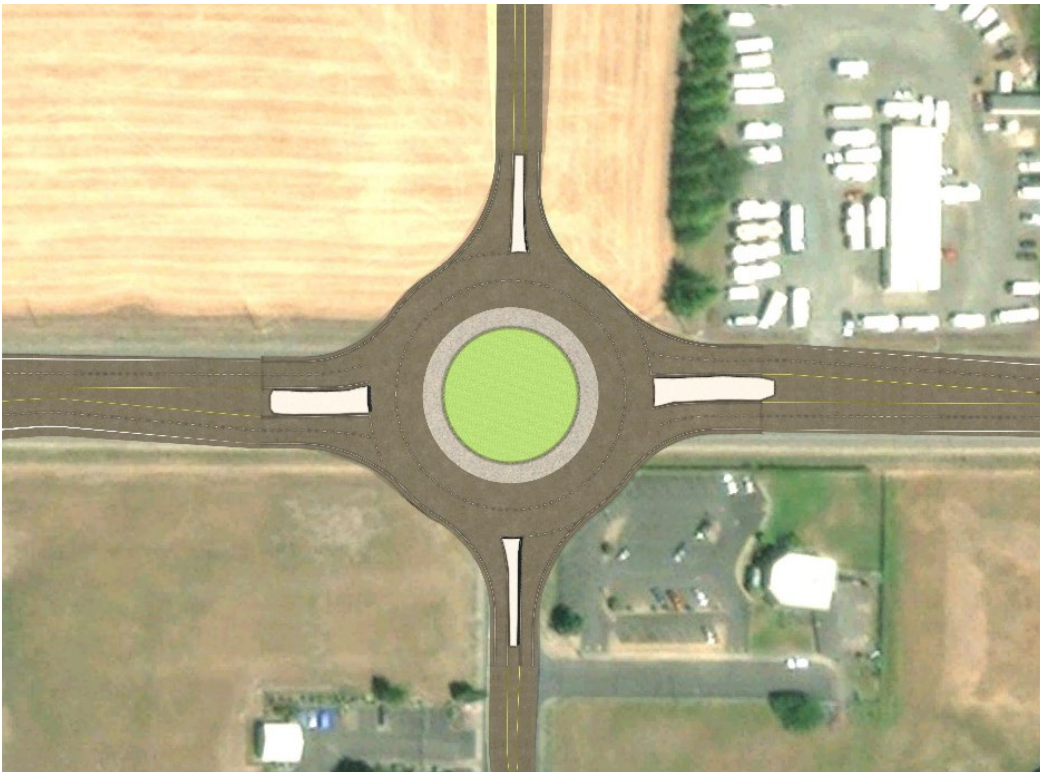
Option 1 Plan View – Norton Lane Crossing



Option 1 Plan View – Cumulus Avenue Junction



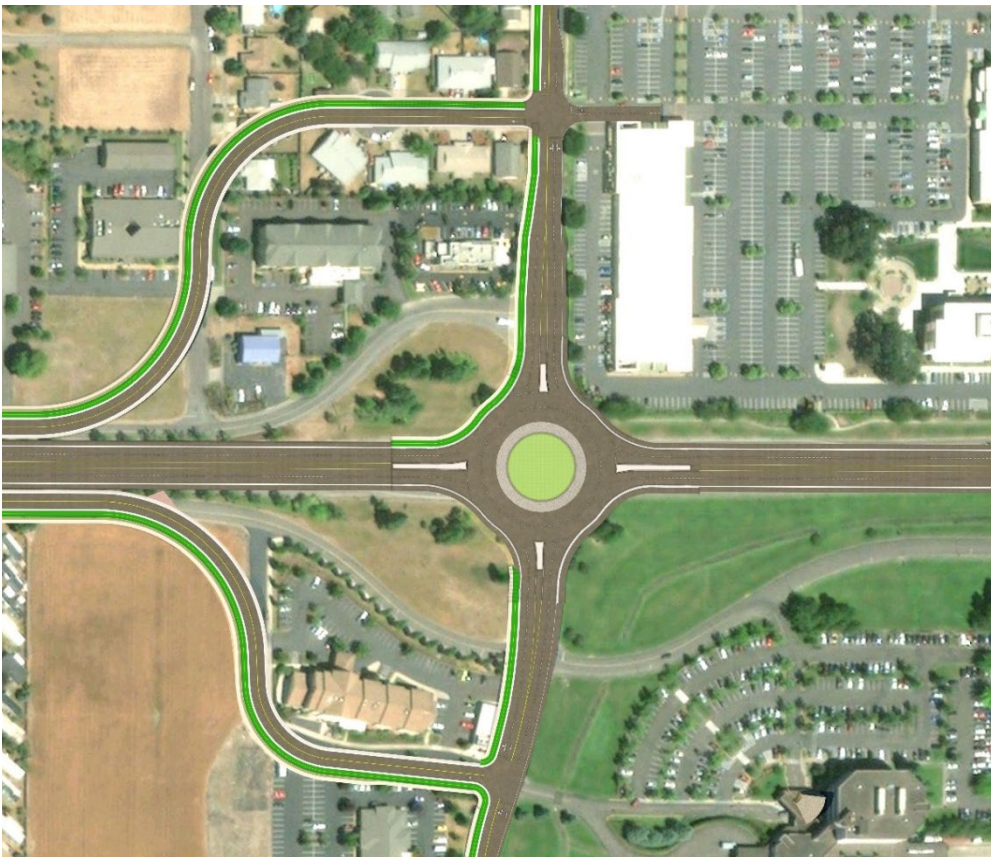
Option 1 Plan View – Cirrus Avenue Junction



Option 2 Plan View – Three Mile Lane Junction



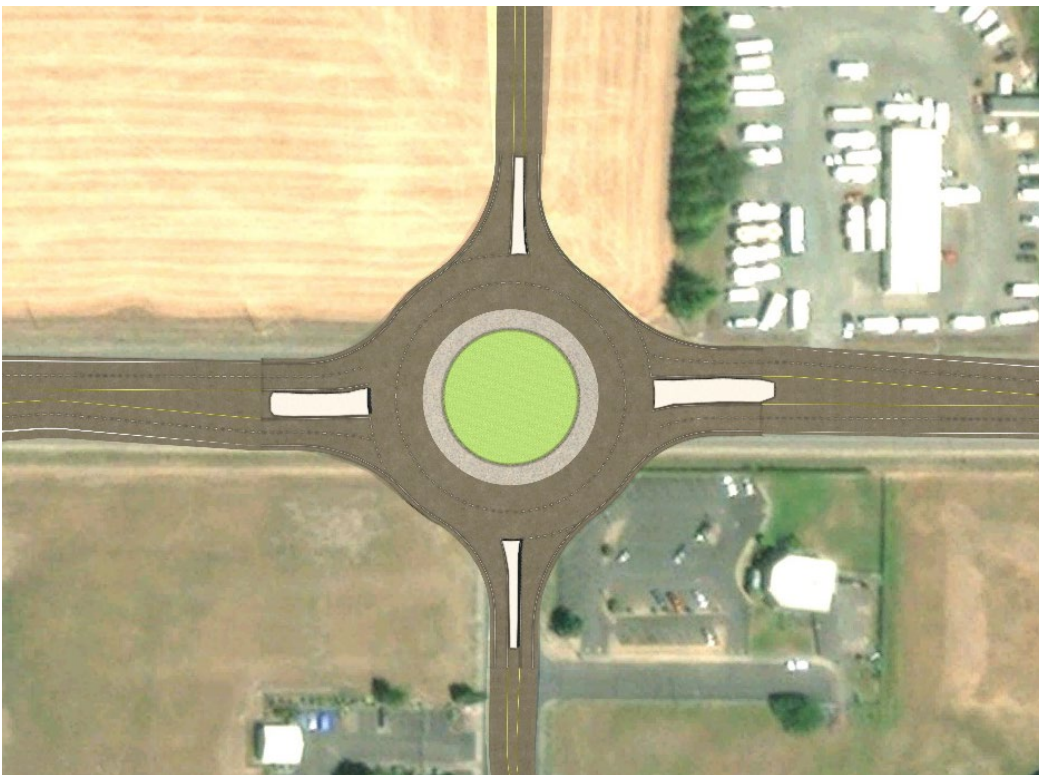
Option 2 Plan View – Norton Lane Junction



Option 2 Plan View – Cumulus Avenue Junction



Option 2 Plan View – Cirrus Avenue Junction



APPENDIX C: SUPPLEMENTAL EVALUATION - TRIP GENERATION ASSESSMENT

The original scope of work for this study anticipated applying future travel demand model estimates for each of the land use options (three) and two facility design options. Model data and estimates were not available at the time of the study. In lieu of applied travel model estimates, a supplemental trip generation analysis was completed. The trip generation assessment identifies the level and location of new trip generators within the study area, comparing and contrasting the three land use options. The assessment is predicated on the following assumptions:

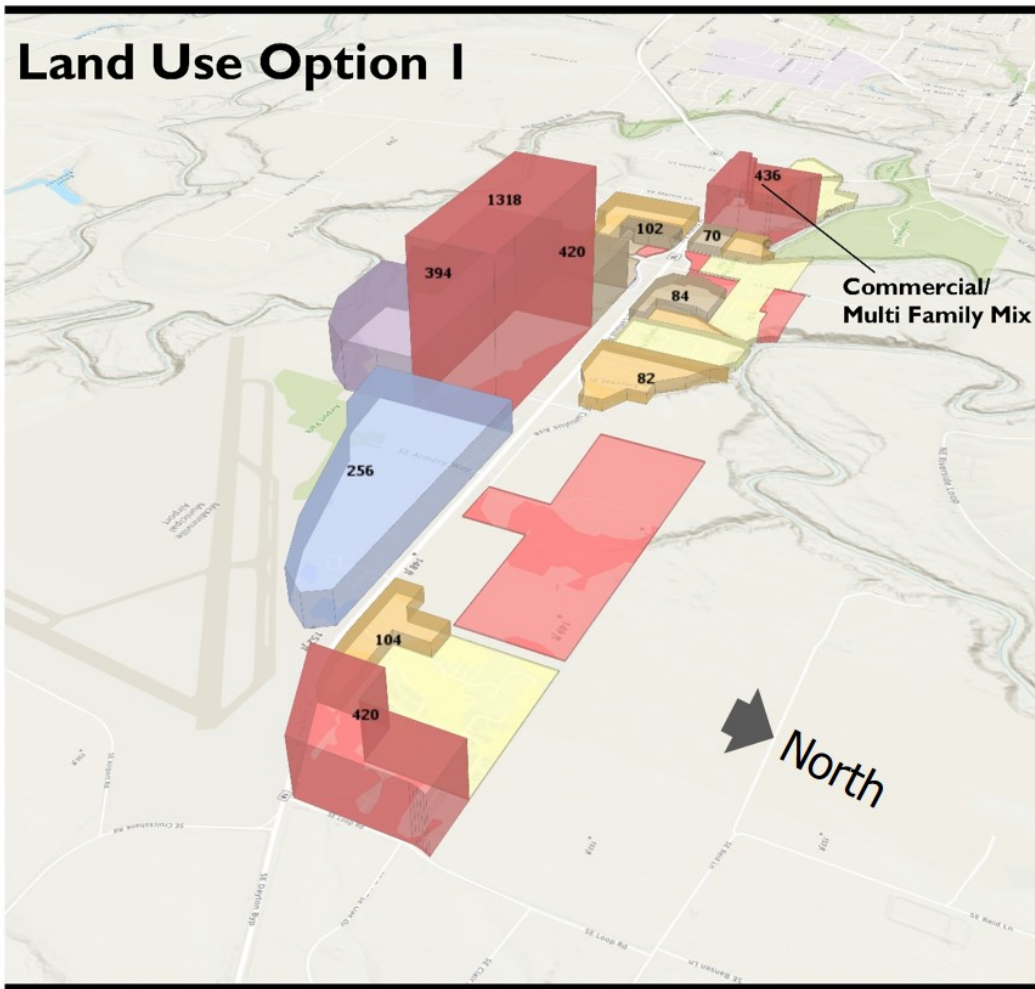
- Estimates of developable land by general type, assuming limited redevelopment
- Building density based on a range of floor area ratios by land use category
- Vehicle trip generation rates by land use type, as noted in the Institute of Transportation Engineers, Trip Generation (10th Edition), including pass-by trip rate reductions for commercial lands

Land Use Option 1

Figure 7 maps the net new vehicle trips generated in the study area under Land Use Option 1, by land use type.

The greatest number of new vehicle trips in Option 1 are generated by planned commercial and multi-story medical office developments on the south side of OR 18, between the Willamette Valley Medical Center and Cumulus Avenue. New commercial lands at the eastern end of the study area and along Cumulus Avenue (Baker Rock site) will also generate significant vehicle trips. Industrial land at the southern edge of the study area is not expected to generate significant vehicle traffic.

Figure 1: Net New Vehicle Trips – Land Use Option 1



Legend

Land Use	Net New PM Peak Hour Vehicle Trips
Airport Commercial/Industrial	260
Commercial	2,030
Industrial	390
Medical	680
Single Family Residential	50
Multi Family Residential	590
TOTAL	4,000

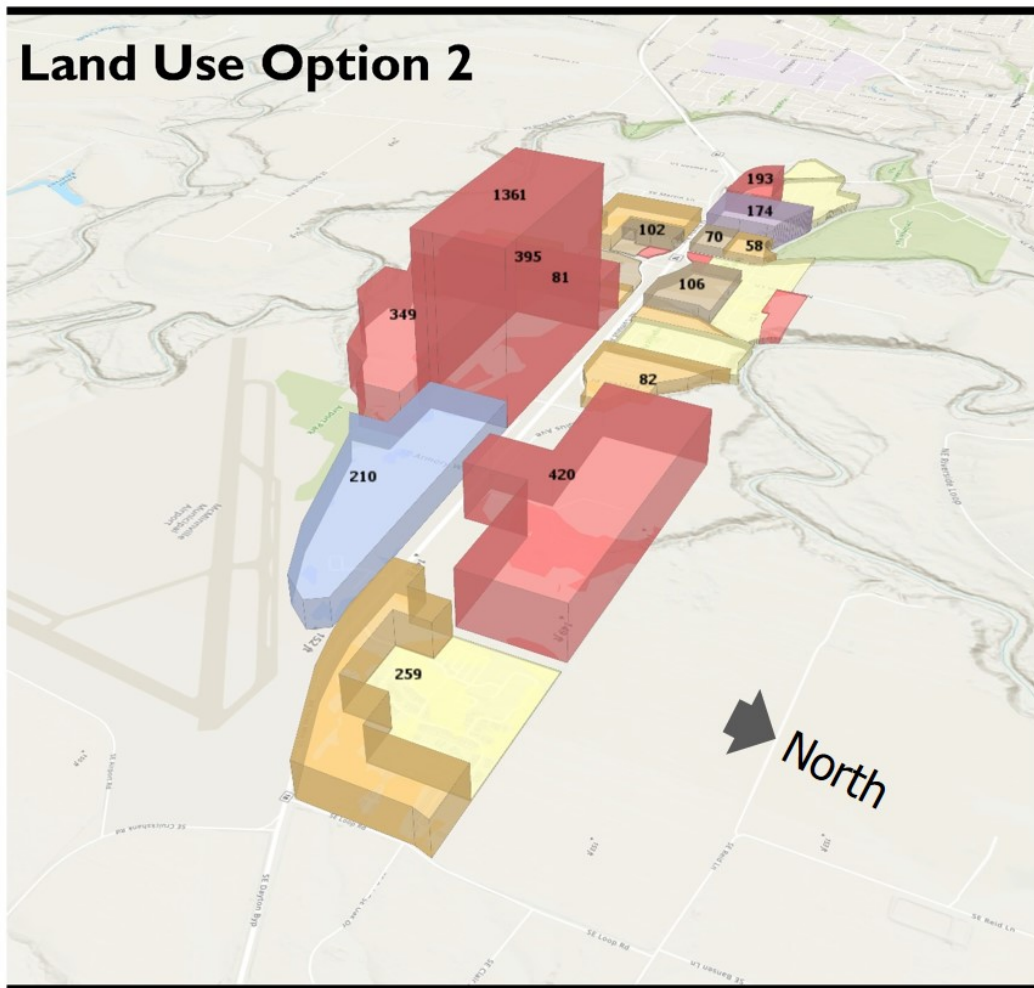
* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

Land Use Option 2

Figure 8 maps the net new vehicle trips generated in the study area under Land Use Option 2, by land use type.

The total new vehicle trip generation is slightly larger in Option 2 than it is in Option 1, though more of the traffic is generated by commercial lands, located near (north and south of OR 18) and focused on Cumulus Avenue. Residential land at the eastern end of the study area will also generate new vehicle trips.

Figure 2: Net New Vehicle Trips – Land Use Option 2



Legend

Land Use

- Airport Commercial/Industrial
- Commercial
- Industrial
- Medical
- Single Family Residential
- Multi Family Residential

Net New PM Peak Hour Vehicle Trips

Airport Commercial/Industrial	210
Commercial	2,720
Industrial	170
Medical	360
Single Family Residential	60
Multi Family Residential	780
TOTAL	4,300

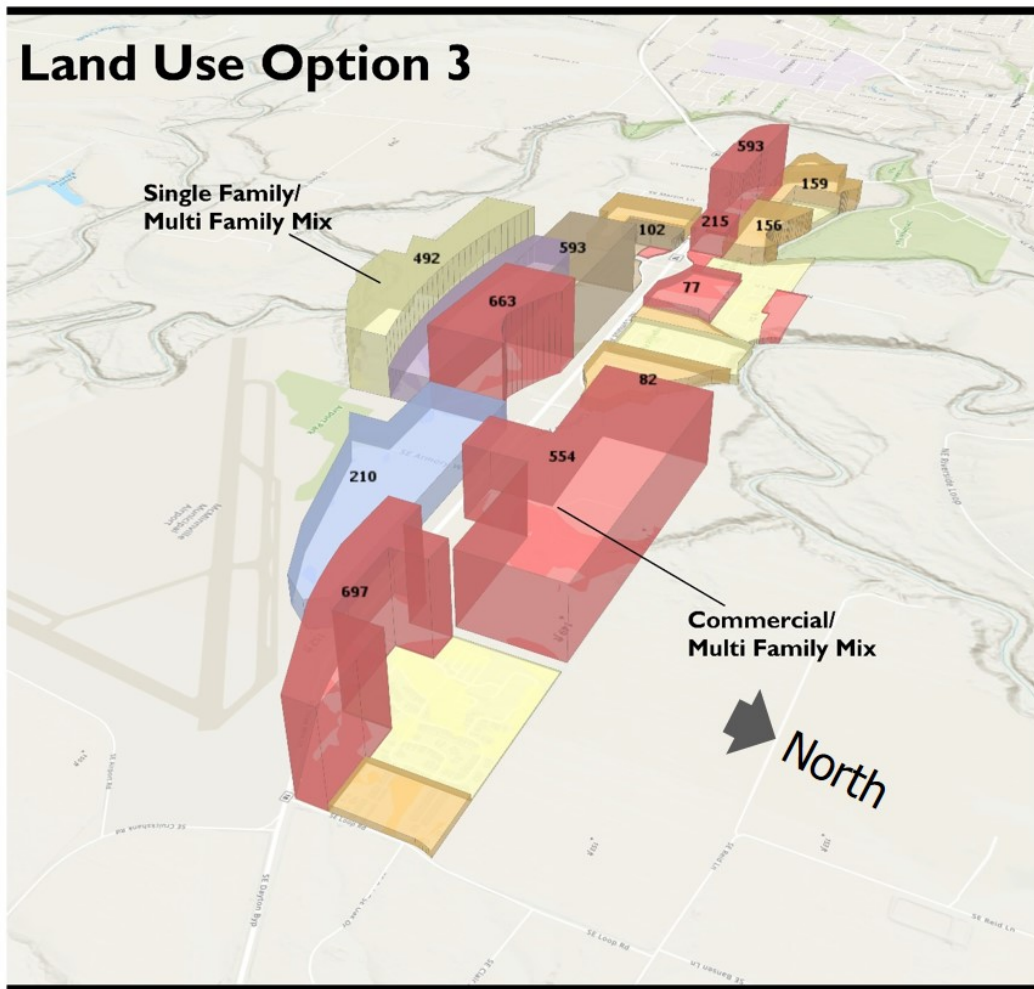
* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

Land Use Option 3

Figure 9 maps the net new vehicle trips generated in the study area under Land Use Option 3, by land use type.

Option 3 focuses more on retail-related lands within the Evergreen Aviation site, and eastern end of the study area (north of OR 18) and along Cumulus Avenue west of Norton Lane. New trip generation by medical office use near Willamette Valley Medical Center is the largest under Option 3. Residential lands at the southern edge of the study near the airport will also generate a sizeable number of new vehicle trips. Option 3 presents a higher total new vehicle trip generation than Options 1 or 2.

Figure 3: Net New Vehicle Trips – Land Use Option 3



Legend

Land Use	Net New PM Peak Hour Vehicle Trips
Airport Commercial/Industrial	210
Commercial	2,720
Industrial	240
Medical	700
Single Family Residential	230
Multi Family Residential	930
TOTAL	5,030

* Heights of bars correspond to the number of new PM peak hour vehicle trips per subarea

Virtual Community Meeting

3310 SE Three Mile Lane
McMinnville, OR

November 17, 2020 – 6:00PM

Presented by: KIMCO McMinnville L.P. (an affiliate of Kimco Realty Corporation)



MEETING FORMAT

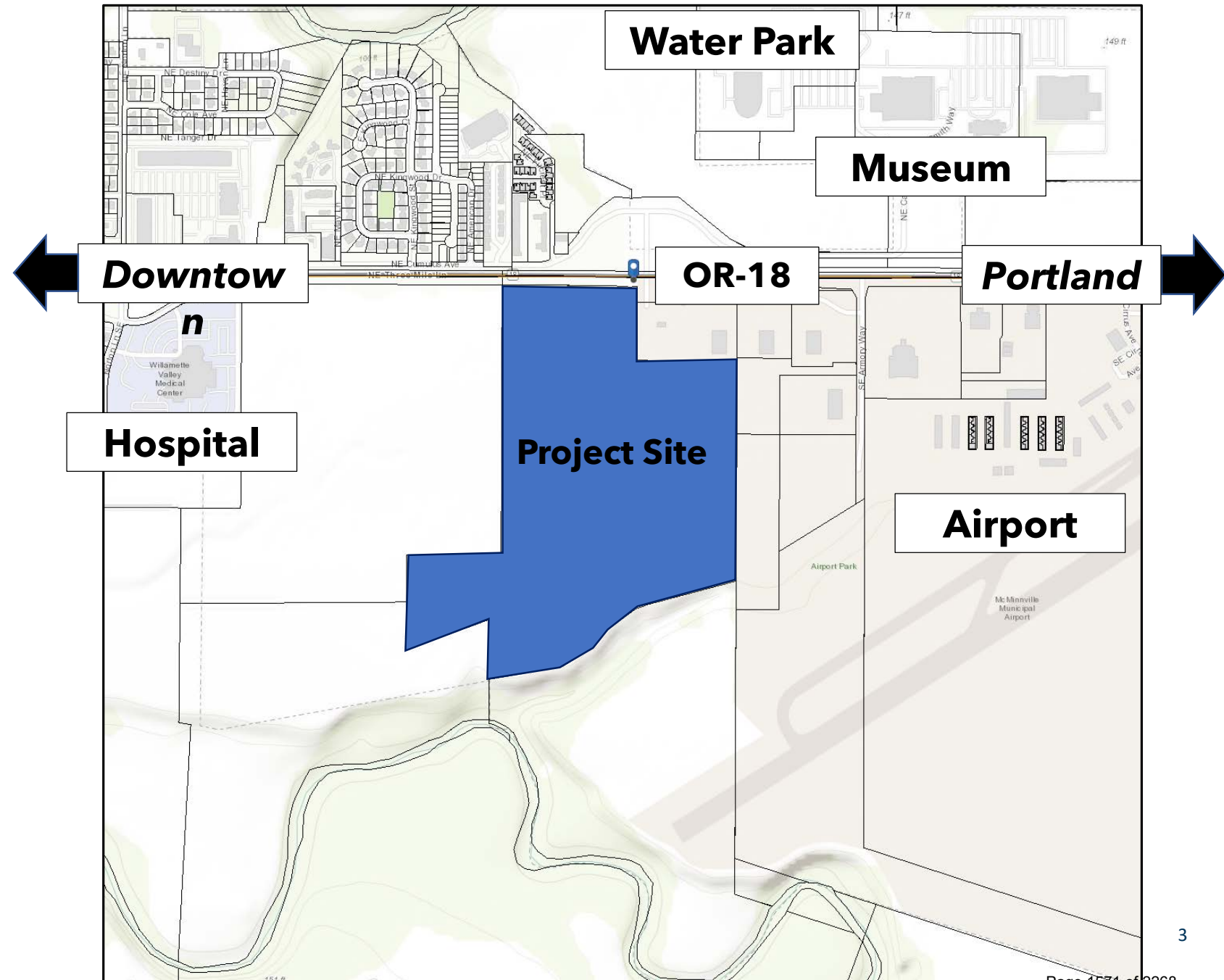
- 6:00 PM – 6:05 PM Introductions
- 6:05 PM – 6:20 PM Description of the Project by the Partnership
- 6:20 PM – END Questions

PROJECT LOCATION

3310 SE Three Mile Lane
McMinnville, OR 97128

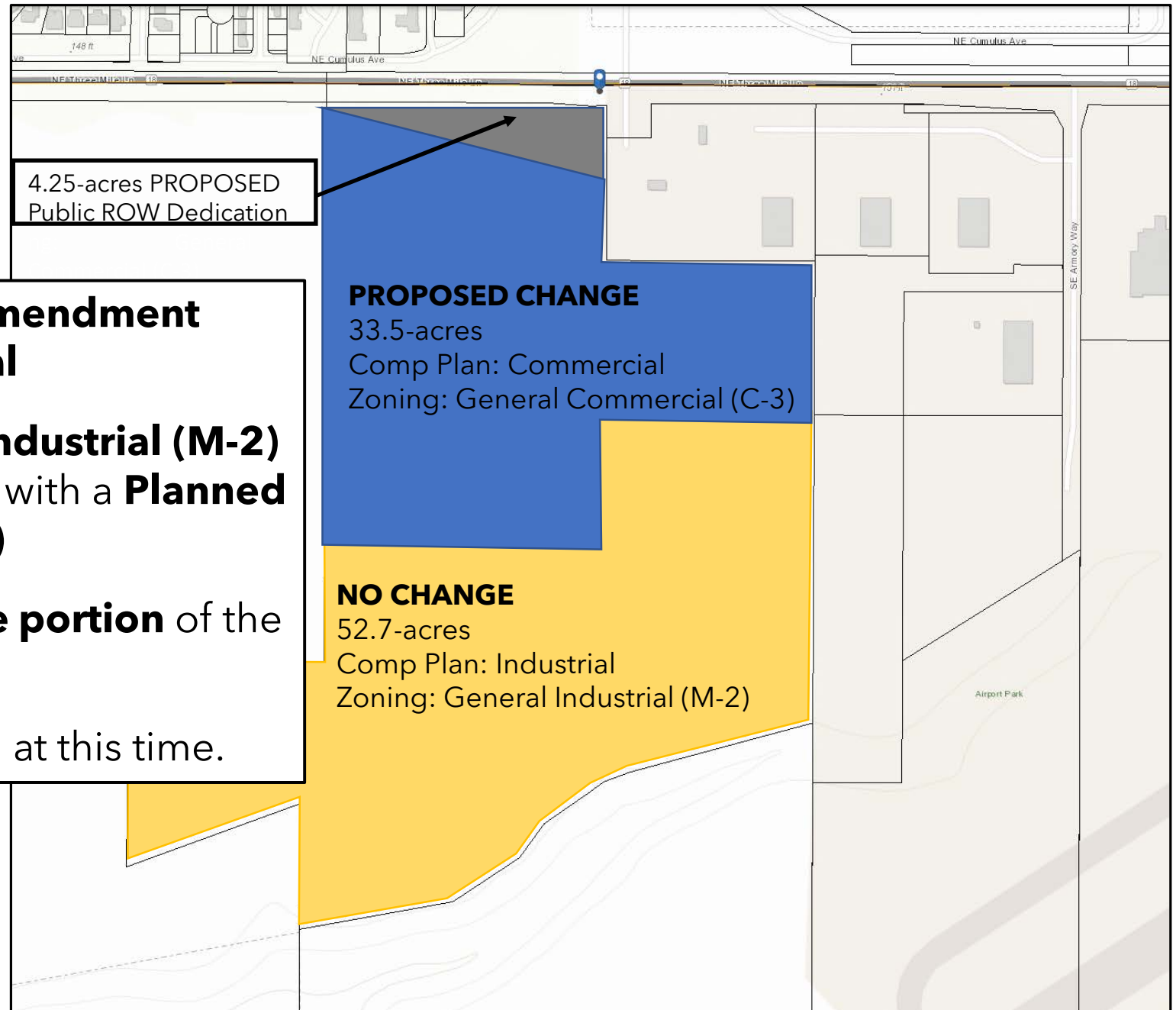
Tax Lot ID: R4426 00700

Lot size: 90.45 acres



PROJECT PROPOSAL

- **Comprehensive Plan Map Amendment** from **Industrial** to **Commercial**
- **Zone Change** from **General Industrial (M-2)** to **General Commercial (C-3)** with a **Planned Development Overlay (PDO)**
- Applies to **northern 33.5-acre portion** of the site along State Highway 18
- **No development** is proposed at this time.



PROJECT DETAILS

- Process and approvals required
- Community benefits
- Traffic impacts and improvements
- Future approvals required before development

CONCLUSION

- Q&A
- Contact **Sam Knutson** with any questions offline by e-mail at sknutson@kimcorealty.com or by phone at **(650) 757-2022**

Attachment 8

NOTICE OF NEIGHBORHOOD MEETING

ADDRESS: 3310 NE Three Mile Lane, McMinnville, OR 97128 (Tax Lot ID: 172164)

PROPOSAL:

- Comprehensive Plan Map Amendment from Industrial to Commercial;
- Zone Change from General Industrial (M-2) to General Commercial (C-3);
- Applies to northern 33.5-acre portion of the site along State Highway 18; and
- No development is proposed at this time.

APPLICANT CONTACT:

- Name: Kimco McMinnville, LLC (Sam Knutson)
- Email: sknutson@kimcorealty.com
- Phone: (650) 757-2022

VIRTUAL MEETING INFORMATION

DATE AND TIME: November 19, 2020 at 6:00PM

BY PHONE: (669) 900-6833 (Meeting ID# 923 4575 3326 and Password# 284715)

BY VIDEO CONFERENCE:

<https://kimcorealty.zoom.us/j/92345753326?pwd=cmhMTEFHM2NRWXNkUVlwV1JEMzJ2Zz09>

**Please contact Sam Knutson by e-mail or phone beforehand to receive the above weblink by e-mail.*

Attachment 8

NOTICE OF NEIGHBORHOOD MEETING

DATE AND TIME: November 19, 2020 at 6:00 PM

LOCATION: Due to the ongoing COVID-19 pandemic, this Neighborhood Meeting will be held virtually with options to join online and by phone. **Please contact Sam Knutson (info below) to receive a direct link by e-mail.**

- Join Zoom Meeting by Video Conference at:
<https://kimcorealty.zoom.us/j/92345753326?pwd=cmhMTEFHM2NRWXNkUVlwV1JEMzJ2Zz09>
- Telephone option: **(669) 900-6833** Meeting ID: **923 4575 3326** Passcode: **284715**

PROPOSAL: Comprehensive Plan Map Amendment (from Industrial to Commercial) and Zone Change (from General Industrial (M-2) to General Commercial (C-3)) for the northern 33.5-acre portion of the site. No development is proposed at this time.

- Property Address: 3310 NE Three Mile Lane, McMinnville, Oregon 97128
- Tax Lot ID Number: 172164
- Applicant: Kimco McMinnville, LLC
- Land Use Process: The proposal requires approval of a Comprehensive Plan Map Amendment and Zone Change under McMinnville Code Section 17.74.020

MEETING PURPOSE: We invite neighbors to attend this Neighborhood Meeting to begin a conversation about the proposal described above.

At a minimum the Neighborhood Meeting will provide the following:

- Opportunity for attendees to view the proposed map amendments
- Description of major elements of proposal
- Opportunity for attendees to speak and ask questions at the meeting. This is a time for attendees to identify any issues that they believe should be addressed.

TENTATIVE MEETING SCHEDULE:

Our tentative meeting schedule is as follows:

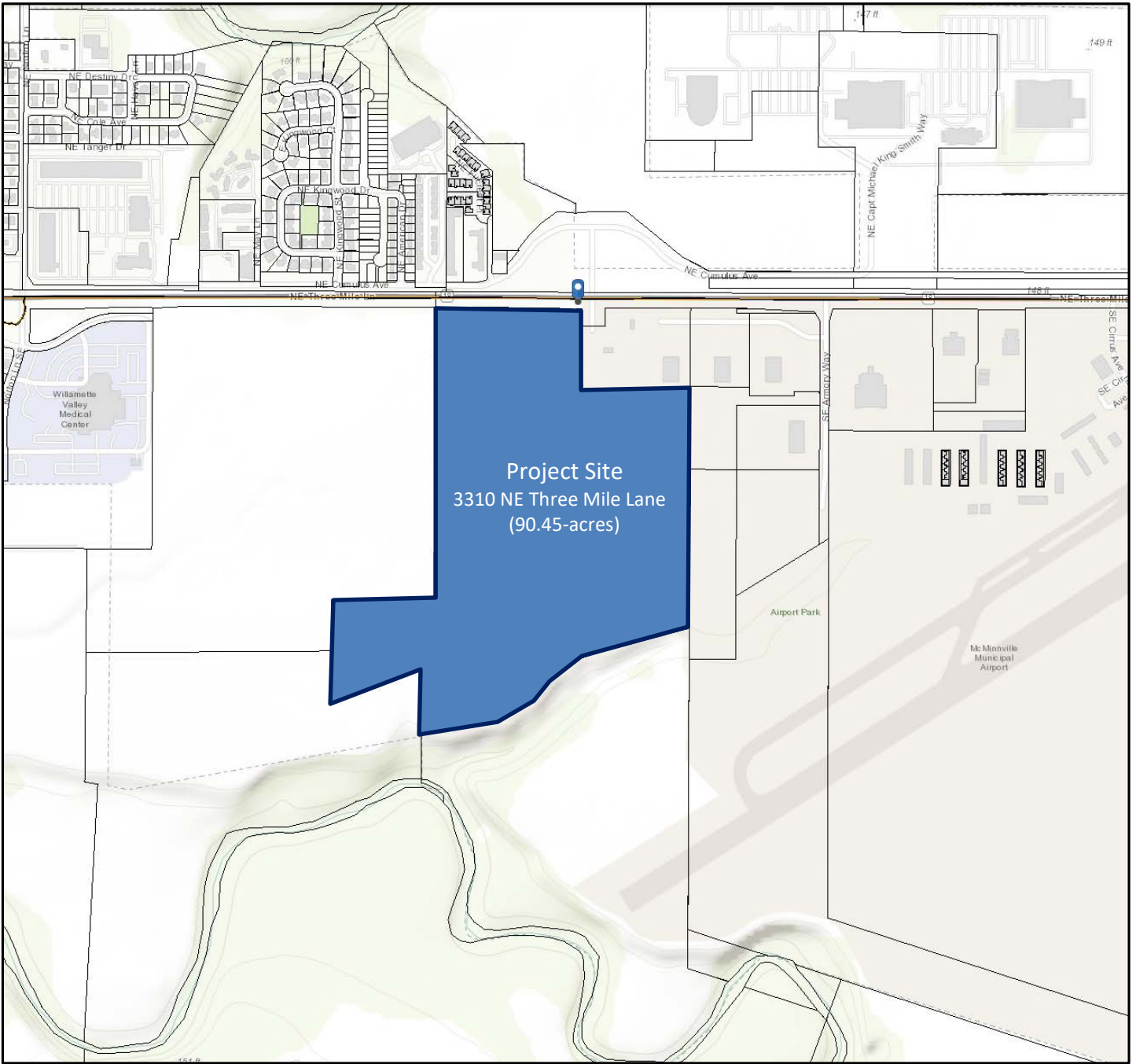
- 6:00 PM – 6:05 PM Introductions
- 6:05 PM – 6:20 PM Description of the Project by the Applicant
- 6:20 PM – END Opportunity for attendees to ask questions and offer feedback on the Proposal

MEETING CONTACT INFORMATION:

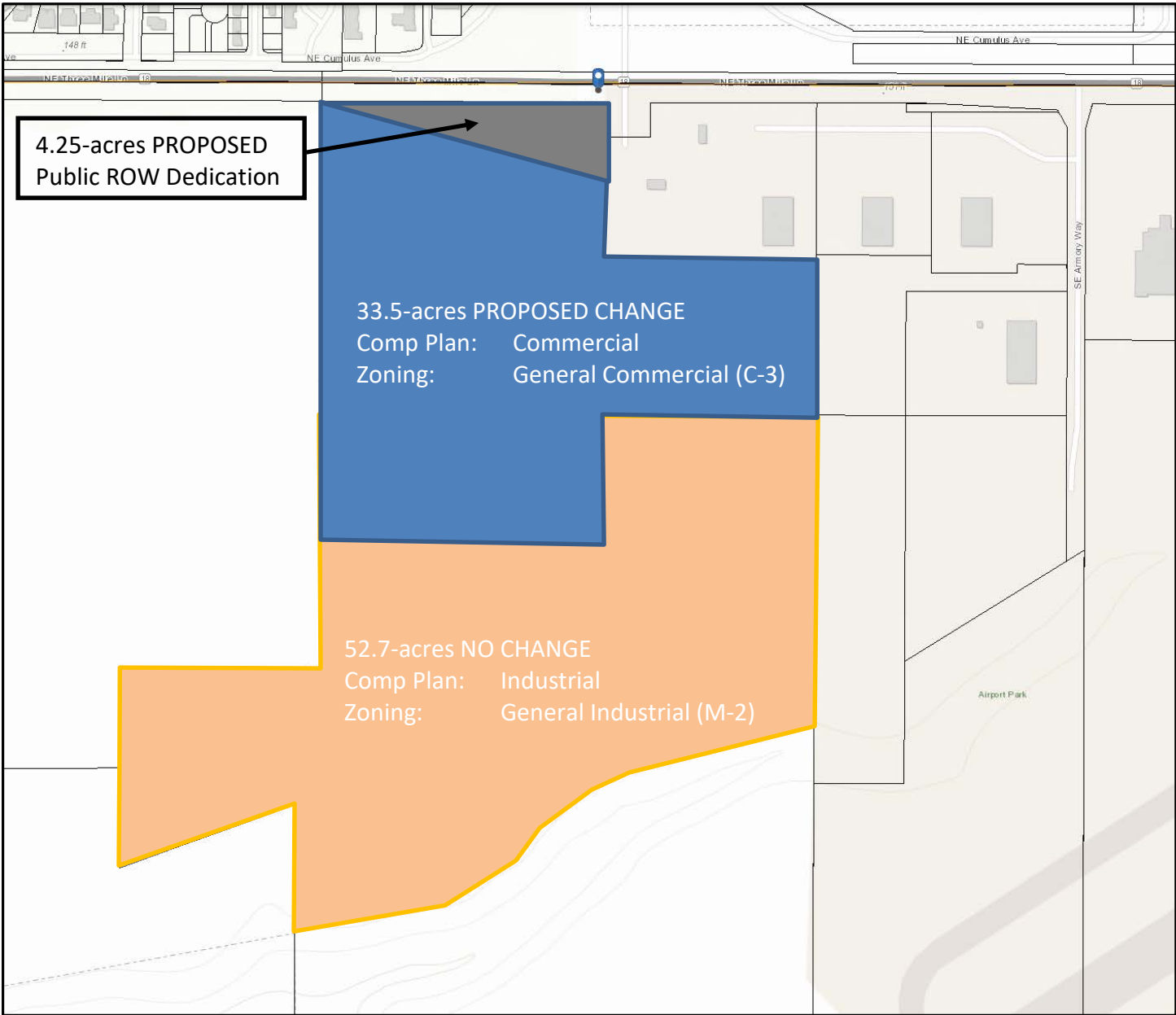
If you have questions about the meeting, please contact us at:

- Name: Sam Knutson
- Email: sknutson@kimcorealty.com
- Phone: (650) 757-2022

Property Location



Proposed Map Amendments



*Please note all boundary lines are approximate.

Attachment 8

Neighborhood Meeting - Mailing List

Map No.	Site Address	Tax Lot	Owner
0	3133 NE THREE MILE LN	R4422DD00101	KRE TIGER PARKLAND LLC
1	112 NE AMERICAN DR	R4422DD00215	SMITH RANDAL L
2	100 NE AMERICAN DR	R4422DD00216	LEWIS MATTHEW
3		R4422DD00217	CRAFTSMAN LANDING HOMEOWNERS
4		R4422DD00218	CRAFTSMAN LANDING HOMEOWNERS
5	107 NE AMERICAN DR	R4422DD00219	MANNING RON
6	3255 NE CUMULUS AVE	R4423 01000	WORLD FUEL SERVICES INC
7	3215 NE CUMULUS AVE	R4423 01100	WITTROCK BONNIE LEE TRUST
8	213 NE FIRCREST DR	R4423 01201	NHI-REIT OF OREGON LLC
9	219 NE FIRCREST DR	R4423 01203	NHI-REIT OF OREGON LLC
10	0 SE AIRPORT RD	R4426 00201	MCMINNVILLE CITY OF
11	3470 SE THREE MILE LN	R4426 00300	JACKSON FAMILY WINES INC
12	173 SE ARMORY WAY	R4426 00400	JACKSON FAMILY WINES INC
13		R4426 00500	MCMINNVILLE CITY OF
14	3330 SE THREE MILE LN	R4426 00600	3330 TML LLC
15	3310 SE THREE MILE LN	R4426 00700	KIMCO MCMINNVILLE LLC
16		R4426 00701	MCMINNVILLE CITY OF
17		R4426 00701	MCMINNVILLE CITY OF
18		R4427 00100	DRS LAND LLC
19	3030 SE THREE MILE LN	R4427 00200	DRS LAND LLC
20	7725 SE BOOTH BEND RD	R4427 02000	CRUICKSHANK BRIAN J CITY OF MCMINNVILLE

Attn:	Mailing Address	City	State	Zip
	19119 N CREEK PKWY	BOTHELL	WA	98011
	29661 NE PUTNAM RD	NEWBERG	OR	97132
LEWIS MELISSA	17800 SW PEAVINE RD	MCMINNVILLE	OR	97128
	133 NE AMERICAN DR	MCMINNVILLE	OR	97128
	133 NE AMERICAN DR	MCMINNVILLE	OR	97128
	PO BOX 605	NEWBERG	OR	97132
	9800 NW 41ST ST	MIAMI	FL	33178
WITTRICK BONNIE L TRUSTEE	13655 NW BERRY CREEK RD	MCMINNVILLE	OR	97128
	222 ROBERT ROSE DR	MURFREESBORO	TN	37129
	222 ROBERT ROSE DR	MURFREESBORO	TN	37129
	230 NE 2ND ST	MCMINNVILLE	OR	97128
	425 AVIATION BLVD	SANTA ROSA	CA	95403
	421 AVIATION BLVD	SANTA ROSA	CA	95403
	230 2ND ST	MCMINNVILLE	OR	97128
TRISTAN RYCHLICK LLC	401 NE EVANS ST	MCMINNVILLE	OR	97128
	3333 NW HYDE PARK RD NO 100	NEW HYDE PARK	NY	11042
	230 2ND ST	MCMINNVILLE	OR	97128
	230 2ND ST	MCMINNVILLE	OR	97128
	5801 SE BANSEN LN	DAYTON	OR	97114
	5801 SE BANSEN LN	DAYTON	OR	97114
CRUICKSHANK JEFFREY W	11400 SE STOCKHOFF RD	DAYTON	OR	97114
PLANNING DEPARTMENT	231 NE 5TH ST	MCMINNVILLE	OR	97128

Attachment 8

Neighborhood Meeting Notes

Summary of November 19, 2020 Virtual (Zoom) Neighborhood Meeting

Sam Knutson from KIMCO MCMINNVILLE, LLC called the meeting to order at 6:00 pm.

Developer Attendees were:

- *Sam Knutson, Alan Roodhouse and Michael Strahs with KIMCO MCMINNVILLE, LLC*
- *Dana Krawczuk, Esq. from Stoel Rives LLP, legal counsel to KIMCO MCMINNVILLE, LLC*
- *Kristine Connolly, PE from Kittelson & Associates, Inc., transportation engineer for KIMCO MCMINNVILLE, LLC*

Community Attendees were:

- *Stewart Kircher, from DRS LAND LLC (Owner of 180 acres to the west of the 90 acres owned by KIMCO MCMINNVILLE, LLC). Property is used to grow feed for dairy farm operation located offsite*

Applicant Presentation:

- *Sam Knutson made introductions, identified project location, and began PowerPoint Presentation*
- *Dana Krawczuk discussed:*
 - *Described aerial map and that proposal applied to only 33.5 acres of KIMCO MCMINNVILLE LLC's property*
 - *Proposal: Comprehensive Plan Map change from Industrial to Commercial and Zoning Map change from General Industrial (M-2) to General Commercial (C-3) for a portion of the site*
 - *No development or site plan proposed at this time – development will come later;*
 - *Steps:*
 - *File application*
 - *City reviews & Staff recommendation, public hearings before Planning Commission & City Council, lots more process to go – this is just the 1st step*
 - *Rationale: good site for retail, consistent with City's goals, good local access for community member convenience*
 - *Planning Efforts – too much industrial, surplus 200+ acres, deficit of commercial land of over 30 acres*
 - *More retail to capture growth*
 - *Address leakage, sales leaving area, to as far as Salem, missed opportunity for City*
 - *Three Mile Lane Planning process shows KIMCO property with commercial designation, consistent with City goals in Three Mile Lane plan*
 - *Zone Change – Traffic Study analyzes reasonable worst-case scenario, no actual site plan prepared or proposed, roadway network safe and can accommodate rezone, multimodal area with bikes and pedestrians also accommodated*

Community Comments

- *Stewart Kircher familiar with Three Mile Lane Zoning process and has participated*
- *Mr. Kircher has no questions or concerns about the proposal. Notes that access into KIMCO's property, and to adjacent properties is key.*
 - *Project team explains that when the KIMCO's property develops, we expect that access to the south will be by a signalized intersection, with roads that connect to adjacent properties.*
- *Mr. Kircher asks if KIMCO MCMINNVILLE rezone limits options for adjacent properties*
 - *Dana Krawczuk answers that no – rezone is consistent with Three Mile Lane plan, and the City's 2013 EOA and updated planning documents show that there is additional demand for retail development and that the Three Mile Lane corridor is an appropriate place for retail (and other) development. Ms. Krawczuk also explained that while this application will be considered in advance of the adoption of the Three Mile Lane Area Plan, which has been delayed, KIMCO's application is supportive of and consistent with the City's efforts*
 - *Group discussion about delays in the Three Mile Lane Area Plan and reconsideration of prior Urban Growth Boundary appeal as causing a delay with the Three Mile efforts.*
 - *Ms. Krawczuk clarifies that the UGB appeal process does not impact KIMCO's application. KIMCO's application will be processed under the 2013 EOA and is consistent with the goal of maintaining a compact urban form.*
- *Mr. Kircher expresses support for the project and asks whether there is any opposition.*
 - *Project team responds that it has not been contacted directly yet by any project opponents, but understands that there has previously been, and are currently ongoing, appeals to the City's long-range planning efforts.*

Meeting concluded at 6:30 pm.

Revisions to Application Based Upon Comments

- *None needed. Only supportive comments were received.*

Attachments:

*Mailed notice
Mailing list
Photograph of posted notice
PowerPoint presented at neighborhood meeting*

NOTICE OF NEIGHBORHOOD MEETING

ADDRESS: 3310 NE Three Mile Lane, McMinnville, OR 97128 (Tax Lot ID: 172164)

PROPOSAL:

- Comprehensive Plan Map Amendment from Industrial to Commercial;
- Zone Change from General Industrial (M-2) to General Commercial (C-3);
- Applies to northern 33.5-acre portion of the site along State Highway 18; and
- No development is proposed at this time.

APPLICANT CONTACT:

- Name: Kimco McMinnville, LLC (Sam Knutson)
- Email: sknutson@kimcorealty.com
- Phone: (650) 757-2022

VIRTUAL MEETING INFORMATION

DATE AND TIME: November 19, 2020 at 6:00PM

BY PHONE: (669) 900-6833 (Meeting ID# 923 4575 3326 and Password# 284715)

BY VIDEO CONFERENCE:

<https://kimcorealty.zoom.us/j/92345753326?pwd=cmhMTEFHFM2NRWXNkUVlwV1JEMzJ2Zz09>

**Please contact Sam Knutson by e-mail or phone beforehand to receive the above weblink by e-mail.*



Wetland Land Use Notification

OREGON DEPARTMENT OF STATE LANDS

775 Summer Street NE, Suite 100, Salem, OR 97301-1279

Phone: (503) 986-5200

This form is to be completed by planning department staff for mapped wetlands and waterways.

Responsible Jurisdiction



* **Municipality*** **Date***

City of County of McMinnville 4/20/2021

Staff Contact

First Name* **Last Name***

Tom Schauer

Phone* **Email***

503-474-5108 tom.schauer@mcminnvilleoregon.gov

Applicant



First Name* **Last Name***

Michael Strahs

Mailing Address*

Street Address
Kimco McMinnville LLC

Address Line 2
15 Southgate Avenue, Suite 201

City State
Daly City CA

Postal / Zip Code Country
94015 USA

Phone **Email (?)**

650-746-7501 mstrahs@kimcorealty.com

Is the Property Owner name and address the same as the Applicant?*

No Yes

Activity Location



Township* (?) **Range* (?)** **Section* (?)**

04S 04W 26

Quarter-quarter Section (?)

Tax Lot(s) *

00700

You can enter multiple tax lot numbers within this field. i.e. 100, 200, 300, etc.

To add additional tax map and lot information, please click the "add" button below.

Address

Street Address

3310 SE Three Mlle Lane

Address Line 2

City

McMinnville

Postal / Zip Code

97128

State

OR

Country

USA

County *

Yamhill

Adjacent Waterbody

Yamhill River

Proposed Activity



Local Case File # *

CPA 2-20/ZC 3-20

Zoning

M-2 (General Industrial)

Proposed

Building Permit (new structures)

Grading Permit

Site Plan Approval

Other (please describe)

Comprehensive Plan Map and Zoning Map Amendment

Conditional use Permit

Planned Unit Development

Subdivision

Project *

Proposed Comprehensive Plan Map Amendment from Industrial to Commercial and Zoning Map Amendment from M-2 (General Industrial) to C-3 (General Commercial) with a Planned Development (PD) Overlay for approximately 37.74 acres of a 90.43 acre parcel, including area proposed for future street right-of-way. No development plan is proposed at this time. As part of the Planned Development process, the development plan application must be submitted for review through a public hearing process in the future before any development can occur on the portion of the property subject to the PD overlay.

Required attachments with site marked: Tax map and site plan(s). (?)

4426.pdf

318.34KB

9. CPA 2-20_ZC 3-20_review response_3-30-21.pdf

3.42MB

Additional Attachments

Date

4/20/2021



Oregon

Kate Brown, Governor


Department of Transportation

Region 2 Tech Center

455 Airport Road SE, Building A
Salem, Oregon 97301-5397
Telephone (503) 986-2990
Fax (503) 986-2839

DATE: May 4, 2021

TO: Dan Fricke
Senior Transportation Planner

FROM: 
Arielle Ferber, PE
Traffic Analysis Engineer

SUBJECT: Three Mile Lane Rezone (McMinnville, OR) – Transportation Planning Rule
TIA Review Comments

ODOT Region 2 Traffic has completed our review of the submitted traffic impact analysis (dated December 18, 2020) to address traffic impacts due to development on the southwest quadrant of Salmon River Highway No. 039 (OR 18) and Cumulus Avenue in the city of McMinnville, with respect to consistency and compliance with ODOT's Analysis Procedures Manual, Version 2 (APM). The APM was most recently updated in October 2020. The current version is published online at: <http://www.oregon.gov/ODOT/TD/TP/Pages/APM.aspx>. As a result, we submit the following comments for the City's consideration:

Analysis items to note:

- Region Traffic assumes all land uses and densities offered under both the current and proposed zones are consistent with the City's code as cited in the report.

Recommended analysis items to be addressed:

1. NE Three Mile Lane is classified as an ODOT district highway from OR 18 to just south of SE Brooks Street. As the *Oregon Highway Plan (OHP)* v/c mobility target for Three Mile Lane (district highway, within UGB, non-MPH, 40 MPH) is 0.90 at the NE Three Mile Lane at SE Nehemiah Lane/NE Cumulus Avenue this will not have effect on the conclusions of the study.
2. Analysis of the NE Three Mile Lane at NE 1st Street intersection included signalization of the intersection as mitigation. While it appears a preliminary traffic signal warrant analysis was conducted, the supporting documentation was not included in the Appendix and was not able to be reviewed. It is recommended the supporting documentation be provided.

Proposed mitigation comments:

3. ODOT maintains jurisdiction of the Salmon River Highway No. 039 (OR 18) and ODOT approval shall be required for all proposed mitigation measures to this facility. At this time, Region Traffic has the following comments regarding the proposed mitigation measures:
 - NE Three Mile Lane at NE 1st Street – Approval for installation of a traffic signal will require that the intersection meet MUTCD traffic signal warrants as well as approval under the authority of the State Traffic-Roadway Engineer with support from the City and Region Traffic. At the time an official request is submitted to Region 2 Traffic by the applicant, the request shall include an operational and queuing analysis, preliminary design layout, and a preliminary signal operations design (PSOD).
 - NE Three Mile Lane at SE Nehemiah Lane/NE Cumulus Avenue – Restricting left-turns from the minor approaches onto NE Three Mile Lane will improve operations at the intersection, however, no analysis was conducted to determine how the reassignment of traffic would affect operations at the Three Mile Lane at SE Mountain View Lane intersection.
 - OR 18 at SE Norton Lane and OR 18 at NE Cumulus Avenue – All proposed intersection and/or signal modifications (new installations or changes to existing phasing or timing), changes to lane configuration, and additional turn or receiving lanes will require ODOT approval. Both the City and the applicant shall be aware no approval for any proposed mitigations have been issued at this time and proposed mitigations shall not be considered approved for installation until formal written approval has been issued. Approval request will need to be submitted to Region 2 Traffic and be accompanied by the appropriate analysis justifying such request. The approval process takes time and any approval could possibly have added features required to obtain such approval.
 - OR 18 at SE Loop Road and OR 18 at SE Cruickshank Road – Restriction of left-turns from the side street onto the mainline is expected to improve operations and safety at the intersections, particularly at the OR 18 at Cruickshank Road intersection which is currently a top 5% SPIS location. However, these left-turns were either fully or partially reassigned to the OR 18 at SE Lafayette intersection which is also currently a top 5% SPIS location. Region 2 Traffic recommends that the OR 18 at SE Lafayette intersection be analyzed to determine if the reassignment of traffic would have any operations or safety impacts to the intersection.

Thank you for the opportunity to review this traffic impact analysis. As the analysis software files were not provided, Region 2 Traffic has only reviewed the submitted report. As the above comments request additional information, we look forward to a second round of review at which time we will comment on any and all proposed mitigation measures affecting the state highway system. If there are any questions regarding these comments, please contact me at (503) 986-2857 or Arielle.Ferber@ODOT.state.or.us



City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97128
(503) 434-7311
www.mcminnvilleoregon.gov

EXHIBIT 3 - STAFF REPORT

DATE: May 20, 2021
TO: Planning Commission Members
FROM: Heather Richards, Planning Director
SUBJECT: Public Hearing – Proposed Amendments to the Comprehensive Plan to adopt a New Housing Needs Analysis (G 1-20); a New Housing Strategy (G 2-20); and a New Economic Opportunities Analysis (G 3-20).

STRATEGIC PRIORITY & GOAL:



GROWTH & DEVELOPMENT CHARACTER

Guide growth & development strategically, responsively & responsibly to enhance our unique character.

OBJECTIVE/S: Strategically plan for short and long-term growth and development that will create enduring value for the community

Report in Brief:

This is a legislative public hearing to consider proposed amendments to the McMinnville Comprehensive Plan, adopting a new Housing Needs Analysis, a new Housing Strategy, and a new Economic Opportunities Analysis.

Due to the passage of some recent state legislation and resulting Department of Land Conservation and Development (DLCD) rulemaking, staff is recommending opening the public hearing and continuing it to May 18, 2023, so that the documents can be amended to reflect the impacts of HB 2001 (2019), HB 2003 (2019) and recent rules adopted by DLCD.

Background:

In 2018, the City of McMinnville initiated an effort to update its Housing Needs Analysis (HNA), Economic Opportunities Analysis (EOA) and Public Lands Analysis.

In Oregon Land Use planning cities must maintain a buildable land supply to support necessary population growth for twenty years. This is accomplished through a needs analysis process. It is a highly regulated process governed by state legislation (Oregon Revised Statutes (ORS)) and rulemaking (Oregon Administrative Rules (OAR)). If the needs analysis identifies a need for additional land supply, cities must determine how they are going to meet that need, either by increasing density within the existing urban growth boundary or by expanding the urban growth boundary, or both.

Cities typically will conduct an efficiency measures analysis to identify opportunities for growth and higher density within the city's urban growth boundary prior to expanding the urban growth boundary. If cities choose to expand their urban growth boundary, cities must then embark on a land analysis of land adjacent to the existing urban growth boundary to determine where it is appropriate to expand. Like the needs analysis, the efficiency measures analysis and urban growth boundary analysis are highly regulated with ORS and OARs.

In 2018, after realizing the negative effects of constrained land supply on the City of McMinnville's housing market and employment opportunities, the City elected to initiate the needs analysis with a mindset that it would lead eventually to an urban growth boundary amendment even after an efficiency measures analysis. City Council direct staff to plan for both a twenty-year growth horizon (2021 -2041) as well as a fifty-year growth horizon (2021 – 2067) in order to adopt a future Urban Reserve Area so that the City did not find itself in the same predicament in the future.

The last time the City had successfully adopted a Housing Needs Analysis was in 2001 and although the needs analysis and resulting efficiency measures indicated a need to expand the city's urban growth boundary for future growth, the city was not successful in adopting a new urban growth boundary that met the city's identified need due to legal challenges, eventually resulting in a Court of Appeals remand to the City in 2013.

Thus, the city engaged a consultant team and worked with a project advisory committee on a buildable lands inventory, housing needs analysis and economic opportunities analysis throughout 2018, 2019 and 2020.

At the same time, during the 2019 Oregon Legislative Session, two house bills were adopted, HB 2001 and HB 2003. Both bills impacted state legislation and eventually rulemaking relative to how cities implemented needs analyses. Knowing that the legislation and rulemaking would take some time to enact, the City put a pause on their efforts, and turned towards the 2013 urban growth boundary remand to see if that would lead to a quicker resolution to the city's land supply issues rather than a new effort. City staff worked on a response to the Court of Appeals remand in 2020 and in April, 2021 learned that the submittal had been approved by the Department of Land Conservation and Development and was not appealed.

In order to preserve their efforts from 2018, 2019 and 2020, in May 2020, the City of McMinnville submitted the following "PAPA" notices (Notice of Proposed Amendments) to DLCD:

- **HNA.** Housing Needs Analysis and Residential Buildable Land Inventory (June 2019 Draft).
- **Housing Strategy.** (June 2019 Draft).
- **EOA.** Economic Opportunities Analysis, Employment Land Buildable Land Inventory, and Other Land Needs (February 2020 Draft). The City subsequently completed additional updates to the February 2020 draft in June 2020 after the initial PAPA submittal to DLCD. The City subsequently submitted the updated draft as an amended PAPA notice in May 2021.

All of the above documents are attached to this staff report and constitute the draft proposed amendments to the McMinnville Comprehensive Plan.

In addition to the HNA, Housing Strategy and EOA, the City prepared a Memo updating the HNA (Addendum 1 to the HNA) in June 2020 to address any new discoveries since the June 2019 draft was completed, and an Urbanization Study that served as a summary of the HNA/EOA analysis. A description of which is provided below.

- **Addendum 1 to the HNA.** This addendum provides the following updates to the June 2019 Draft HNA, providing the basis for the revised residential capacity data presented in the June 2020 Draft Urbanization Report:
 - **Corrections to BLI Acreages Due to Split-Zoned Lots Identified During EOA Work.** Some properties were split-zoned residential and commercial, but had residential capacity assigned to both portions. With the EOA work, the analysis was updated, and the commercially zoned portions were assigned to employment lands as part of the employment BLI. This addendum provides the adjustments to the HNA and residential BLI to reflect the adjustments to buildable acreage and capacity for the residentially zoned portions of those properties.
 - **Capacity of Exception Areas in the UGB.**
 - **OAR 660-024-0067(6).** For exception areas added to the UGB, OAR 660-024-0067(6) provides for reduced capacity assumptions for tax lots less than two acres. This applies to lands within three exception areas that were added to the UGB: Riverside South, Redmond Hill Road, and Fox Ridge Road. This is based on research and analysis that was conducted for the “HB 2554 Report.” In September 2015, The University of Oregon Community Service Center published a final report for the HB 2254 Rules Advisory Committee, “Analysis of Development on Rural Residential Lands: A Report to the HB 2254 Rules Advisory Committee.” This rule is based on the results of the analysis presented in that report.
 - **Density Assumptions for Exception-Area Tax Lots \geq 2 Acres.** In the HNA, it was assumed Exception Areas would develop at the “average needed density” of 4.9 du/gross acre, assuming the average density could be achieved through efficiency measures. However, with the substantial amount of properties $<$ 2 acres in exception areas which are subject to the reduced capacity assumptions noted above, it may not be feasible to achieve that overall average density when considering what density increase would have to be achieved on the remaining properties within the exception areas to offset reduced capacity assumptions on the smaller parcels, especially given some location policies, including those which limit residential density in proximity to certain uses such as the sewer treatment plant.
 - **Other: Serviceability.** During the residential BLI and capacity analysis, it was assumed that all land over 275’ elevation was in Water Pressure Zone 2. However, Pressure Zone 2 is an elevation band of approximately 275-415’. There are some properties and portions of properties (and potential future structures) within the UGB over 415’ elevation which would be in a future Water Pressure Zone 3 and would require future Pressure Zone 3 infrastructure to serve those properties. This may be infeasible to serve during the planning horizon. The current master plan includes provisions for serving Zone 2, but didn’t include service of a Water Pressure Zone 3.
 - **Analysis Under ORS 197.296 as Amended by HB 2001.** HB 2001 was signed into law after the City finished the preliminary work to produce the June 2019 Draft HNA with recommendations from the Project Advisory Committee. HB 2001 amends ORS

197.296(6) in part to specify that, when a City is expanding its UGB and/or including new measures to accommodate growth within the UGB, that it must adopt findings regarding the density expectations assumed to result from the measures adopted to implement “middle housing” provisions, as specified in the statute. This analysis provides the required analysis and findings regarding density expectations and the associated effect on capacity.

- **Small Lot Status and Capacity.** The way lands are classified under state law, some properties which most people would intuitively consider to be “infill” or “redevelopment” properties are treated the same as “greenfield” development when making assumptions about which properties will further develop and at what densities during the 20-year planning period. Approximately 82% of the non-entitled tax lots classified as buildable land are two acres or smaller, and approximately 93% of these tax lots are three acres or smaller. Many of those properties are “partially vacant” – meaning they are already developed with homes. Historic analysis of partition and development activity shows only a small number and percentage of smaller properties being further divided each year and over the long-term. Further, these smaller properties are often unplatted properties that contain “remnant” acreage, and/or contain naturally constrained areas in a configuration that limits the land use efficiency to densities less than achieved when master planning larger greenfield sites.
- **Capacity Assigned to Platted Entitled Lots within Landslide Constraint Area.** A previously platted subdivision included lots within a landslide constraint area. Platted lots in this subdivision can develop subject to approved geotechnical reports. Most lots in the subdivision have already developed, but approximately 19 lots were still undeveloped at the time of the June 2019 Draft HNA. Since this is within a landslide constraint area, no capacity was assigned to these lots. This amendment assigns capacity to these lots, recognizing development of these entitled and platted lots subject to approved geotechnical reports.
- **Urbanization Report.** (June 2020 Draft). This report doesn’t include new analysis or information. It provides a user-friendly summary and compilation of the key information in the HNA, as updated by Addendum 1, as well as the key information in the EOA document.

As part of the PAPA notice for these documents in May 2020, the City needed to provide a specific date for a public hearing, and the City elected to select May 20, 2021 for the public hearing date to provide enough time for the HB 2001 and HB 2003 rulemaking to conclude.

Discussion:

Since these documents were completed and noticed to the Department of Land Conservation and Development, there have been two significant developments that have occurred which impact the outcomes of these draft documents:

- The City’s successful completion of the McMinnville Growth Management and Urbanization Plan (MGMUP), which amended the existing urban growth boundary by adding 662.40 gross buildable acres to the urban growth boundary.

- HB 2003 rulemaking which mandated a calendar of when cities needed to adopt a new Housing Needs Analysis (OAR 660-008-0045). The City of McMinnville was assigned an adoption date of December 31, 2023. (Please see table below).
- New DLCD program for the development of a Housing Production Strategy to meet the mandates of HB 2003.

Housing Capacity Analysis Update Schedule for Oregon						
Cities with a population above 10,000 (Required by ORS 197.296)						
OAR 660, Division 8 – Exhibit A						
<i>Adopted by the Land Conservation and Development Commission November 12, 2020.</i>						
<i>Updated November 23, 2020.</i>						
Cities to adopt updated Housing Capacity Analyses (HNA) by December 31st of the listed year.						
	2022	2023	2024	2025	2026	2027
1	Grants Pass	Ashland	Bend	Springfield	Eugene	Central Point
2	Newport	Beaverton	Hermiston	The Dalles	Troutdale	Corvallis
3		Forest Grove	Sandy			Cottage Grove
4		Gresham				St. Helens
5		Happy Valley				
6		Hillsboro				
7		Lake Oswego				
8		McMinnville				
9		Medford				
10		Milwaukie				
11		Portland				
12		Tigard				
13		West Linn				
14		Wilsonville				

The City is able to preserve the work that has already been done thus far to meet the HB 2003 mandate, but it must be updated to reflect the new urban growth boundary amendment (buildable land inventory) and the application of the provisions of HB 2001 to the new urban growth boundary amendment. Then if the needs analysis shows additional land need for the 2021 – 2041 planning horizon, the City will need to conduct an efficiency measures analysis, and if there is still land need remaining, embark on a new urban growth boundary amendment. The City will need to show how it will meet its identified land need when it adopts the HNA by December 31, 2023.

Currently the draft HNA and EOA show a need for additional land supply (please see table below). However, this need does not yet reflect the reconciliation of the MGMUP UGB amendment or an efficiency measures analysis.

MCMINNVILLE NEEDS 1,399 ACRES TO ACCOMMODATE GROWTH THROUGH 2041

The land needs analysis indicates the City will need an additional 576 acres for housing in the 2021 to 2041 period. The City also needs about 280 acres for commercial employment and 70 acres for industrial employment during the 2021 to 2041 period.

LAND USE TYPE	SURPLUS (DEFICIT)	
	20-YEAR (2021-2041)	46-YEAR (2021-2067)
Residential	(576)	(1,481)
Public or Institutional	(473)	(780)
Industrial	(70)	(70)
Commercial	(280)	(494)
Total	(1,399)	(2,825)

Source: ECONorthwest

The City has identified a work program to reconcile the MGMUP UGB amendment into the existing HNA and EOA drafts, by updating the buildable lands inventory and applying the provisions of HB 2001 to the MGMUP UGB lands, and then if there is still need identified to embark on an efficiency measures analysis. To conduct this work, the City will continue to work with project advisory committee and host public workshops and public open houses to ensure that there is significant public engagement and input throughout the process. The City has budgeted the time and resources to address this effort in 2021 and 2022, with a goal of completing the effort for a public hearing on May 18, 2023.

If, after the MGMUP UGB reconciliation and the efficiency measures analysis, the City still shows a need for additional land supply to accommodate needed new housing to support project population growth to 2041, the City will need to embark on a new urban growth boundary amendment.

Normally, this urban growth boundary amendment would need to be completed and adopted at the same time as the HNA by December 2023. However, given the time constraints and the City’s most recent urban growth boundary amendment, staff has already met with the Department of Land Conservation and Development to negotiate the ability to enter into a sequential urban growth boundary program (OAR 660-025-0040) which would allow the City to submit the urban growth boundary amendment December 31, 2025.

Attachments:

- Draft McMinnville Housing Needs Analysis (June 2019)
- Addendum 1 to Housing Needs Analysis (June 2019)
- Draft McMinnville Housing Strategy
- Draft McMinnville Economic Opportunities Analysis (June 2020)
- Draft Urbanization Report (June 2020)
- HB 2001 - Enrolled (2019)
- HB 2003 – Enrolled (2019)

Fiscal Impact:

Per HB 2003 (2019), the City of McMinnville will need to update its Housing Strategy to conform with the mandates of the state legislation and the resulting program that the Department of Land Conservation and Development constructed to support the state legislation. It is anticipated that this effort will cost the City of McMinnville approximately \$15,000.

Per HB 2003 (2019), the City of McMinnville needs to adopt a new Housing Needs Analysis by December, 2023, and if that Housing Needs Analysis demonstrates that the City has additional need for land supply to support new housing within the city limits over the twenty-year horizon (2021 – 2041), then the City will need to adopt measures to accommodate that need – either with efficiency measures (higher density within the city limits) or with additional land supply (urban growth boundary amendment), or both. It is anticipated that the efficiency measures evaluation will cost the City of McMinnville approximately \$50,000, and if needed a new urban growth boundary amendment will cost the City of McMinnville approximately \$250,000.

PROJECT COMPONENT	TIMEFRAME	COSTS
HNA/EOA/BLI – DRAFT Urbanization Study	May, 2021 First Evidentiary Hearing – Open and Continue	\$162,000 FY 2019/20
Reconcile MGMUP UGB Remand with Urbanization Study	Draft December, 2021	\$15,000 FY 20/21
Efficiency Measures	Adopt December, 2023	\$50,000 FY 21/22
Housing Production Strategy	Adopt December, 2023	Draft Form
UGB Amendment (if needed)	Adopt June 30, 2025	\$250,000 FY 23/24, 24/25

Recommendation:

Due to the amount of work that needs to occur to amend the proposed Housing Needs Analysis, Housing Strategy and Economic Opportunities Analysis to conform to new state legislation and rulemaking, staff is recommending that the public hearing be continued to May 18, 2023.

City of McMinnville

Housing Needs Analysis

June 2019

Prepared for:
City of McMinnville

FINAL REPORT



KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503.222.6060

This page intentionally blank

Acknowledgments

ECONorthwest prepared this report for the City of McMinnville. ECONorthwest and the City of McMinnville thank those who helped develop the McMinnville Buildable Lands Inventory and Housing Needs Analysis. This project is funded by Oregon general fund dollars through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

Project Advisory Committee (PAC)

Citizen Advisory Committee (CAC)

- | | | |
|--------------------------|------------------|-------------------|
| Marilyn Worrix, Chair | Sal Peralta | Beth Caster |
| Kellie Menke, Vice Chair | Alan Ruden | Michael Jester |
| Zack Geary | Sid Friedman | Robert J. Banagay |
| Roger Lizut | Mark Davis | Amanda Perron |
| Susan Dirks | Danielle Hoffman | Matt Deppe |
| Roger Hall | Andrew Burton | Brad Bassitt |
| | | Patty O’Leary |

Technical Advisory Committee (TAC)

State of Oregon

- Angela Carnahan, Regional Representative – Oregon Department of Land Conservation and Development
- Kevin Young, Housing Specialist – Oregon Department of Land Conservation and Development

City of McMinnville

- Tom Schauer, Senior Planner – Lead
- Heather Richards, Planning Director
- Chuck Darnell, Senior Planner
- Jamie Fleckenstein, Associate Planner
- Mike Bisset, Community Development Director
- Susan Muir, Parks Director

Yamhill County

- Ken Friday, Planning Director
- Stephanie Armstrong, Associate Planner

Consulting Team (ECONorthwest)

Robert Parker, Senior Project Adviser
Beth Goodman, Project Director
Margaret Raimann, Technical Manager
Sadie DiNatale, Associate

City of McMinnville Contact:

Tom Schauer, Senior Planner
City of McMinnville
230 NE Second Street
McMinnville, Oregon 97128
503-474-5108
tom.schauer@mcminnvileoregon.gov

ECONorthwest Contact:

Robert Parker, Project Director
ECONorthwest
222 SW Columbia, Suite 1600
Portland, OR 97201
503-222-6060
parker@econw.com

Table of Contents

ACKNOWLEDGMENTS	III
1. INTRODUCTION	1
BACKGROUND	1
FRAMEWORK FOR A HOUSING NEEDS ANALYSIS	2
PUBLIC PROCESS	8
ORGANIZATION OF THIS REPORT	9
2. RESIDENTIAL BUILDABLE LANDS INVENTORY	10
CATEGORIZING LANDS	10
BUILDABLE LANDS INVENTORY RESULTS	14
INFILL AND REDEVELOPMENT POTENTIAL	21
3. HISTORICAL AND RECENT DEVELOPMENT TRENDS	24
DATA USED IN THIS ANALYSIS	25
TRENDS IN HOUSING MIX	26
HOUSING DENSITY	31
TRENDS IN TENURE	32
VACANCY RATES	35
SHORT-TERM RENTALS AND SEASONAL HOUSING	36
GOVERNMENT-ASSISTED HOUSING PROJECTS	38
MANUFACTURED HOMES	39
4. DEMOGRAPHIC AND OTHER FACTORS AFFECTING RESIDENTIAL DEVELOPMENT IN MCMINNVILLE	41
DEMOGRAPHIC AND SOCIOECONOMIC FACTORS AFFECTING HOUSING CHOICE	42
REGIONAL AND LOCAL TRENDS AFFECTING AFFORDABILITY IN MCMINNVILLE	69
SUMMARY OF THE FACTORS AFFECTING MCMINNVILLE'S HOUSING NEEDS	79
5. HOUSING NEED IN MCMINNVILLE	83
PROJECT NEW HOUSING UNITS NEEDED IN THE NEXT 5, 10, 20, AND 46 YEARS	83
NEEDED DENSITY	100
NEEDED HOUSING BY INCOME LEVEL	103
NEED FOR GOVERNMENT-SUBSIDIZED, FARMWORKER, AND MANUFACTURED HOUSING	104
OTHER NEEDS	107
6. RESIDENTIAL LAND SUFFICIENCY WITHIN MCMINNVILLE	109
STATUTORY GUIDANCE	109
RESIDENTIAL CAPACITY ANALYSIS	110
RESIDENTIAL LAND SUFFICIENCY IN MCMINNVILLE	113
CONCLUSIONS	115
APPENDIX A. RESIDENTIAL BUILDABLE LANDS INVENTORY METHODS	117
OVERVIEW OF THE METHODOLOGY	117
RESIDENTIAL LAND BASE	118

APPENDIX B. SCENARIO MODELING	<u>121</u>
HOUSING FORECAST BY HOUSING TYPE	121
ALLOCATION OF NEEDED HOUSING	124
NEEDED DENSITIES	126
LAND SUFFICIENCY APPROXIMATIONS FOR THE 2021 TO 2041 PLANNING PERIOD	126

1. Introduction

This report presents a housing needs analysis (HNA) for the City of McMinnville. It is intended to comply with statewide planning policies that govern planning for housing and residential development, including Goal 10 (Housing) and applicable statutes such as ORS 197.296 and OAR 660 Division 8. The methods used for this study generally follow the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

Consistent with Statewide Planning Goal 10, the HNA documents McMinnville's housing needs for the 2021–2041 planning period.¹ It is more comprehensive than the State requires, looking at housing needs for a 5-, 10-, 20-, and 50-year period. The shorter-term analyses are intended to identify immediate housing needs and strategies given current land-need deficiencies, and the 50-year analysis can provide a basis for the establishment of urban reserve areas (URAs).

ECONorthwest developed this report in tandem with the development of the housing strategy, which is a separate, freestanding document, which is referenced and discussed herein.

Background

In January 1981, the City of McMinnville adopted an urban growth boundary (UGB) intended to meet the needs for the 1980–2000 planning period. The City of McMinnville last initiated a housing needs analysis in 2000 for the 2000–2020 planning period as part of a comprehensive review of its 20-year needs. It was subsequently updated to a 2003–2023 planning period.

In 2007–2008, the City submitted a UGB amendment to the Department of Land Conservation and Development (DLCD) for the inclusion of 1,188 gross acres, resulting in a total inclusion request of 890 buildable acres (of which 537 buildable acres were designated to meet identified housing needs) and the adoption of several land-use efficiency measures. This UGB amendment was subsequently appealed on a number of issues, and ultimately the court of appeals found that the City had not justified its inclusion of high-value farmland instead of rural residential “exception” areas and agricultural areas of poorer soils.

In July 2011, the court of appeals remanded the aforementioned case, approving the inclusion of 217 buildable acres of exception-only land in the UGB for residential use, thus leaving a 320-acre deficit of buildable residential land. To partially address residential land needs, the City has since approved some plan amendments and rezones from lower- to higher-density residential designations. Other than some smaller nonresidential-to-residential plan

¹ ORS 197.296(2) requires cities to “demonstrate that its comprehensive plan or regional framework plan provides sufficient buildable lands within the urban growth boundary established pursuant to statewide planning goals to accommodate estimated housing needs for 20 years. The 20-year period shall commence on the date initially scheduled for completion of the periodic or legislative review.” McMinnville anticipates adopting the housing needs analysis no earlier than 2021. As a result, this report presents housing needs for the 2021 to 2041 period.

amendments and zone changes, no additional land has been added to the residential plan designation since 2007–2008, per the court of appeals’ decision in 2011 that required a reduction in land.

From 1996 to 2016, when Senate Bill 1573 was passed, annexation of residentially designated land within the unincorporated UGB was subject to approval by City voters.² Annexations of land in McMinnville from 1996 to 2016 totaled 468.4 acres with at least 190 of those acres designated for uses other than housing.

The City has changed considerably since the time the last UGB review was initiated. From 2000 to 2017, McMinnville added nearly 7,166 residents, accounting for 34% of Yamhill County’s growth over that period. In the same time, McMinnville added about 3,250 new dwelling units. McMinnville’s population has grown a little older on average and has become slightly more ethnically diverse since 2000, consistent with statewide trends.

This report provides McMinnville with a factual basis to update the Housing Element of the City’s comprehensive plan and zoning code. Additionally, it provides a factual basis to support future planning efforts related to housing and options for addressing unmet housing needs in McMinnville. It provides information that will inform future planning efforts, including a review of the McMinnville UGB and the establishment of urban renewal areas (URAs). It provides the City with information about the housing market in McMinnville and describes the factors that will affect future housing demand and need in McMinnville, such as changing demographics and housing preferences. This analysis will help decision makers understand whether McMinnville has enough land to accommodate growth over the next 5, 10, 20, and 50 years.

Framework for a Housing Needs Analysis

Economists view housing as a bundle of services for which people are willing to pay, including shelter, proximity to other attractions (job, shopping, recreation), amenities (type and quality of fixtures and appliances, landscaping, views), prestige, and access to public services (quality of schools). Because it is impossible to maximize all these services and simultaneously minimize costs, households must make tradeoffs. What they can get for their money is influenced both by economic forces and government policy. Moreover, different households will value what they can get differently. They will have different preferences, which in turn are a function of many factors such as income, age of household head, number of people and children in the household, number of workers and job locations, number of automobiles, and so on.

Thus, housing choices of individual households are influenced in complex ways by dozens of factors. The housing market in Yamhill County and McMinnville are the result of the individual decisions of thousands of households, (McMinnville has over 12,000 households, and Yamhill

² <https://olis.leg.state.or.us/liz/2016R1/Measures/Overview/SB1573>.

County has nearly 40,000 households). These points help to underscore the complexity of projecting what types of housing will be built in McMinnville between 2021 and 2041.

The complex nature of the housing market was demonstrated by the unprecedented boom-and-bust during the past two decades. This complexity does not eliminate the need for some type of forecast of future housing demand and need, with the resulting implications for land demand and consumption. Such forecasts are inherently uncertain. Their usefulness for public policy often derives more from the explanation of their underlying assumptions about the dynamics of markets and policies than from the specific estimates of future demand and need.

Statewide Planning Goal 10 and Related Policies

The passage of the Oregon Land Use Planning Act of 1974 (ORS Chapter 197) established the Land Conservation and Development Commission (LCDC) and the Department of Land Conservation and Development (DLCD). The Act required the Commission to develop and adopt a set of statewide planning goals. Goal 10 addresses housing in Oregon and provides guidelines for local governments to follow in developing their local comprehensive land-use plans and implementing policies.

At a minimum, local housing policies must meet the requirements of Goal 10 and the statutes and administrative rules that implement it (ORS 197.295 to 197.314, ORS 197.475 to 197.490, and OAR 600-008).³ Goal 10 requires incorporated cities to complete an inventory of buildable residential lands and encourage the availability of adequate numbers of housing units in price and rent ranges commensurate with the financial capabilities of its households.

Goal 10 defines needed housing types as “housing types determined to meet the need shown for housing within an urban growth boundary at particular price ranges and rent levels.”

ORS 197.303(1) defines “needed housing” as follows:

As used in ORS 197.307, “needed housing” means all housing on land zoned for residential use or mixed-residential and commercial use that is determined to meet the need shown for housing within an urban growth boundary at price ranges and rent levels that are affordable to households within the county with a variety of incomes, including but not limited to households with low incomes, very low incomes and extremely low incomes, as those terms are defined by the US Department of Housing and Urban Development under 42 U.S.C. 1437a. Needed housing includes the following housing types:

- (a) Attached and detached single-family housing and multifamily housing for both owner and renter occupancy;
- (b) Government-assisted housing;

³ ORS 197.296(1)-(9) only applies to cities with populations over 25,000.

- (c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490;
- (d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions; and
- (e) Housing for farmworkers.

DLCD provides guidance on conducting a housing needs analysis in the document *Planning for Residential Growth: A Workbook for Oregon's Urban Areas*, referred to as the workbook. In addition, cities with a population of 25,000 or more (including McMinnville) are required to comply with ORS 197.296(1)–(9) and must conduct an analysis of housing need by housing type and density range to determine the number of needed dwelling units and amount of land needed for each housing type in the next 20 years (ORS 197.296(3)(b)).

Broadly, ORS 197.296(2) requires cities to demonstrate that its comprehensive plan provides sufficient buildable lands within the urban growth boundary to accommodate estimated housing needs for 20 years. Section 6 requires cities to conduct a buildable lands inventory and analyze housing needs and residential land needs. If the conclusion of that analysis is that the housing need determined pursuant is greater than the housing capacity determined, the City must either (1) amend its urban growth boundary to include sufficient buildable lands to accommodate housing needs for the next 20 years; (2) amend land-use regulations to include new measures that “demonstrably increase the likelihood that residential development will occur at densities sufficient to accommodate housing needs for the next 20 years without expansion of the urban growth boundary”; or (3) adopt a combination of (1) and (2).

In summary, McMinnville must identify needs for all of the housing types listed above as well as adopt policies that increase the likelihood that needed housing types will be developed. This housing needs analysis was developed to meet the requirements of Goal 10 and its implementing administrative rules and statutes. This report references relevant state guidance in relation to various elements of the HNA.

A Note About Housing Needs

As described above, the nature of the housing market and housing needs are complex. Provisions of statute that discuss needed mix and needed density read as if, after conducting an analysis of historical and forecast trends, the City can apply a formula to arrive at a correct determination of needed mix and density to ensure that housing needs are met for the next twenty years of population growth. But these determinations function within a fairly rigid formula that does not take into account market and choice. In effect, this would require the City to determine the needed housing type and density for each household and aggregate the results for all households to arrive at the needed mix of housing types and the average needed density for the planning period. It presumes that households fit into categories that are uniform in their housing needs, preferences, choices, and trade-offs and, therefore, the City can determine the correct aggregate housing choices. Meeting housing needs should also reflect community values

and provide opportunities for a range of housing options to meet needs in the community, from affordable housing for the residents with the lowest incomes to executive housing options.

This formula further assumes that housing needs are reduced to type (single-family detached, single-family attached, and multifamily), mix, and density. It further assumes these are the sole factors, if not the most critical ones, that allow cities to meet housing need. Without explicitly stating it, these components of housing need are reduced to a proxy for affordability across income levels, while failing to account for other aspects of the housing market that may be more critical to addressing housing need and choice across the income spectrum. It is demonstrably true that density does not necessarily equate to affordability. Further, state law currently prohibits cities from directly addressing some aspects of the housing market that may be more critical to meeting housing needs, specifically ORS 197.309 (which enables inclusionary zoning but places restrictions on when it can be applied).

The required analysis also ignores the fact that some historic trends may be the result of factors that have artificially distorted the market and provision of housing supply in different ways, including past regulatory constraints that may have influenced the housing market, which become embedded in the trend analysis of housing need.

In reality, the City is zoning for housing opportunities in which households can make choices about housing that meets their needs by providing choices consistent with their preferences, and these needs and preferences may change during the planning period. This interpretation is consistent with the language of Goal 10: “Plans shall encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density.”

Household preference will lead to housing choices, where a household may have a choice of different housing options that reflect trade-offs. For example, when it comes to affordability, there may be different housing choices that are equally affordable. A household may choose an ownership opportunity that results in slight cost burden but allows them to establish ownership and equity, rather than a rental opportunity at a lower price point that doesn’t result in cost burden.

While housing type and density can be factors in housing costs, they are not determinants. Other factors can have a significant impact on housing cost and preference. These factors include:

- **Location within the region and city.** Locational factors and neighborhood amenities can dramatically affect housing cost. Locational choices relative to neighborhoods, amenities, schools, access to services, and so on can determine preferences and housing costs. In some cases, the cost per square foot in the highest-density multifamily developments in the most desirable neighborhoods can be significantly higher than larger single-family detached housing in a neighborhood a few miles

away. To create equity and inclusion, the City needs to be cognizant of ensuring that neighborhoods are equitable and that housing types are equally distributed.

- **Square footage, materials, and amenities.** These factors can be significant in determining housing cost. Census data suggests that the size of both single-family units and multifamily units continue to increase.
- **Household formation.** Some people may select different options for household formation to increase housing choice opportunities. For example, some individuals or extended families may prefer to live in a larger house together and share costs and social supports, rather than living in individual units that may be more expensive, lack social supports, or both.
- **Housing subtypes.** Within the three broad categories of housing types specified in statute (single-family detached, single-family attached, and multifamily) are numerous subtypes. Some subtypes might have more in common with other housing types. For example, a cottage cluster might be comprised of single-family detached homes with smaller footprints and a higher density, where they are more comparable in density and affordability to other housing types than they are to large-lot single-family homes with significantly more square footage. In this case, it could be more appropriate to plan for opportunity/flexibility to achieve densities and affordability with different housing types, rather than to plan for a specific mix of the three specified housing types.

In short, housing needs can, and do, change over time. The statutes imply that the needed mix identified at the start of the planning period is the correct mix and must be achieved over the course of the planning period. It treats needed mix and density as determinants rather than predictive factors. If households make different housing choices than were initially expected or predicted then, per the statutes, the City has not achieved the correct mix and must adjust because the predictions may not have accurately reflected the socioeconomic and demographic characteristics or housing choices of the City's current and future residents. The law is set up to treat housing mix and density as destiny—treating them as a given to be adhered to rather than a forecast. While the population growth that provides the basis for future planning is described as a “forecast,” and planning for employment land is described as “economic opportunities,” planning for housing is instead described as “needed mix and density” rather than a housing forecast of opportunities for different housing types.

This suggests that the numbers in a population forecast are predictive and subject to change while the demographic and socioeconomic components inherent in that same forecast are not. It further assumes that the City can determine the complex factors that determine the right housing choice for households. A self-fulfilling planning scheme can be overly rigid and may drive households to select housing options because they are an available, rather than a preferred, choice.

The statutes appear to be more concerned with needed density and mix, identified at the beginning of the planning period as an absolute, more so than the consideration of housing

preferences and affordable options commensurate with household incomes. In effect, the metrics (e.g., density and mix) for needed housing can be more concerned with urbanization goals than with housing needs (particularly affordability, since density does not necessarily equate to affordability).

The above discussion isn't intended to conflate housing need with the housing market. On the contrary, the housing needs analysis and residential lands needs analysis must address housing needs for those who lack housing, those who are at risk of losing housing, those who are not being served by the housing market, and those who have the narrowest choice of housing options commensurate with their incomes. There are many in the community who lack viable housing opportunities or choices. The market may continue to operate without responding to, or being able to respond to, housing needs for those residents, absent market interventions.

The housing needs analysis and resulting housing strategy will require creativity to meet the housing challenges that lie ahead, but they will provide pathways to opportunity. Rigid thinking about housing type, mix, and density—as well as segregated zoning—will not lead to the creative solutions that McMinnville seeks to meet housing challenges head-on while creating great neighborhoods of enduring value that provide opportunity to future generations. Further, narrow thinking about the term “needed housing,” however well-intentioned, could replicate planning failures from the past. Affordability achieved through the warehousing of people doesn't provide a pathway to opportunity or upward mobility.

Needed mix and density are statutory components of a housing needs analysis that are typically conducted in advance of a housing strategy; accordingly, predetermining them will prevent the use of flexible options that provide more creative solutions. Instead, the residential land needs analysis should be based on either needed mix or density, leaving the other to be addressed through a responsive, creative strategy that avoids rigid categories and adjusts as needs are met over time.

As the City of McMinnville continues to discuss housing needs and construct a housing strategy in response, it should allow for market innovation over the planning horizon to ensure that the need is truly being met with choice option. Additionally, the City of McMinnville has recently adopted Great Neighborhood Principles to ensure that everyone in McMinnville can live in a nice neighborhood regardless of income. These principles strive for equity and inclusion in residential neighborhoods, and they will play an important role in crafting a meaningful response that will not only address the housing needs of McMinnville's future residents but provide enduring value.

Public Process

At the broadest level, the purpose of the project was to understand how much McMinnville will grow over the next 5, 10, 20, and 46 years. The project has two components: (1) technical analysis (the BLI and HNA), and (2) housing strategies (provided in a separate document). Both benefit from public input. The technical analysis requires a broad range of assumptions that influence the outcomes, and the housing strategy is a series of high-level policy choices that will affect McMinnville residents. Public engagement during the project was accomplished through the three primary avenues described below.⁴

Project Advisory Committee Meetings

The City of McMinnville and ECONorthwest solicited public input from an ad-hoc Project Advisory Committee. The Project Advisory Committee met six times⁵ to discuss project assumptions, results, and implications. There was also a joint meeting of the Project Advisory Committee and City Council. The project relied on the Project Advisory Committee to:

- Review work products, advise on public involvement, and consider public input when making recommendations.
- Advise the project team on matters regarding housing needs, market conditions, and the buildable lands inventory in McMinnville.
- Work collaboratively with, and provide guidance to, the staff and consultant project team in the preparation for the McMinnville Housing Needs Analysis.
- Work collaboratively with, and provide guidance to, the staff and consultant project team in the preparation for the McMinnville Housing Strategy. Provide input on goals, strategies, and actions that address McMinnville's housing needs in a way that fits with, and enhances quality of life in, the community.

Public Open House

The City of McMinnville and ECONorthwest solicited input from the general public at a public open house held on February 5, 2019. The open house consisted of eight information stations related to the preliminary results of the housing needs analysis and the buildable lands inventory, as well as two public comment stations. As work proceeds on the evaluation of actions in the housing strategy, there will be additional public engagement.

⁴ In addition to Project Advisory Committee meetings, public meetings, and stakeholder focus groups, the City of McMinnville also maintained a project website and social media presence.

⁵ Project Advisory Committee meeting dates with the consultant team: July 17, 2018; November 14, 2018; December 18, 2018; March 7, 2019; and May 21, 2019.

Project Advisory Committee meeting dates without the consultant team: January 16, 2019 and June 13, 2019.

Stakeholder Focus Group

The City of McMinnville and ECONorthwest solicited feedback at a stakeholder focus group. The purpose of the focus group was to provide an opportunity for small-group discussion and to allow input on key issues. The purpose of the focus group, held on January 25, 2019, was to have a targeted discussion with realtors, developers, and housing providers to learn about what they see as opportunities and constraints associated with housing development in McMinnville for the next 5, 10, 20 and 50 years.

Organization of This Report

The rest of this document is organized as follows:

- **Chapter 2. Residential Buildable Lands Inventory** presents the methodology and results of McMinnville’s inventory of residential land.
- **Chapter 3. Historical and Recent Development Trends** summarizes the state, regional, and local housing market trends affecting McMinnville’s housing market.
- **Chapter 4. Demographic and Other Factors Affecting Residential Development in McMinnville** presents factors that affect housing need in McMinnville, focusing on the key determinants of housing need: age, income, and household composition. This chapter also describes housing affordability in McMinnville relative to the larger region.
- **Chapter 5. Housing Need in McMinnville** presents the forecast for housing growth in McMinnville, describing housing need by density ranges and income levels.
- **Chapter 6. Residential Land Sufficiency within McMinnville** estimates McMinnville’s residential land sufficiency needed to accommodate expected growth over the planning period.
- **Appendix A. Residential Buildable Lands Inventory** provides details on the process and methods for conducting the analysis as well as findings.
- **Appendix B. Scenario Modeling** provides details about the impact of housing mix assumptions. ECONorthwest presented these scenarios to the Project Advisory Committee to inform their housing mix assumption recommendation.

2. Residential Buildable Lands Inventory

This chapter summarizes the residential buildable lands inventory (BLI) for the McMinnville UGB. The buildable lands inventory analysis (BLI) complies with statewide planning Goal 10, ORS 197.296(4), and OAR 660-008. A detailed discussion of methods and additional results is presented in Appendix A.

The BLI has the following main steps: (1) establish the residential land base (parcels or portion of parcels with appropriate zoning); (2) classify parcels by development status; (3) identify and deduct development constraints, including environmental and other constraints; and (4) summarize total buildable area by zone. Buildable lands are properties classified as “vacant” or “partially vacant,” which have at least some development capacity after deducting constrained areas. Those will be assigned capacity for new residential development. Calculations must also be made about how much of that land will be needed for streets and other land uses expected to occur on residential lands, which will reduce the amount available for development. Assumptions are also made about the extent of infill and redevelopment that is expected to occur on other lands.

The BLI is based on data and development status of land in late 2018. Since the planning period for this analysis is 2021–2041, McMinnville used the forecast to estimate acres that will develop between 2018 and 2021, as described in this report. The City could review the BLI in 2021 to determine actual changes in buildable lands between 2018 and 2021.

Categorizing Lands

The buildable lands inventory classifies all residential (and commercial land where housing is a permitted use) into categories.

Development Status

A key step in the buildable lands analysis is to classify each tax lot into a set of mutually exclusive categories based on development status. For the purpose of this study, all residential tax lots in the UGB are classified into one of the following categories:

- *Vacant land.* Tax lots that have no structures or have buildings with very little improvement value are considered vacant. For the purpose of this inventory, lands with improvement values under \$10,000 are considered vacant (not including lands that are identified as having mobile homes), unless aerial imagery or City staff determined that the tax lot is no longer vacant in the verification step.
- *Partially vacant land.* Partially vacant tax lots are those occupied by a use, but which contain enough land to be developed further. Generally, these are lots that have more

than a half-acre of buildable land after removing constraints and developed land from the total acreage.⁶ This was refined through visual inspection of recent aerial photos.

- *Developed land.* Developed land is developed at densities consistent with zoning and has improvements that make it unlikely to redevelop during the analysis period. Lands not classified as vacant or partially vacant are considered developed.
- *Public or exempt land.* Except as noted below, lands in public or semipublic ownership are considered unavailable for development. This includes lands in Federal, State, County, or City ownership. Public lands were identified using the Yamhill County Assessment property tax exemption codes and ownership field. Exempt lands owned by a nonprofit housing developer which are vacant or partially vacant are considered available for development and are inventoried accordingly.

Development Constraints

Consistent with state guidance on buildable lands inventories, ECONorthwest deducted portions of residential tax lots that fall within certain constraints from the vacant and partially vacant lands (e.g., wetlands and steep slopes). We used categories consistent with OAR 660-008-0005(2):

- *Lands within floodplains and floodways.* Flood insurance rate maps from the Federal Emergency Management Agency (FEMA), as well as land in McMinnville's floodplain zone and plan designation, were used to identify lands in floodways and 100-year floodplains.
- *Land within natural resource protection areas.* The National Wetlands Inventory was used to identify areas within wetlands.
- *Land within landslide hazards.⁷* The DOGAMI SLIDO database and landslide susceptibility datasets were used to identify lands with landslide hazards. ECONorthwest included lands with high or very high susceptibility to landslides in the constrained area. The City is proposing a policy interpreting the mapped DOGAMI hazards for purposes of the BLI, which can be reviewed upon further study if necessary.
- *Land with slopes over 25%.* Lands with slopes over 25% are considered unsuitable for residential development.

⁶ Under the safe harbor established in OAR 660-024-0050 (2)(a), the infill potential of developed residential lots of one-half acre or more may be determined by subtracting one-quarter acre (10,890 square feet) for the existing dwelling and assuming that the remainder is buildable land. Cities with populations greater than 25,000, including McMinnville, are not eligible for this safe harbor. However, other cities that ECONorthwest has worked with have successfully justified similar threshold assumptions, and the Public Advisory Committee (PAC) for this project considered this a reasonable method to address infill potential of developed residential lots in McMinnville.

⁷ The City of McMinnville will need to adopt comprehensive plan policies regarding buildable lands assumptions in areas with high and very-high landslide susceptibility. Current comprehensive plan policies addressing this hazard do not exist. Should future studies find that the City can address issues by engineering, the City could add associated acreage back into the BLI.

- *Land with conservation easements.* Lands within conservation easements, as identified by City staff, were included in the constrained area.

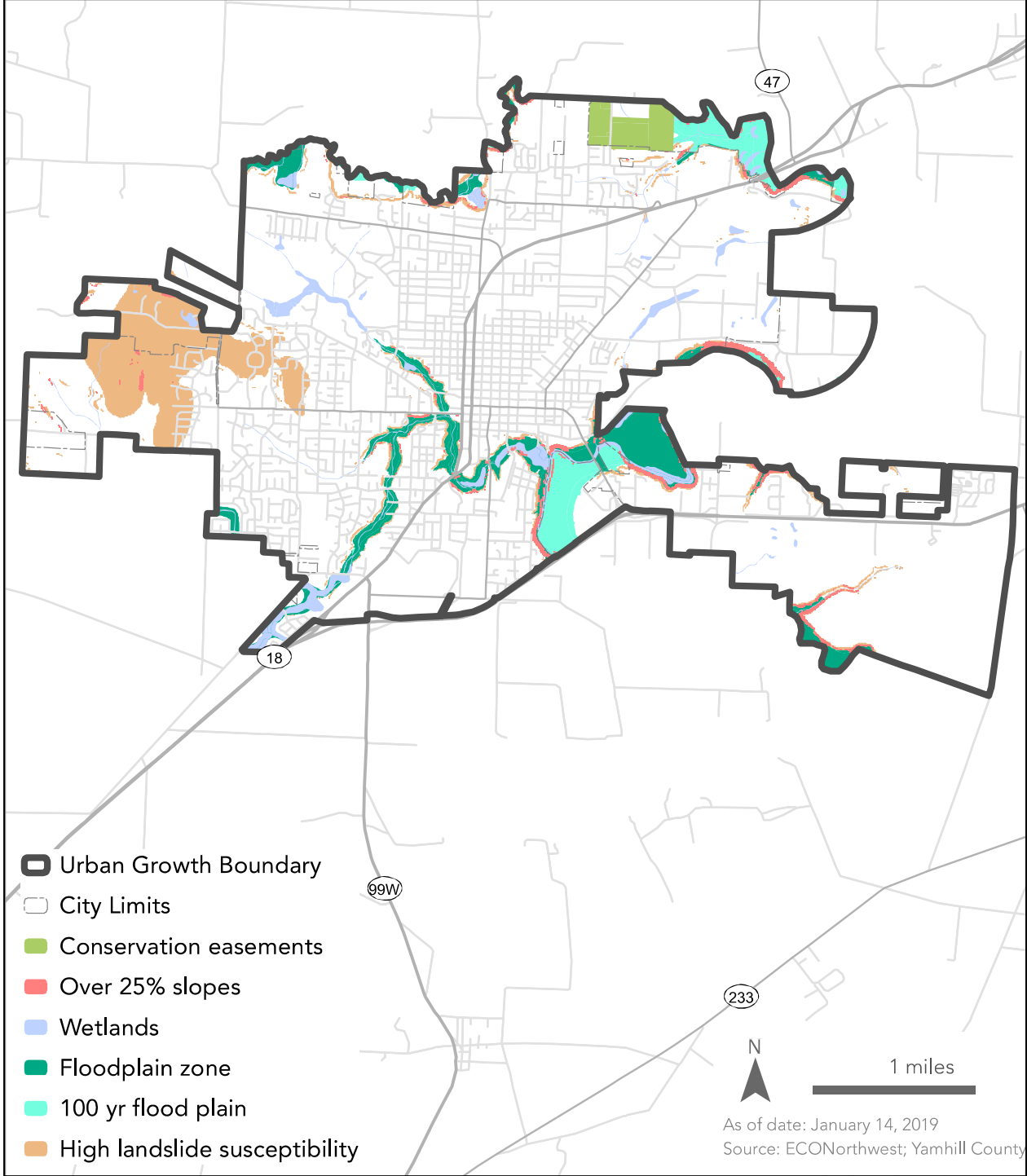
After deducting constraints, vacant and partially vacant lands that have remaining development capacity are classified as buildable lands.

Exhibit 1 maps the development constraints used for the residential BLI.

Exhibit 1. Residential Development Constraints, McMinnville UGB, 2018

McMinnville Buildable Lands Inventory

Residential Constraints



Buildable Lands Inventory Results

Land Base

Exhibit 2 shows the residential land base in McMinnville by plan designation and zone. It also allocates the properties and acreage in the land base between Water Pressure Service Zone 2 and all other areas as described below. The land base is comprised of those properties within the UGB with a zoning or plan designation that permits residential use. This is predominantly properties with a residential plan or zoning designation. It also includes commercial plan designations and zones that also allow residential uses. The land base excludes plan and zone designations that don't allow for residential use, such as industrial zones and the floodplain zone.

The results show that the McMinnville UGB has 4,749 total acres in the residential land base in 9,854 tax lots. This analysis includes commercial zones C-3 and O-R, which allow residential uses, and excludes zones that do not allow residential uses, including industrial zones C-1, C-2, and F-P zones.⁸ Of the total acres in the UGB, about 918 acres (19%) are in the R-1 single-family residential zone, about 1,326 acres (28%) are in the R-2 single-family residential zone, about 386 acres (8%) are in the R-3 two-family residential zone, and about 664 acres (14%) are in the R-4 multifamily residential zone.

ECONorthwest also identified land in the Water Pressure Service Zone 2 contour due to additional considerations for capacity. Properties in Service Zone 2 are in the UGB but will be unable to develop until a water storage tank and associated water infrastructure are built to serve properties in Service Zone 2. The Zone 2 area covers properties within three zoning or plan designations: R-1 and R-2 (within City limits), as well as the residential plan designation (within the unincorporated UGB). Exhibit 2 shows the acreage in tax lots that is either completely within or partially within Zone 2, and the remaining acreage in tax lots not in Zone 2 is defined as Zone 1.⁹ Of the 4,749 acres in the land base, 272 acres (6%) are in Zone 2.

⁸ The F-P zone and plan designation were included in the development constraints. Tax lots partially in the F-P zone and a residential zone were assigned to the adjacent residential zone, and the overlapping floodplain area was calculated in the constraint deductions.

⁹ Some lots that fell within Zone 2 were excluded from Zone 2 acreage based on discussion with City staff. These included lots that were not subject to Zone 2 requirements, such as lots in a platted subdivision (most of those are authorized for development using private booster pumps for water pressure in the interim). Lots partially in Zone 2 were split, and acreages were calculated separately using the Intersect tool in GIS.

Exhibit 2. Land Base: Residential Acres by Classification and Zone, McMinnville UGB, 2018

Source: City of McMinnville, Yamhill Co., ECONorthwest. Note: The numbers in the table may not add up to the total as a result of rounding. Note: all lands in county zones are in the residential plan designation.

Zone/Plan Designation	Number of taxlots	Percent	Total taxlot acreage			Percent (total acreage)
			Zone 1	Zone 2	Total	
City Limits, by Zone						
R-1 Single Family Residential	1,928	20%	857	61	918	19%
R-2 Single Family Residential	4,357	44%	1,248	78	1,326	28%
R-3 Two Family Residential	1,225	12%	386	-	386	8%
R-4 Multiple-Family Residential	1,322	13%	664	-	664	14%
O-R Office/Residential	72	1%	25	-	25	1%
C-3 General Commercial	758	8%	613	-	613	13%
UGB, by County Zone or Plan Des.						
EF-80 (County Zone)	11	0%	117	-	117	2%
LDR9000 (County Zone)	1	0%	3	-	3	0%
VLDR-1 (County Zone)	2	0%	3	-	3	0%
Residential Plan Des.	178	2%	563	133	695	15%
Total	9,854	100%	4,477	272	4,749	100%

Development Status

Properties within the residential land base were classified into the development status categories described above (vacant, partially vacant, developed, public/exempt). The constraints shown in Exhibit 1 were then overlaid and applied to those properties.

Exhibit 3 shows all land in the residential land base by development and constraint status. Of the total residential land base, about 65% of McMinnville’s total residential land (3,100 acres) is committed, 20% (928 acres) is constrained, and 15% (721 acres) is unconstrained buildable acres.

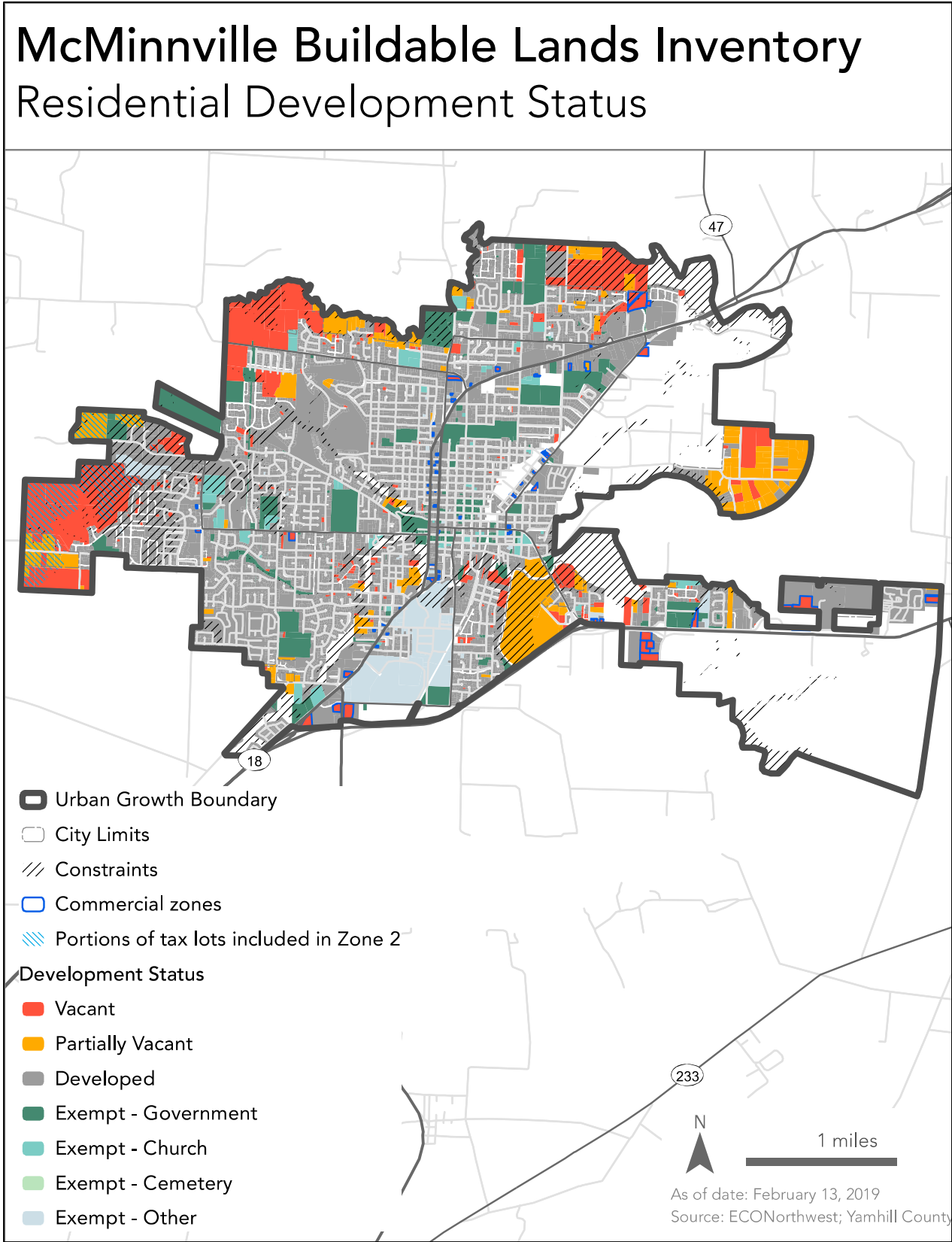
Exhibit 3. Residential Land by Zone and Constraint Status, McMinnville UGB, 2018

Source: City of McMinnville, Yamhill Co., ECONorthwest. Note: The numbers in the table may not add up to the total as a result of rounding.

Zone/Plan Designation	Total acres			Committed acres			Constrained acres			Buildable acres		
	Zone 1	Zone 2	Total	Zone 1	Zone 2	Total	Zone 1	Zone 2	Total	Zone 1	Zone 2	Total
City Limits, by Zone												
R-1 Single Family Residential	857	61	918	595	0	596	153	25	178	109	36	145
R-2 Single Family Residential	1,248	78	1,326	990	-	990	172	33	206	86	45	131
R-3 Two Family Residential	386	-	386	347	-	347	33	-	33	6	-	6
R-4 Multiple-Family Residential	664	-	664	529	-	529	114	-	114	21	-	21
O-R Office/Residential	25	-	25	22	-	22	2	-	2	0	-	0
C-3 General Commercial	613	-	613	535	-	535	17	-	17	61	-	61
UGB, by County Zone or Plan Des.												
EF-80 (County Zone)	117	-	117	18	-	18	31	-	31	68	-	68
LDR9000 (County Zone)	3	-	3	0	-	0	0	-	0	3	-	3
VLDR-1 (County Zone)	3	-	3	1	-	1	0	-	0	2	-	2
Residential Plan Des.	563	133	695	56	8	63	274	73	347	232	52	285
Total	4,477	272	4,749	3,092	8	3,100	796	131	928	588	133	721

Exhibit 4 on the following page shows residential land by development status with constraints overlaid.

Exhibit 4. Residential Land Base by Development Status, McMinnville UGB, 2018



Vacant Buildable Land in 2018

Exhibit 5 shows buildable acres (i.e., acres in tax lots that have capacity after constraints are deducted) for vacant and partially vacant land by zone and plan designation in 2018. Of McMinnville’s 721 unconstrained buildable residential acres, about 61% are in tax lots classified as vacant and 39% are in tax lots classified as partially vacant.

Exhibit 5. Buildable (Gross) Acres in Vacant and Partially Vacant Tax Lots by Zone, McMinnville UGB, 2018

Source: City of McMinnville, Yamhill Co., ECONorthwest. Note: The numbers in the table may not add up to the total as a result of rounding.

Zone/ Plan Designation	Total Buildable acres			Buildable acres on vacant lots			Buildable acres on partially vacant lots		
	Zone 1	Zone 2	Total	Zone 1	Zone 2	Total	Zone 1	Zone 2	Total
City Limits, by Zone									
R-1 Single Family Residential	109	36	145	84	34	118	25	2	27
R-2 Single Family Residential	86	45	131	74	45	119	12	-	12
R-3 Two Family Residential	6	-	6	5	-	5	1	-	1
R-4 Multiple-Family Residential	21	-	21	16	-	16	5	-	5
O-R Office/Residential	0	-	0	0	-	0	0	-	0
C-3 General Commercial	61	-	61	59	-	59	1	-	1
UGB, by County Zone or Plan Des.	0	-	0	0	-	0	0	-	0
EF-80 (County Zone)	68	-	68	63	-	63	5	-	5
LDR9000 (County Zone)	3	-	3	3	-	3	0	-	0
VLDR-1 (County Zone)	2	-	2	0	-	0	2	-	2
Residential Plan Des.	232	52	285	50	6	56	183	47	229
Total	588	133	721	354	85	438	234	48	283

The exhibits on the following pages map McMinnville’s buildable vacant and partially vacant residential land and resulting buildable lands after deducting constraints. Exhibit 6 shows vacant and partially vacant lots with constraints overlaid. Exhibit 7 shows buildable lots—those vacant and partially vacant parcels that have at least some development capacity after deducting constraints. Exhibit 8 shows the unconstrained buildable acres on those buildable parcels.

Exhibit 6. Vacant and Partially Vacant Residential Lots with Constraints Overlaid, McMinnville UGB, 2018

McMinnville Buildable Lands Inventory

Buildable Land by Development Status

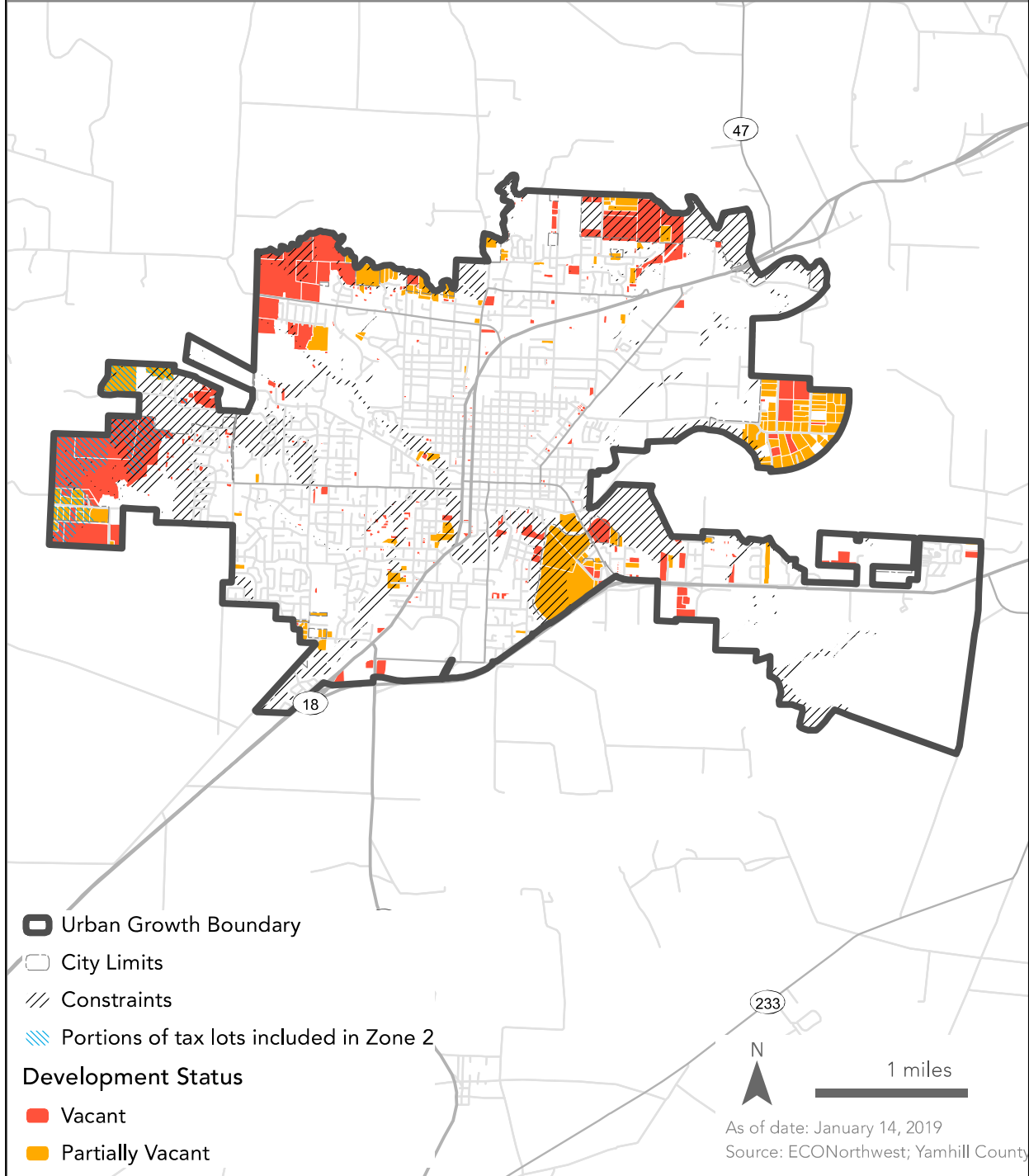


Exhibit 7. Buildable Lots with Development Capacity

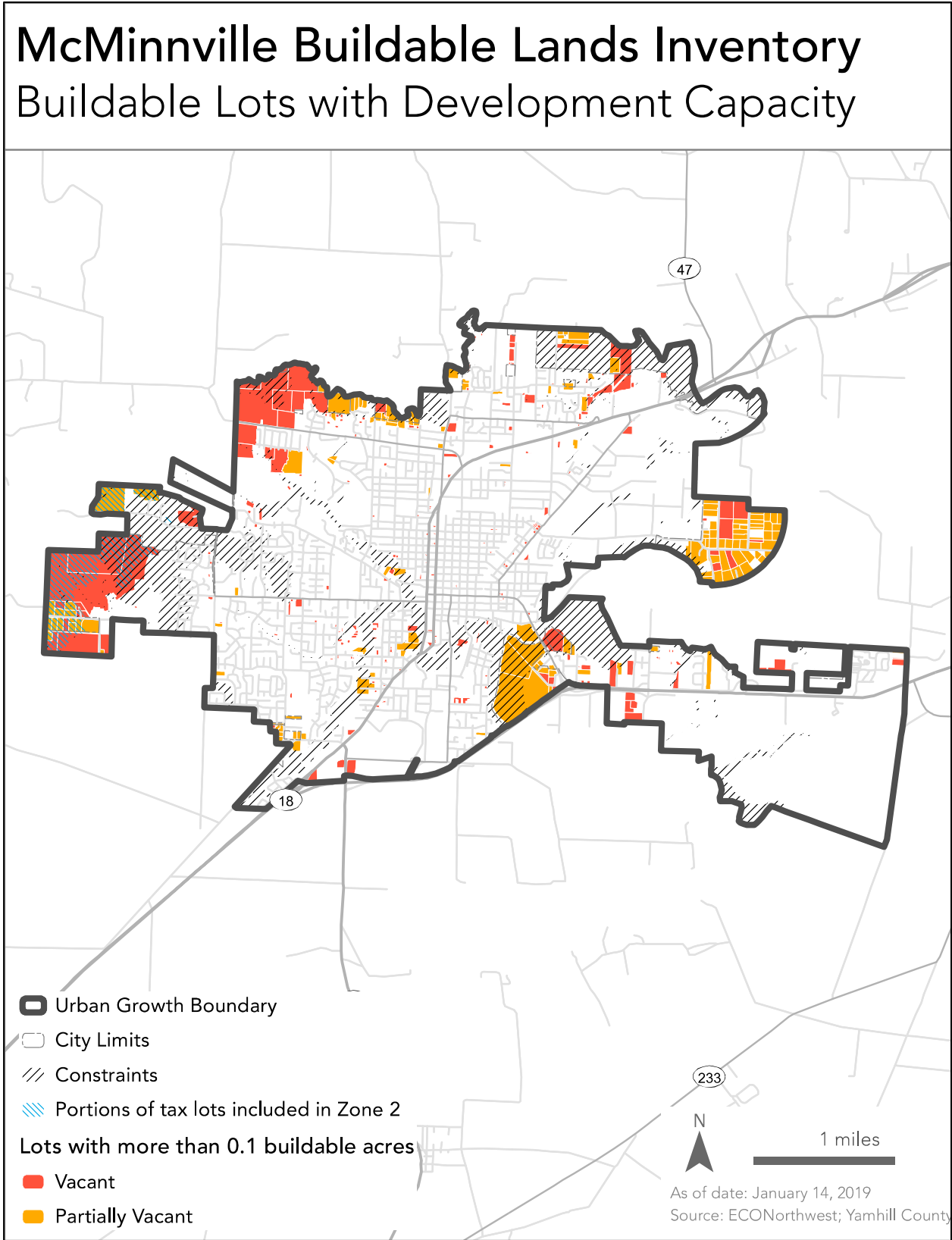
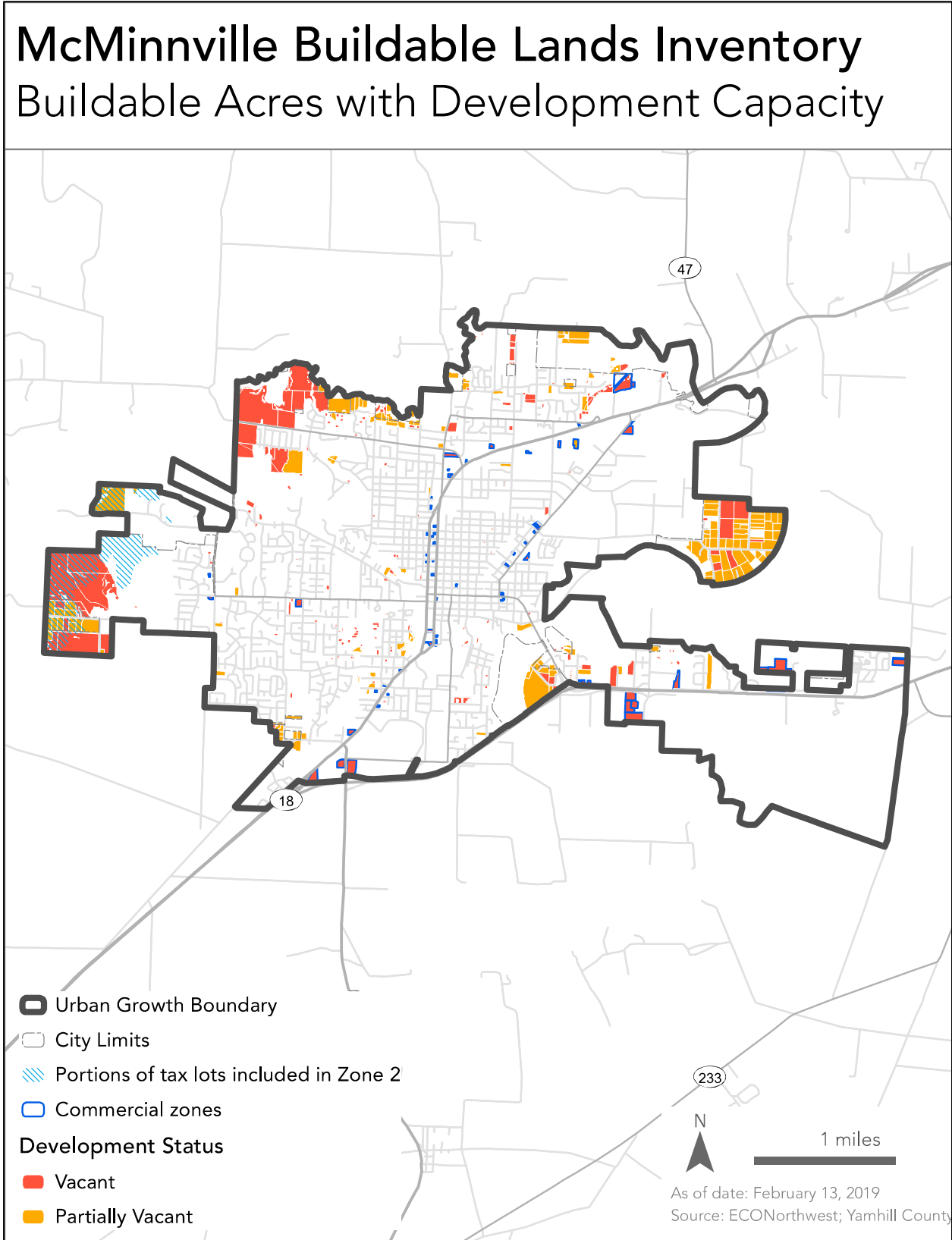


Exhibit 8. Buildable Acres (Unconstrained Portions of Vacant and Partially Vacant Parcels with Development Capacity), McMinnville UGB, 2018



Infill and Redevelopment Potential

ORS 197.296(4) states that buildable lands must include vacant and partially vacant lands, as well as lands that may be used for infill and redevelopment. In other words, can lands that are classified as developed (not classified as vacant or partially vacant) accommodate additional development? For example, a lot developed with a single-family home may be able to accommodate an accessory dwelling unit. Infill and redevelopment reduce the amount of new residential development that must be accommodated on vacant and partially vacant land. The standard is outlined in OAR 660-008-0005(7):

“Redevelopable Land” means land zoned for residential use on which development has already occurred but on which, due to present or expected market forces, there exists the strong likelihood that existing development will be converted to more intensive residential uses during the planning period.

The key phrase here is “there exists the strong likelihood that existing development will be converted to more intensive uses.” The rule provides no guidance on how to operationalize the definition; the remainder of this section describes how it is addressed for this study.

While every property that is classified as vacant or partially vacant and has capacity after deducting constraints is expected to accommodate new development, the calculation is different for infill and redevelopment. The City need only identify the extent of infill and redevelopment likely to occur on lands that are already classified as developed. In other words, while some developed lots may accommodate some additional infill and redevelopment, not every property that could experience infill or redevelopment will do so during the twenty-year planning period.

The City is not required to create a map or document that identifies specific lots or parcels that may be used for infill or redevelopment like it is for vacant and partially vacant properties classified as buildable lands (ORS 197.296(4)(c)).

The Project Advisory Committee considered options for assumptions about the amount of infill and redevelopment that could reasonably be expected to occur on other residential lands that are already considered to be developed. There was general interest in using safe harbors or safe harbor methods and simplified methods when provided in applicable statutes and administrative rules. This recognizes that the safe harbor protections may not be available to the City for some methods while acknowledging that the methods and assumptions are reasonable nonetheless and are based on an analysis that was used to develop those methods and assumptions.

As a reminder, even small parcels with existing development that have been classified as partially vacant are already assumed to have capacity and are not included under the definition of infill.

It is unrealistic to assume that every property classified as developed that could experience even a small amount of infill, redevelopment, or both would do so during the planning period.

For example, if every single-family dwelling could add an accessory dwelling, it would be unreasonable to assume every property owner would add one (e.g., the strong likelihood standard). Therefore, rather than analyze properties to identify which ones would be authorized for infill and redevelopment, the analysis focused on the share of new residential units that reasonably could be expected to be accommodated on lands that are already classified as developed. For redevelopment, an optional check could include an evaluation of the extent of larger sites that have capacity to accommodate increased development and have realistic improvement-to-land-value ratios.

Assumed infill and redevelopment would need to add new units, and the demolition and replacement of one dwelling with another one would not add new residential units.

OAR 660-038 provides a simplified UBG method, which provides formulas that can be used for certain assumptions related to a UGB expansion, including sections that address residential land needs in OAR 660-038-0030. The simplified method can only be used when planning for a UGB for a shorter time period (fourteen years), which the City of McMinnville has chosen not to pursue. However, the analysis that went into developing the formulas in the simplified method provide useful guidance.

- OAR 660-038-0030(6) allows a city to account for the projected redevelopment expected to occur in residentially zoned areas and for mixed-use residential development in commercially zoned areas. For cities with a current UGB population greater than 25,000, the specified range is between 5% and 25%.
 - Five percent of the 4,657 units projected from 2021 to 2041 is 233 units (12 units/year); 25% is 1,164 units (58 units/year). The City of McMinnville has not seen significant redevelopment of existing sites for new housing in the past twenty years.
- OAR 660-038-0030(7) allows a city to account for accessory dwelling units expected to occur. For cities with a current UGB population greater than 25,000, the specified range is between 1% and 3%.
 - One percent of the 4,657 units projected from 2021 to 2041 is 47 units (2 units/year); 3% is 140 units (7 units/year). While McMinnville does not track permits for ADUs differently than for other dwellings, it is estimated that the construction of new ADUs has averaged fewer than two per year.
- These two factors account for infill and redevelopment. There are no other provisions in the simplified method addressing infill other than in the later evaluation of land in areas studied for inclusion in the UGB. Taken together, the range for infill and redevelopment is 6% to 28%
- It is reasonable to assume that some parcels classified as developed (less than one-half acre with a residence) will also have some infill capacity through partitioning rather than ADUs, based on zoning and site development configuration. Therefore, we don't differentiate the type of infill development.

Recommendation on Infill

The Project Advisory Committee's recommended assumption for redevelopment is that 8% of new dwelling units during the planning period will be accommodated on lands classified as "developed" through infill, redevelopment, or both. (Eight percent of the 4,657 units projected from 2021 to 2041 is 373 units [19 units/year].)

Recommendation for Land Needs Before 2021

Since the planning period begins in 2021, there is an interim period during which there will be additional population growth, new housing, and consumption of buildable land. The PSU population forecast shows growth of about 1,480 people between 2018 and 2021, which would equate to about 580 households (and 580 needed occupied dwelling units), using the same household size assumption applied to the planning period. After applying vacancy rate assumptions, McMinnville is forecast to need 612 new dwelling units between 2018 and 2021 (see Exhibit 75). After applying assumptions for infill and redevelopment, McMinnville will need to accommodate 49 dwelling units through infill and redevelopment and 563 new dwelling units on vacant and partially vacant land (see Exhibit 88 and Exhibit 89).

At historic average density of 4.9 dwelling units per gross acre, it is expected that the 563 dwelling units would consume approximately 115 acres of the current buildable lands inventory before 2021. Since that interim population will have occurred prior to the beginning of the planning period (2021), that population is considered an "existing population," which does not need to be added back into forecast population that starts in the 2021 base year. Rather, the 563 dwelling units and the 115 acres, estimated between 2018-2021, are deducted from the 2018 capacity to estimate the remaining capacity in 2021 at the beginning of the planning period (see Chapter 6).

3. Historical and Recent Development Trends

Analysis of historical development trends in McMinnville provides insight into the functioning of the local housing market. Moreover, it is required by ORS 197.296(5)(a). The mix of housing types and densities, in particular, are key variables in forecasting the capacity of residential land to accommodate new housing and to forecast future land need. The specific steps are described in Task 2 of the DLCDC *Planning for Residential Lands Workbook* as:

1. Determine the time period for which the data will be analyzed.
2. Identify types of housing to address (all needed housing types).
3. Evaluate permit/subdivision data to calculate the actual mix, average actual gross density, and average actual net density of all housing types.

ORS 197.296 requires the analysis of housing mix and density to include the past five years or since the most recent periodic review, whichever time period is greater.¹⁰ The City's last periodic review ended in 1999. As a result, this HNA examines changes in McMinnville's housing market from January 2000 to December 2017 for information about housing mix and density. For other information about McMinnville's housing market, we present information for 2000 through 2017 from the US Census and ACS, as that is the most recently available data. We selected this time period both because it complies with ORS 197.296 and because it provides information about McMinnville's housing market before and after the national housing market bubble's growth and deflation, in addition to the more recent increase in housing costs.

This chapter presents information about residential development by housing type. There are multiple ways that housing types can be grouped. For example, they can be grouped by:

1. Structure type (e.g., single-family detached, single-family attached, multifamily, etc.)
2. Tenure (e.g., distinguishing unit type by owner or renter units)
3. Housing affordability (e.g., subsidized housing or units affordable at given income levels)
4. Some combination of these categories

For the purposes of this study, we grouped housing types based on (1) whether the structure is a stand-alone or is attached to another structure, and (2) the number of dwelling units in each structure. The housing types used in this analysis are consistent with needed housing types as defined in ORS 197.303:

¹⁰ Specifically, ORS 197.296(5) (b) states: "A local government shall make the determination described in paragraph (a) of this subsection using a shorter time period than the time period described in paragraph (a) of this subsection if the local government finds that the shorter time period will provide more accurate and reliable data related to housing capacity and need. The shorter time period may not be less than three years."

- **Single-family detached** includes single-family detached units (including multiple single-family detached units on a single parcel), manufactured homes on lots and in mobile home parks, and accessory dwelling units.
- **Single-family attached** is all structures with a common wall where each dwelling unit occupies a separate lot, such as row houses or town houses.
- **Multifamily** is all attached structures (e.g., duplexes, triplexes, quadplexes, and structures with five or more units) other than single-family detached units, manufactured units, or single-family attached units.

In McMinnville, government-assisted housing (ORS 197.303[b]) and housing for farmworkers (ORS 197.303[e]) can be any of the housing types listed above. ORS 197.312 specifies that a city or county may not, by charter, prohibit government-assisted housing or impose additional approval standards on government-assisted housing that are not applied to similar but unassisted housing. It also contains provisions providing for equal zoning treatment of housing for a farmworker and the farmworker's immediate family.

Data Used in This Analysis

Throughout this report, we use data from multiple sources, choosing data from well-recognized and reliable data sources. State statutes do not provide direction about which data sources to use. This report uses the best available sources for housing, population, and household data, which comes from two primary Census sources:

- The **Decennial Census**, which is completed every ten years and is a survey of all households in the United States. The Decennial Census is considered the best available data for information such as demographics (e.g., number of people, age distribution, or ethnic or racial composition), household characteristics (e.g., household size and composition), and housing occupancy characteristics. As of 2010, the Decennial Census does not collect more detailed household information, such as income, housing costs, housing characteristics, and other important household information. Decennial Census data is available for 2000 and 2010.
- The **American Community Survey (ACS)**, which is completed every year and is a sample of households in the United States. From 2012 through 2016 and 2013 through 2017, the ACS sampled an average of 3.5 million households per year, or about 2.6% and 2.9% of the households in the nation, respectively. The ACS collects detailed information about households, including demographics (e.g., number of people, age distribution, ethnic or racial composition, country of origin, language spoken at home, and educational attainment), household characteristics (e.g., household size and composition), housing characteristics (e.g., type of housing unit, year unit built, or number of bedrooms), housing costs (e.g., rent, mortgage, utility, and insurance), housing value, income, and other characteristics.

This report uses data from the 2012–2016 and 2013–2017 ACS for McMinnville.¹¹ In general, we use data from 2012–2016, unless the data informs a housing forecast assumption, in which case we use data from 2013–2017. This chapter, as well as the following chapters, also use data from the 2000 and 2010 Decennial Census. If, for example, the report presents a finding that addresses a period from 2000 to the “2013–2017 period,” then the report is describing a trend that took place from 2000 to 2017 (a 17-year analysis period).

It is worth commenting on the methods used for the American Community Survey.¹² The American Community Survey (ACS) is a national survey that uses continuous measurement methods. It uses a sample of about 3.5 million households to produce annually updated estimates for the same small areas (census tracts and block groups) formerly surveyed via the Decennial Census long-form sample. It is also important to keep in mind that all ACS data are estimates that are subject to sample variability. This variability is referred to as “sampling error” and is expressed as a band, or “margin of error” (MOE), around the estimate.

This report uses Census and ACS data because, despite the inherent methodological limits, they represent the most thorough and accurate data available to assess housing needs. We consider these limitations in making interpretations of the data and have strived not to draw conclusions beyond the quality of the data.

Trends in Housing Mix

This section provides an overview of changes in the mix of housing types, comparing McMinnville to Yamhill County and Oregon. We compare McMinnville to these larger regions to understand how McMinnville fits into the regional housing market. These trends demonstrate the types of housing developed in McMinnville historically.

This section shows the following trends in housing mix in McMinnville:

- **McMinnville’s housing stock is majority single-family detached housing units.** According to 2013–2017 ACS data, 68% of McMinnville’s housing stock was single-family detached, 23% was multifamily, and 9% was single-family attached (e.g., town houses).

Based on ACS data, McMinnville has a proportionally smaller share of single-family housing compared to Yamhill County (79%) and the State (72%). This is typical, as urban areas (i.e., McMinnville) will often have a larger share of multifamily housing than more rural areas of the same jurisdiction (i.e., Yamhill County).

¹¹ ACS data is presented in five-year ranges because “they represent the characteristics of the population and housing over a specific data collection period.” https://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS_Information_Guide.pdf

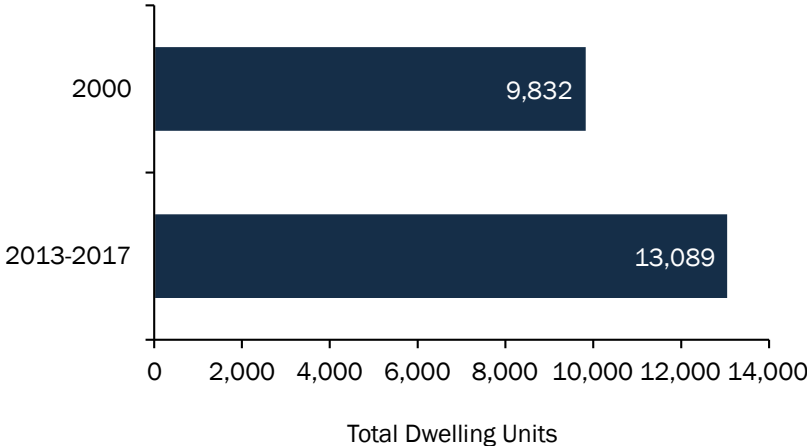
¹² A thorough description of the ACS can be found in the Census Bureau’s publication “What Local Governments Need to Know.” <https://www.census.gov/library/publications/2009/acs/state-and-local.html>

- **McMinnville’s housing mix is not unlike most comparison cities.** Single-family detached housing is the dominant housing type in McMinnville and other comparison cities (Albany, Ashland, Grants Pass, Hood River, Newberg, Redmond, and Sherwood). McMinnville does, however, have a slightly higher share of single-family attached housing than many of these communities, (particularly Albany, Grants Pass, Hood River, and Redmond). McMinnville has a larger share of manufactured housing (about 12%, classified as single-family detached), compared to other comparison cities.
- **McMinnville’s total housing stock grew by about 33% between 2000 and the 2013–2017 period.** McMinnville added 3,257 new dwelling units during this 17-year period.
- **According to McMinnville’s permit database, single-family detached housing accounted for the majority of new housing growth between 2000 and 2017.** Sixty-two percent of new housing permitted between 2000 and 2017 was single-family detached housing.

Housing Mix

The total number of dwelling units in McMinnville increased by 3,257 units from 2000 to 2017 (33% change).

Exhibit 9. Total Dwelling Units, McMinnville, 2000 and 2013–2017
Source: US Census Bureau, 2000 Decennial Census, SF3 Table and 2013–2017 ACS Table B25024.

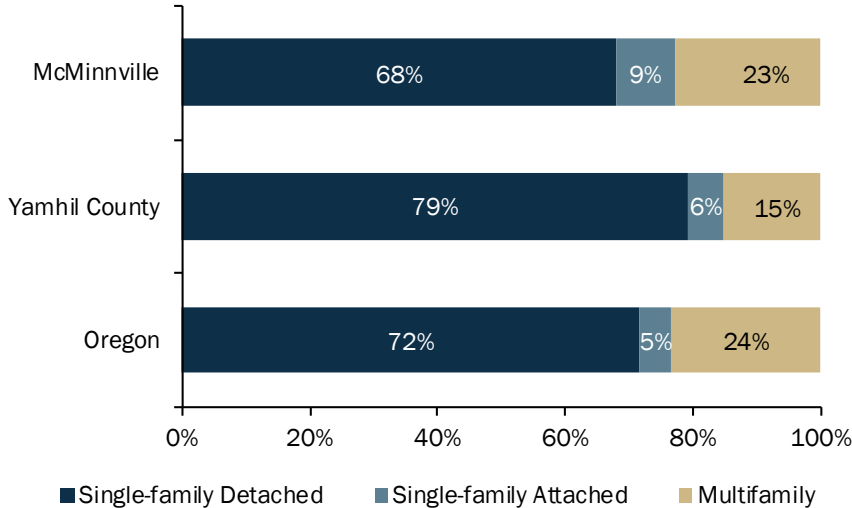


About two-thirds of McMinnville’s total housing stock is single-family detached.

Typical of urban areas, McMinnville has a larger share of multifamily housing than Yamhill County, which is comprised of both urban (including McMinnville) and rural areas.

Exhibit 10. Housing Mix, 2013–2017

Source: US Census Bureau, 2013–2017 ACS Table B25024.

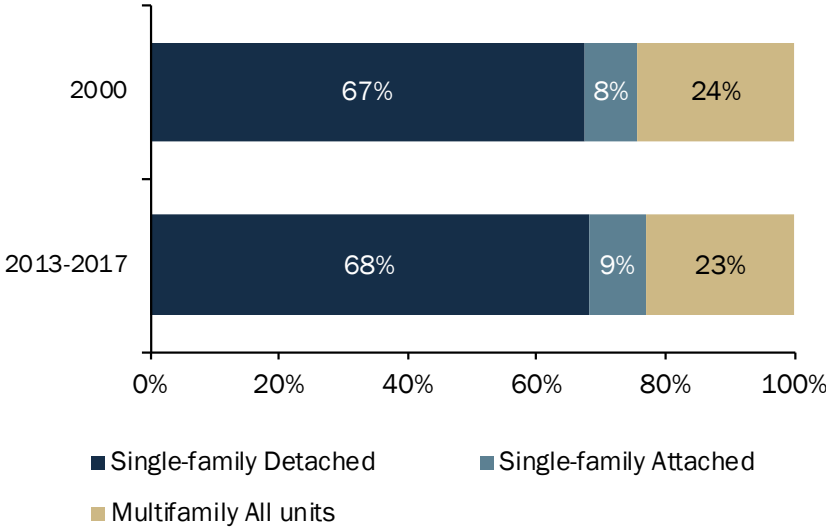


The mix of housing in McMinnville stayed relatively static from 2000 to 2017.

McMinnville had 13,089 dwelling units in 2017. About 8,902 were single-family detached, 1,180 were single-family attached, and 3,007 were multifamily.

Exhibit 11. Change in Housing Mix, McMinnville, 2000 and 2013–2017

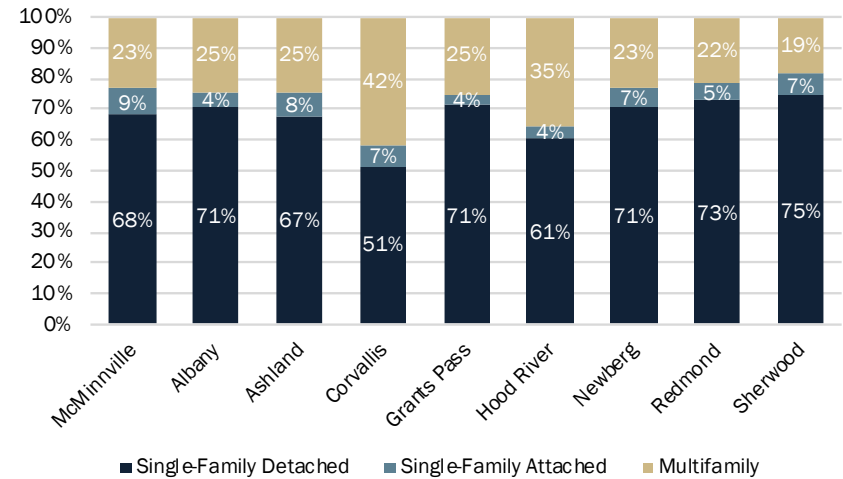
Source: US Census Bureau, 2000 Decennial Census, SF3 Table H030, and 2013–2017 ACS Table B25024.



McMinnville has a larger share of single-family attached housing than other comparison cities.

Exhibit 12. Housing Mix, McMinnville and Comparison Cities, 2013–2017

Source: US Census Bureau, 2013–2017 ACS, Table B25024. Note: Comparison cities selected by the City of McMinnville.

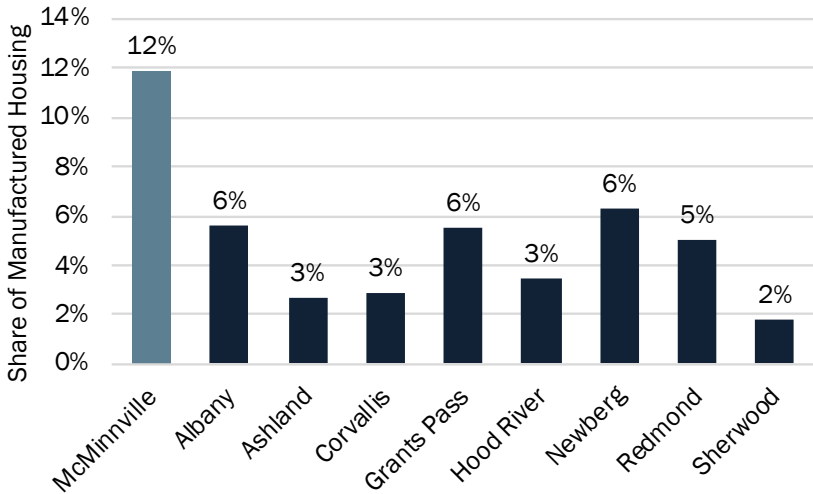


About 12% of McMinnville’s housing stock is manufactured housing.

McMinnville has a larger share of manufactured housing stock than all other comparisons cities.

Exhibit 13. Manufactured Housing, Share of Total Housing Stock, McMinnville and Comparison Cities, 2013–2017

Source: US Census Bureau, 2013–2017 ACS, Table B25024. Note: Manufactured housing is a form of single-family detached housing.



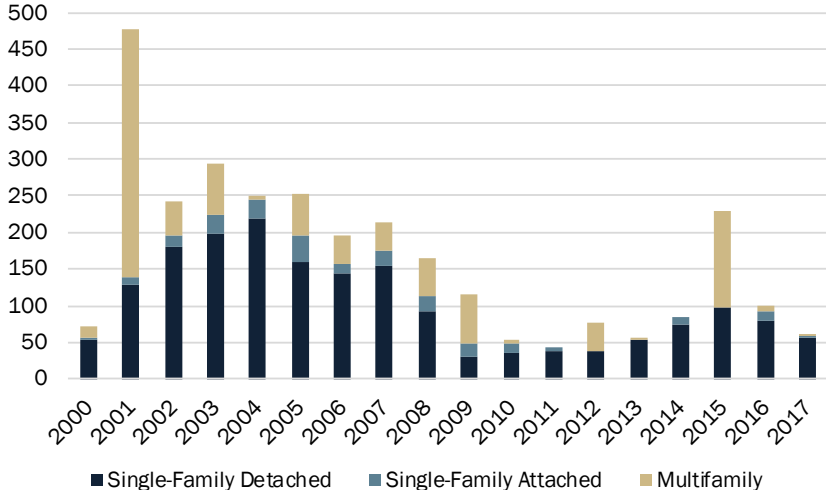
Building Permits

Over the 2000 to 2017 period, McMinnville issued permits for 3,038 dwelling units, with an average of 179 permits issued annually.

Since 2000, McMinnville issued 69% of permits for single-family dwelling units (62% single-family detached and 8% single-family attached). McMinnville issued 31% of permits for multifamily dwelling units.

Exhibit 14. Building Permits Issued for New Residential Construction by Type of Unit, McMinnville, 2000 through 2017

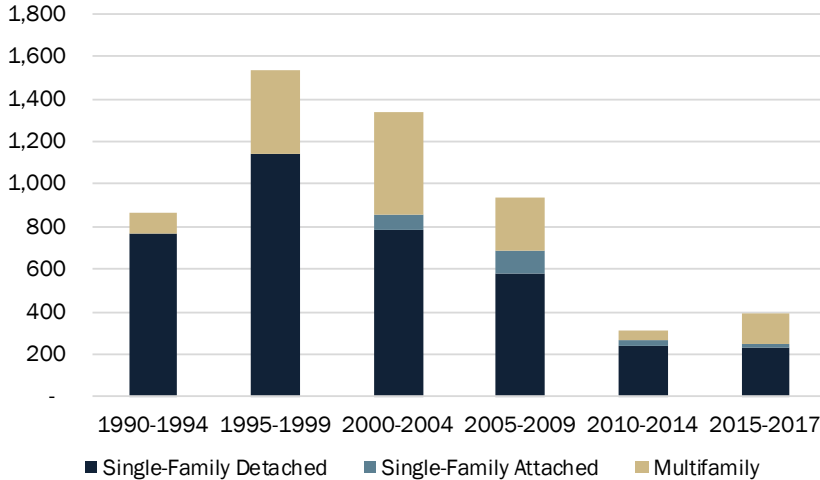
Source: City of McMinnville. Note: This chart shows a ~200 unit discrepancy from ACS data presented in Exhibit 9. That said, there is a margin of error associated with ACS data.



McMinnville permitted substantially fewer units in the current decade (2010–17) than previous decades.

Exhibit 15. Share of Building Permits Issued for New Residential Construction by Type of Unit, McMinnville, 1990–1994, 1995–1999, 2000–2004, 2005–2009, 2010–2014, and 2015–2017

Source: City of McMinnville. Note: DU is dwelling unit.



Housing Density

Housing density is the density of housing by structure type, expressed in dwelling units per net or gross acre.¹³ The US Census does not track residential development density, thus this study analyzes housing density based on McMinnville’s permit database for development between 2000 and July 2018.

Through analysis of McMinnville’s building permit data, between 2000 and July of 2018, 3,038 new dwelling units were developed in McMinnville. Of the 3,038 new units:

- 1,877 units were single-family detached (62%),
- 228 units were single-family attached (8%), and
- 933 units were multifamily (31%).

Exhibit 16 shows average net residential development by structure type for the historical analysis period (2000 to July of 2018). In this time, housing in McMinnville developed at an average density of 6.6 dwelling units per net acre. Single-family detached housing developed at an average of 4.8 units per net acre. Single-family attached housing developed at an average of 12.3 units per net acre. Multifamily housing developed at an average of 18.2 units per net acre (of which duplexes developed at an average of 7.0 units per net acre and all other multifamily units developed at 19.7 units per net acre).

Exhibit 16. Net Density by Unit Type and Zone, McMinnville, 2000 through July 2018

Source: City of McMinnville Building Permit Database.

Plan Designation and Zone	Single-Family Detached			Single-Family Attached			Multi-Family			TOTAL		
	Units	Acres	Net Density	Units	Acres	Net Density	Units	Acres	Net Density	Units	Acres	Net Density
Commercial Sub-Total	-	-	-	-	-	-	309	9.9	31.2	309	9.9	31.2
C-3	-	-	-	-	-	-	309	9.9	31.2	309	9.9	31.2
Residential Sub-Total	1,877	393.8	4.8	228	18.5	12.3	624	41.3	16.5	2,729	453.5	6.0
O-R	-	-	-	-	-	-	57	7.5	7.6	57	7.5	7.6
R-1	393	98.9	4.0	27	2.9	9.5	2	0.2	-	422	102.0	4.1
R-2	880	184.8	4.8	102	8.3	12.3	213	14.5	18.6	1,195	207.6	5.8
R-3	100	17.0	5.9	44	4.2	10.6	6	0.9	-	150	22.0	6.8
R-4	504	93.1	5.4	55	3.1	17.6	346	18.2	19.1	905	114.4	7.9
Total	1,877	393.8	4.8	228	18.5	12.3	933	51.2	18.2	3,038	463.4	6.6

¹³ OAR 660-024-0010(6) defines net buildable acre as land that “consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads.” While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

Trends in Tenure

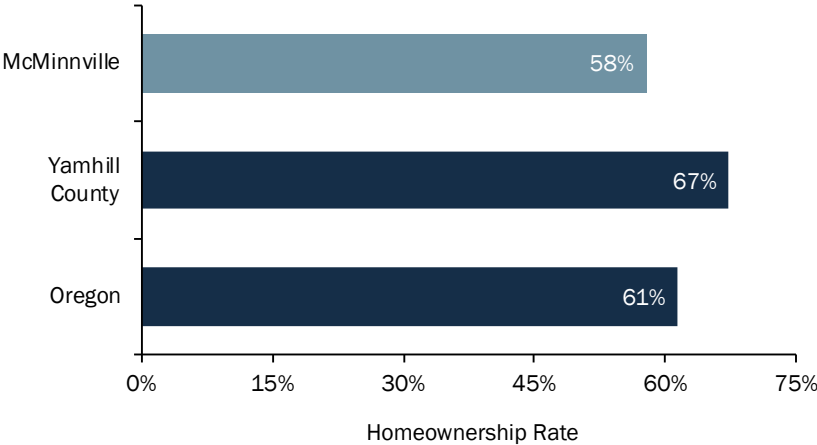
Housing tenure describes whether a dwelling is owner- or renter-occupied. The data shows:

- **About 58% of McMinnville households were homeowners in 2012–2016.** In comparison, 67% of Yamhill County households and 61% of Oregon households were homeowners.
- **Homeownership in McMinnville stayed relatively stable between 2000 and 2012–2016.** In 2000, 60% of McMinnville households were homeowners. In 2010 and 2012–2016, 58% of households were homeowners.
- **Nearly all McMinnville homeowners (95%) lived in single-family detached housing, while many renters (58%) lived in multifamily housing.** (2012–16 ACS data)

McMinnville’s homeownership rate is lower than that of the County and State.

Exhibit 17. Homeownership for Occupied Units, McMinnville, Yamhill County, and Oregon 2012–2016

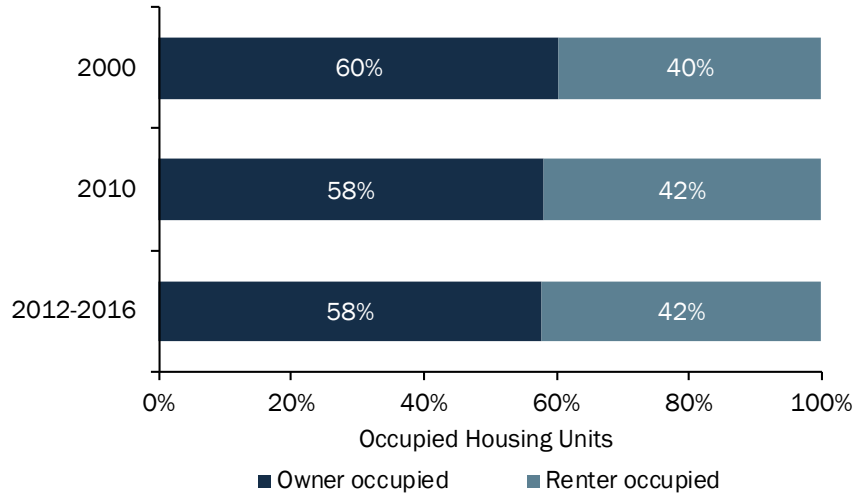
Source: US Census Bureau, 2012–2016 ACS Table B24003.



McMinnville's homeownership rate has remained steady since 2000 at about 60%.

Exhibit 18. Tenure, Occupied Units, McMinnville 2012–2016

Source: US Census Bureau, 2000 Decennial Census SF1 Table H004, 2010 Decennial Census SF1 Table H4, 2012–16 ACS Table B24003.

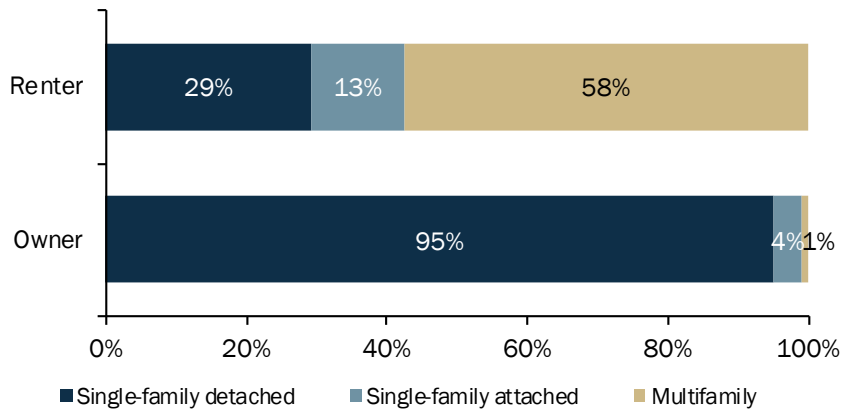


Nearly all homeowners and about a third of all renters lived in single-family detached housing.

Fifty-eight percent of McMinnville's households that rented lived in multifamily housing.

Exhibit 19. Housing Units by Type and Tenure, McMinnville, 2012–2016

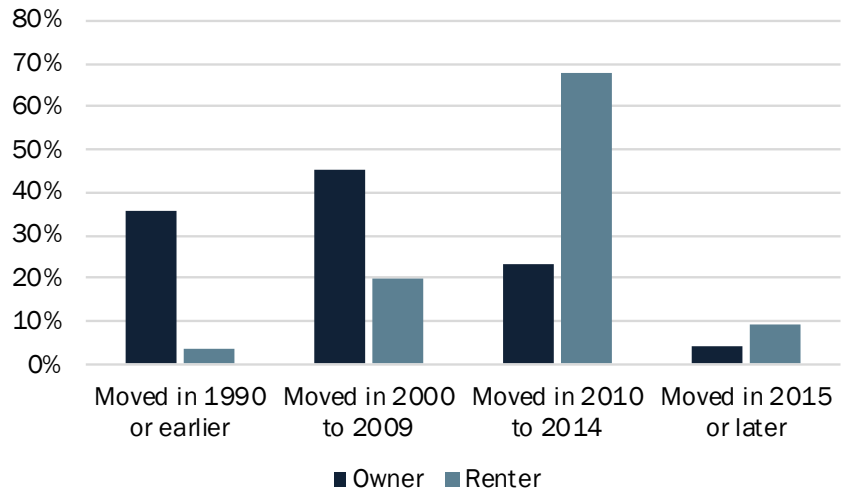
Source: US Census Bureau, 2012–2016 ACS Table B25032.



Twenty-eight percent of homeowners moved in 2010 or after, compared to 77% of renters that moved in 2010 or after.

Exhibit 20. Tenure by Year Householder Moved, McMinnville, 2012–2016

Source: US Census Bureau, 2012–2016 ACS Table B25026.



Vacancy Rates

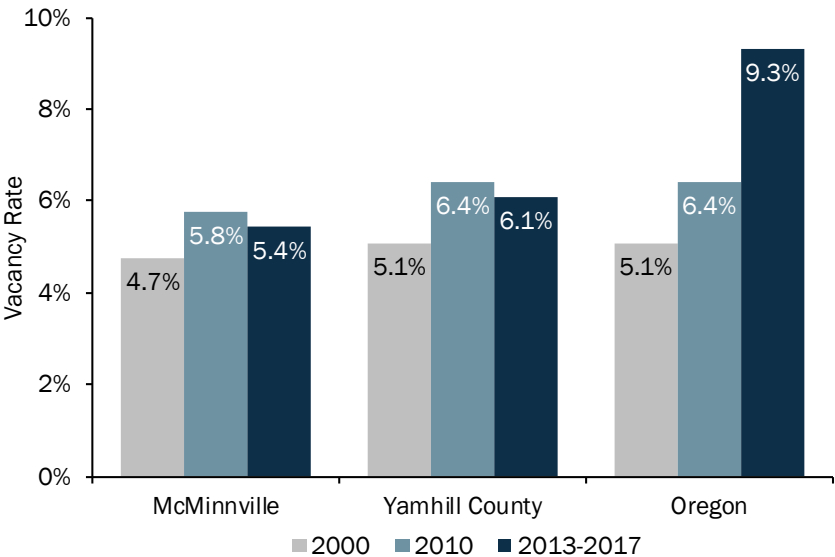
Housing vacancy is a measure of housing that is available to prospective renters and buyers. It is also a measure of unutilized housing stock. The Census defines vacancy as "unoccupied housing units . . . determined by the terms under which the unit may be occupied, e.g., for rent, for sale, or for seasonal use only." The 2010 Census identified vacancy through an enumeration, separate from (but related to) the survey of households. The Census determines vacancy status and other characteristics of vacant units by enumerators obtaining information from property owners and managers, neighbors, rental agents, and others.

The vacancy rate in McMinnville was 5.4% in 2013–2017, up from 4.7% in 2000.

As of 2017, McMinnville's vacancy rate was below that of Yamhill County (6.1%) and Oregon (9.3%).

Exhibit 21. Percent of Housing Units that are Vacant, McMinnville, Yamhill County, and Oregon, 2000, 2010, 2013–2017

Source: Census Bureau, 2000 Decennial Census SF1 Table QT-H1, 2010 Decennial Census SF1 Table QT-H1, 2013-2017 ACS Table B25002.



Short-Term Rentals and Seasonal Housing

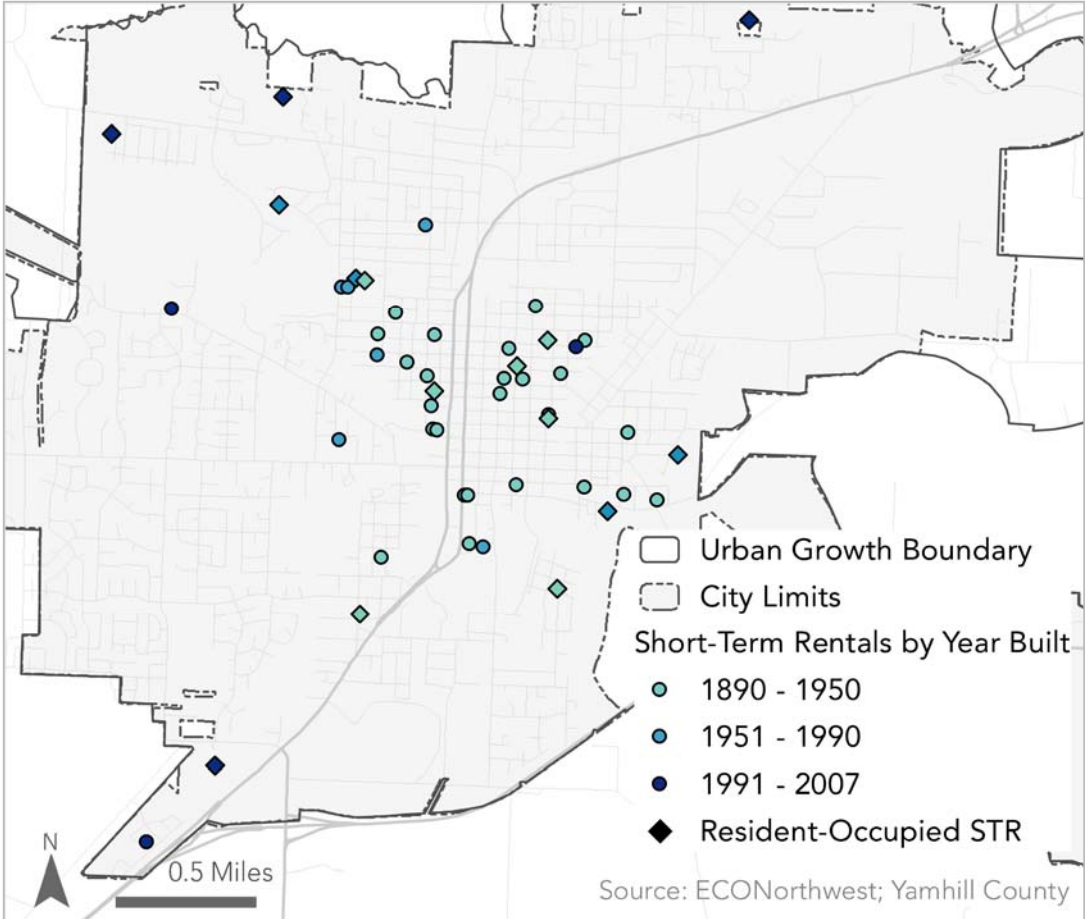
McMinnville defines a short-term rental as “the use of an entire dwelling unit by any person or group of persons entitled to occupy for rent for a period of no more than 30 (thirty) consecutive days. Short term rentals include vacation home rentals approved under the regulations in effect through May 10, 2018 (Ord. 5047 §2, 2018).

McMinnville defines a resident-occupied short-term rental as “the use of no more than two guest sleeping rooms by any person or group of persons entitled to occupy for rent for a period of no more than 30 (thirty) consecutive days. The dwelling unit is occupied by a full-time resident at the time that the guest sleeping rooms within the dwelling unit are available for overnight rental. Resident occupied short-term rentals include bed-and-breakfast establishments approved under the regulations in effect through May 10, 2018 (Ord. 5047 §2, 2018).

McMinnville has about 53 short-term rentals, of which 15 rentals are occupied by a resident. Of these rentals, 60% are located in units built in 1950 or earlier, 19% in units built between 1951 and 1990, 13% in units built in 1991 or later, and 8% are unknown.

Exhibit 22. Short-Term Rentals, McMinnville, 2018 Point-in-Time

Source: City of McMinnville short-term rental database. Note: Short-term rentals include resident-occupied short-term rentals and nonresident-occupied short-term rentals.

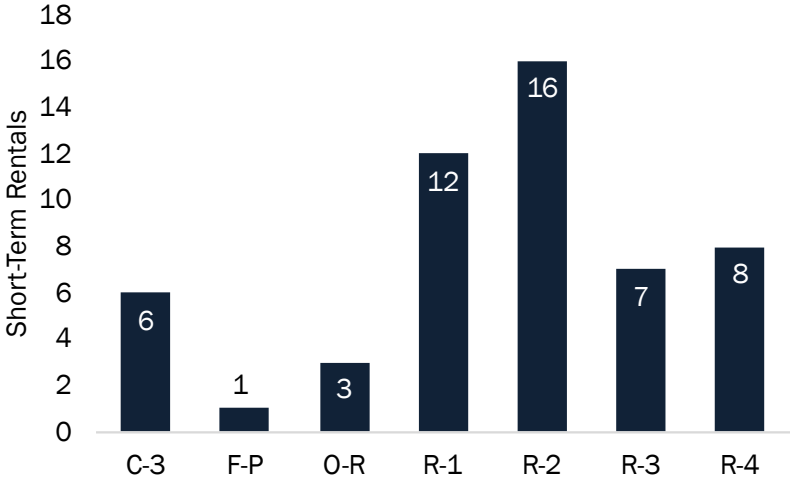


About 87% of McMinnville’s short-term rentals are located in a residential zone (O-R, R-1, R-2, R-3, and R-4).

Another 11% of short-term rentals are located in a commercial zone (C-3), and the remaining 2% of short-term rentals are located in a floodplain (F-P).

Exhibit 23. Short-Term Rental by Zone Classification, McMinnville, 2018 Point-in-Time

Source: City of McMinnville short-term rental database. Note: Short-term rentals include resident-occupied short-term rentals and nonresident-occupied short-term rentals.



McMinnville has more vacant units categorized as “seasonal, recreational, or occasional use” than it did in 2000.

However, a smaller share of McMinnville’s vacant units is for seasonal, recreational, or occasional use (9% in 2000, 7% in 2010, and 5% in 2016).

Exhibit 24. Vacancy of Seasonal, Recreational, or Occasional-Use Housing, McMinnville, 2000 to 2012–2016

Source: US Census Bureau, 2000 Decennial Census SF1 Table H005, 2010 Decennial Census SF1 Table H5, 2012–16 ACS Table B25004. Note: This data is not directly associated with the City of McMinnville’s short-term rental data.

23 Units 2000	52 Units 2010	74 units 2012–2016	222% Change from 2000 to 2012– 2016
-------------------------	-------------------------	------------------------------	---

Government-Assisted Housing Projects

Governmental agencies and nonprofit organizations offer a range of housing assistance to low- and moderate-income households in renting or purchasing a home. There are sixteen government-assisted housing developments in McMinnville:

McMinnville has a total of 16 government-assisted housing developments, totaling 558 units.

Exhibit 25. Inventory of Government-Assisted Housing Projects, McMinnville, 2018

Source: Oregon Department of Housing and Community Services, Affordable Housing Inventory, 2018. Note: The Project Advisory Committee vetted OHCS's inventory and modified the listings to accurately reflect government-assisted housing in McMinnville.

Development Name	Total Units	Population Served
Bridges	6	Low-income residents
Fresa Park B	6	Agricultural workers
Hendricks Place	8	Special Needs
Heritage Place	60	Seniors
Homeport	12	Special Needs
Jandina Park	36	Family
Orchards Plaza	60	(5) Family and (55) Seniors
Redwood Commons	64	Family
Sunflower Park	33	(27) Family (6) Transitional
Sunnyside Apts	15	Special Needs
Tice Park	88	Family
Villa Del Sol	24	(12) Family and (12) Agricultural workers
Villa West	48	Family
Village Quarter	50	Senior
Willamette Place I	24	Seniors or Special Needs of Any Age
Willamette Place II	24	Seniors or Special Needs of Any Age
Total	558	

In addition, the Housing Authority of Yamhill County (HAYC) administers 1,423 Housing Choice Vouchers (countywide). A small share of these vouchers serves specific populations, such as homeless veterans and their families with VASH vouchers and nonelderly persons with disabilities with Mainstream Vouchers. Due to the shortage of affordable rental housing in Yamhill County, HAYC has a 58% utilization rate for persons-issued vouchers (as of December 2018).¹⁴

¹⁴ When households qualify to receive a Housing Choice Voucher, they must first find housing that meets their income and housing cost requirements. Many households in McMinnville are unable to find rental housing that meets those requirements and must forego their Housing Choice Voucher, despite being eligible. Forty-two percent of Housing Choice Vouchers are currently unused for this reason.

Manufactured Homes

Cities are required to plan for manufactured homes—both on individual lots and in parks (ORS 197.475-492). Manufactured homes typically provide a source of affordable housing in cities. They provide a form of homeownership and rental units that can be made available to households making less than the median income in cities.

Generally, manufactured homes in parks are owned by the occupants who pay rent for the space on which the unit is located. Living in a manufactured housing park is desirable to some because it can provide a sense of security (with an on-site manager), community, and amenities (such as laundry and recreation facilities). Monthly housing costs are typically lower for a homeowner in a manufactured home park for several reasons. For instance, manufactured homes have lower base prices, as they cost less to produce. Due to the durability of a manufactured home, the value of a manufactured home generally does not appreciate in the way a conventional home would. Manufactured homeowners in parks are also subject to the mercy of the property owner in terms of rent rates and increases. It is generally not within the means of a manufactured homeowner to relocate to another manufactured home to escape rent increases.

ORS 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial or high-density residential development. Exhibit 26 presents the Oregon Department of Housing and Community Services (OHCS) inventory of mobile and manufactured home parks within McMinnville as of 2018.

McMinnville has 12 manufactured home parks within the UGB, with a total of 1,014 spaces.

Exhibit 26. Inventory of Mobile/Manufactured Home Parks, McMinnville UGB, 2018

Source: Oregon Manufactured Dwelling Park Directory (tabular) and Interactive Map and Statewide Park Directory. Note 1: The tabular directory only identified four parks (Flamingo Mobile Homes, Squires Estates, Squires Mobile West Estates, and Walnut City Lodges). Note 2: This inventory excludes “mobile home subdivisions” where all lots are occupied by manufactured homes, but each manufactured home is on a separate lot.

Name	Location	Type	Total Spaces	Vacant Spaces	Zone or Plan Designation
Flamingo Mobile Home Park	1338 E Quincy	55+	24	0	R-4
Squires Estates	1557 N Pacific Hwy	Family	103	0	R-3
Squires Mobile West Estates	1011 N 9th St	Family	102	2	R-3
Walnut City Lodges	745 SW Baker St	Family	32	2	O-R
Kathleen Manor Manufactured Home Community	1200 Hill Rd	Family	224	n/a	R-3
Heidi Manor Manufactured Home Community	1145 SW Cypress St	Family	116	n/a	R-3
Southwest Terrace LLC	1501 SW Baker St	55+	76	n/a	C-3
Victor Manor/Horizon Homeowners Cooperative	900 SE Booth Bend Rd	Family	32	n/a	C-3
McMinnville Manor	1602 NE Riverside Dr	55+	95	n/a	R-4
Riverside Mobile Terrace	2170 NE Riverside Dr	Family	82	n/a	R-4
Evergreen Mobile Home Park	2400 SE Stratus Ave	Family	20	n/a	R-4
Olde Stone Village	4155 NE Three Mile Ln	Family	108	n/a	R-4
Total			1,014	4	

4. Demographic and Other Factors Affecting Residential Development in McMinnville

Demographic trends are important for developing a thorough understanding of the dynamics of the McMinnville housing market and projecting McMinnville's future housing needs. McMinnville exists in a regional economy, where trends in the region impact the local housing market. This chapter documents demographic, socioeconomic, and other trends relevant to McMinnville at the national, state, and regional levels.

Demographic trends provide a context for growth in a region; factors such as age, income, migration, and other trends show how communities have grown and how they will shape future growth. To provide context, we compare McMinnville to Yamhill County and, where appropriate, to nearby cities with comparable populations and community attributes (Monmouth, Independence, Dallas, and Newberg). Characteristics such as age and ethnicity are indicators of how the population has grown in the past and provide insight into factors that may affect future growth.

A recommended approach to conducting a housing needs analysis is described in *Planning for Residential Growth: A Workbook for Oregon's Urban Areas*, the Department of Land Conservation and Development's guidebook on local housing needs studies. As described in the workbook, the specific steps in the housing needs analysis are:

1. Project the number of new housing units needed in the next twenty years.
2. Identify relevant national, state, and local demographic and economic trends and factors that may affect the twenty-year projection of structure type mix.
3. Describe the demographic characteristics of the population and, if possible, the housing trends that relate to demand for different types of housing.
4. Determine the types of housing that are likely to be affordable to the projected households based on household income.
5. Determine the needed housing mix and density ranges for each plan designation and the average needed net density for all structure types.
6. Estimate the number of additional needed units by structure type.

This chapter presents data to address steps 2, 3, and 4. Chapter 5 presents data to address steps 1, 5, and 6.

Demographic and Socioeconomic Factors Affecting Housing Choice¹⁵

Analysts typically describe housing demand as the preferences for different types of housing (i.e., single-family detached, single-family attached, or multifamily), and the ability to pay for that housing (the ability to exercise those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

Many demographic and socioeconomic variables affect housing choice. However, the literature about housing markets finds that age of the householder, size of the household, and income are most strongly correlated with housing choice.

- **Age of householder** is the age of the person identified (in the Census) as the head of household. Households make different housing choices at different stages of life. This chapter discusses generational trends, such as housing preferences of seniors (particularly Baby Boomers or people born from about 1946 to 1964), and Millennials, people born from about 1980 to 2000.
- **Size of household** is the number of people living in the household. Younger and older people are more likely to live in single-person households. People in their middle years are more likely to live in multi-person households (often with children).
- **Income** is household income. Research suggests that income is the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., a single-family detached, a duplex, or a building with more than five units) and to household tenure (e.g., rent or own).

This chapter focuses on these key demographic factors, presenting data that suggests how changes to these factors may affect housing need in McMinnville over the next twenty years.

¹⁵ The research in this chapter is based on numerous articles and sources of information about housing, including:

D. Myers and S. Ryu, "Aging Baby Boomers and the Generational Housing Bubble," *Journal of the American Planning Association*, Winter 2008.

Davis, Hibbits & Midghal Research, "Metro Residential Preference Survey," May 2014.

L. Lachman and D. Brett, *Generation Y: America's New Housing Wave*, Urban Land Institute, 2010.

G. Galster, "People Versus Place, People and Place, or More? New Directions for Housing Policy," *Housing Policy Debate*, 2017.

C. Herbert and H. Molinsky, "Meeting the Housing Needs of an Aging Population," 2015.

J. McIlwain, *Housing in America: The New Decade*, Urban Land Institute, 2010.

J. Schuetz, "Who Is the New Face of American Homeownership?," Brookings, 2017.

American Planning Association, "Investing in Place; Two Generations' View on the Future of Communities," 2014.

Transportation for America, "Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows," 2014.

National Trends¹⁶

This brief summary on national housing trends builds on previous work by ECONorthwest, Urban Land Institute (ULI) reports, and conclusions from the *State of the Nation's Housing, 2018* report from the Joint Center for Housing Studies of Harvard University. The Harvard report summarizes the national housing outlook as follows:

“By many metrics, the housing market is on sound footing. With the economy near full employment, household incomes are increasing and boosting housing demand. On the supply side, a decade of historically low single-family construction has left room for expansion of this important sector of the economy. Although multifamily construction appears to be slowing, vacancy rates are still low enough to support additional rentals. In fact, to the extent that growth in supply outpaces demand, a slowdown in rent growth should help to ease affordability concerns.”

However, challenges to a strong domestic housing market remain. High mortgage rates make housing unaffordable for many Americans, especially younger Americans. In addition to rising housing costs, wages have also failed to keep pace, worsening affordability pressures. Single-family and multifamily housing supplies remain tight, which compound affordability issues. The *State of the Nation's Housing, 2018* report emphasizes the importance of government assistance and intervention to keep housing affordable moving forward. Several challenges and trends shaping the national housing market are summarized below:

- **Moderate new construction and tight housing supply, particularly for affordable housing.** New construction experienced its eighth year of gains in 2017 with 1.2 million units added to the national stock. Estimates for multifamily starts range between 350,000 to 400,000 (2017). The supply of for-sale homes in 2017 averaged 3.9 months below what is considered balanced (six months), and lower-cost homes are considered especially scarce. The *State of the Nation's Housing, 2018* report cites lack of skilled labor, higher building costs, scarce developable land, and the cost of local zoning and regulation as impediments to new construction.
- **Demand shift from renting to owning.** After years of decline, the national homeownership rate increased from a fifty-year low of 62.9% in the second quarter of 2016 to 63.7% in the second quarter of 2017. Trends suggest homeownership among householders aged 65 and older have remained strong and homeownership rates among young adults have begun stabilizing after years of decline.
- **Housing affordability.** In 2016, almost one-third of American households spent more than 30% of their income on housing. This figure is down from the prior year, bolstered by a considerable drop in the owner share of cost-burdened households. Low-income households face an especially dire hurdle to afford housing. As resources become increasingly competitive, and with such a large share of households exceeding the

¹⁶ These trends are based on information from (1) the *State of the Nation's Housing, 2018* report from the Joint Center for Housing Studies of Harvard University, (2) the Urban Land Institute's "2018 Emerging Trends in Real Estate," and (3) the US Census.

traditional standards for affordability, policymakers are focusing efforts on the severely cost burdened. Among those earning less than \$15,000, more than 70% of households paid more than half of their income on housing.

- **Long-term growth and housing demand.** The Joint Center for Housing Studies forecasts that demand for new homes nationally could total as many as 12 million units between 2017 and 2027. Much of the demand will come from Baby Boomers, Millennials,¹⁷ and immigrants. The Urban Land Institute cites the trouble of overbuilding in the luxury sector while demand is in mid-priced single-family houses affordable to a larger buyer pool.
- **Growth in rehabilitation market.**¹⁸ Aging housing stock and poor housing conditions are growing concerns for jurisdictions across the United States. With almost 80% of the nation's housing stock at least 20 years old (40% at least 50 years old), Americans are spending in excess of \$400 billion per year on residential renovations and repairs. As housing rehabilitation becomes the go-to solution to address housing conditions, the home remodeling market has grown more than 50% since the recession ended—generating 2.2% of national economic activity (in 2017).

Despite trends suggesting growth in the rehabilitation market, rising construction costs and complex regulatory requirements pose barriers to rehabilitation. Lower-income households or households on fixed-incomes may defer maintenance for years due to limited financial means, escalating rehabilitation costs. At a certain point, the cost of improvements may outweigh the value of the structure, which may necessitate new responses such as demolition or redevelopment.

- **Changes in housing preference.** Housing preference will be affected by changes in demographics; most notably, the aging of Baby Boomers, housing demand from Millennials, and growth of immigrants.
 - *Baby Boomers.* The housing market will be affected by the continued aging of Baby Boomers, the oldest of whom were in their seventies in 2018 and the youngest of whom were in their fifties in 2018. Baby Boomers' housing choices will affect housing preference and homeownership. Addressing housing needs for those moving through their sixties, seventies, eighties, and beyond will require a range of housing opportunities. For example, “the 82-to-86-year-old cohort dominates the assisted living and more intensive care sector” while new or near-retirees may prefer aging in place or active, age-targeted communities.¹⁹ Characteristics like

¹⁷ According to the Pew Research Center, Millennials were born between the years of 1981 to 1996 (inclusive). Read more about generations and their definitions here: <http://www.pewresearch.org/fact-tank/2018/03/01/defining-generations-where-millennials-end-and-post-millennials-begin/>.

To generalize, and because there is no official Millennial generation, we define this cohort as individuals born between 1980 and 2000.

¹⁸ These findings are copied from the Joint Center for Housing Studies of Harvard University's “Improving America's Housing, 2019.”

https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Improving_Americas_Housing_2019.pdf

¹⁹ Urban Land Institute, “Emerging Trends in Real Estate, 2019.”

immigration and ethnicity play a role too, as “older Asians and Hispanics are more likely than whites or blacks to live in multigenerational households.”²⁰ Senior households earning different incomes may make distinctive housing choices. For instance, low-income seniors may not have the financial resources to live out their years in a nursing home and may instead choose to downsize to smaller, more affordable units. Seniors living in close proximity to relatives may also choose to live in multigenerational households.

- Research shows that “older people in western countries prefer to live in their own familiar environment as long as possible,” but aging in place does not only mean growing old in their own homes.²¹ A broader definition exists, which explains that aging in place also means “remaining in the current community and living in the residence of one’s choice.”²² Therefore, some Baby Boomers are likely to stay in their home as long as they are able, and some will prefer to move into other housing, such as multifamily housing or age-restricted housing developments, before they move into to a dependent-living facility or into a familial home. Moreover, “the aging of the U.S. population, [including] the continued growth in the percentage of single-person households, and the demand for a wider range of housing choices in communities across the country is fueling interest in new forms of residential development, including tiny houses.”²³
- *Millennials*. Over the last several decades, young adults have been increasingly living in multigenerational housing—more so than older demographics.²⁴ Despite this trend, as Millennials age over the next twenty years, they will be forming households and families. In 2018, the oldest Millennials were in their late thirties and the youngest were in their late teens. By 2040, Millennials will be between 40 and 60 years old.

Millennials only started forming their own households at the beginning of the 2007–2009 recession. Today, Millennials are driving much of the growth in new households, albeit at slower rates than previous generations. From 2012 to 2017, Millennials formed an average of 2.1 million net new households each year. Twenty-six percent of Millennials aged 25 to 34 lived with their parents (or other relatives) in 2017.

Millennials’ average wealth may remain far below Baby Boomers and Gen Xers, and student loan debt will continue to hinder consumer behavior and affect retirement savings. As of 2015, Millennials comprised 28% of active homebuyers,

²⁰ C. Herbert and H. Molinsky, “Meeting the Housing Needs of an Aging Population,” 2015. https://shelterforce.org/2015/05/30/meeting_the_housing_needs_of_an_aging_population/

²¹ P. Vanleerberghe, et al., *The Quality of Life of Older People Aging in Place: A Literature Review*, 2017.

²² Ibid.

²³ American Planning Association, “Making Space for Tiny Houses,” Quick Notes.

²⁴ According to the Pew Research Center, in 1980, just 11% of adults aged 25 to 34 lived in a multigenerational family household, and by 2008, 20% did (82% change). Comparatively, 17% of adults aged 65 and older lived in a multigenerational family household in 1980, and by 2008, 20% did (18% change).

while Gen Xers comprised 32% and Baby Boomers 31%.²⁵ That said, “over the next 15 years, nearly \$24 trillion will be transferred in bequests,” presenting new opportunities for Millennials (as well as Gen Xers).

- *Immigrants.* Research on foreign-born populations shows that immigrants, more than native-born populations, prefer to live in multigenerational housing. Still, immigration and increased homeownership among minorities could also play a key role in accelerating household growth over the next ten years. Current population survey estimates indicate that the number of foreign-born households rose by nearly 400,000 annually between 2001 and 2007, and they accounted for nearly 30% of overall household growth. Beginning in 2008, the influx of immigrants was stanchied by the effects of the Great Recession. After a period of decline, however, the foreign born are again contributing to household growth. The Census Bureau’s estimates of net immigration in 2017–2018 indicate that 1.2 million immigrants moved to the United States from abroad, down from 1.3 million immigrants in 2016–2017 but higher than the average annual pace of 850,000 during the period of 2009–2011. However, if recent federal policies about immigration are successful, growth in undocumented and documented immigration could slow household growth in the coming years.
- *Diversity.* The growing diversity of American households will have a large impact on domestic housing markets. Over the coming decade, minorities will make up a larger share of young households and constitute an important source of demand for both rental housing and small homes. The growing gap in homeownership rates between whites and blacks, as well as the larger share of minority households that are cost burdened, warrants consideration. Since 1994, the difference in homeownership rates between whites and blacks has risen by 1.9 percentage points to 29.2% in 2017. Alternatively, the gap between white and Hispanic homeownership rates, and white and Asian homeownership rates, both decreased during this period but remained sizable at 26.1 and 16.5 percentage points, respectively. Although homeownership rates are increasing for some minorities, large shares of minority households are more likely to live in high-cost metro areas. This, combined with lower incomes than white households, leads to higher rates of cost burden for minorities—47% for blacks, 44% for Hispanics, 37% for Asians/others, and 28% for whites in 2015.
- Changes in housing characteristics. The US Census Bureau’s *Characteristics of New Housing* report (2017) presents data that show trends in the characteristics of new housing for the nation, state, and local areas. Several long-term trends in the characteristics of housing are evident from the *New Housing* report:²⁶

²⁵ V. Srinivas and U. Goradia, “The Future of Wealth in the United States,” Deloitte Insights, 2015.

<https://www2.deloitte.com/insights/us/en/industry/investment-management/us-generational-wealth-trends.html>

²⁶ US Census Bureau, “Highlights of Annual 2017 Characteristics of New Housing.”

<https://www.census.gov/construction/chars/highlights.html>.

- *Larger single-family units on smaller lots.* Between 1999 and 2017, the median size of new single-family dwellings increased by 20% nationally from 2,028 sq. ft. to 2,426 sq. ft., and between 1999 and 2017, the western region increased by 20% from 2,001 sq. ft. to 2,398 sq. ft. Moreover, between 1999 and 2017 the percentage of new units smaller than 1,400 sq. ft. across the United States decreased by more than half, from 15% to 6%; the percentage of units greater than 3,000 sq. ft. increased from 17% to 25%; and the percentage of lots less than 7,000 sq. ft. increased from 25% to 31%. In addition to larger homes, a trend toward smaller lot sizes is seen nationally.
- *Larger multifamily units.* Between 1999 and 2017, the median size of new multifamily dwelling units increased by 5.3% across the United States, and the western region increased by 2.4%. Nationally, the percentage of new multifamily units with more than 1,200 sq. ft. increased from 28% to 33% between 1999 and 2017, and it increased from 25% to 28% in the western region.
- *Household amenities.* Across the United States since 2013, an increasing number of new units have had air-conditioning (fluctuating year by year at over 90% for both new single-family and multifamily units). In 2000, 93% of new single-family houses had two or more bathrooms, compared to 97% in 2017. In that same time, the share of units with two or more bathrooms decreased from 55% of new multifamily units to 45%. As of 2017, 65% of new single-family houses in the United States had one or more garages (down from 69% in 2000).
- *Shared amenities.* Housing with shared amenities is growing in popularity, as it may improve space efficiencies and reduce per-unit costs/maintenance costs. Single-room occupancies (SROs),²⁷ cottage clusters, cohousing developments, and multifamily products are common housing types that take advantage of this trend. Shared amenities may take many forms and include bathrooms, kitchens and other home appliances (e.g., laundry facilities, outdoor grills), security systems, outdoor areas (e.g., green space, pathways, gardens, rooftop lounges), fitness rooms, swimming pools, and tennis courts.²⁸

State Trends

Oregon's 2016–2020 Consolidated Plan Amendment includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide. The plan concludes that “a growing gap between the number of Oregonians who need affordable housing and the availability of affordable homes has given rise to destabilizing rent increases, an alarming number of evictions

²⁷ Single-room occupancies are residential properties with multiple single-room dwelling units occupied by a single individual. From: US Department of Housing and Urban Development, *Understanding SRO*, 2001. <https://www.hudexchange.info/resources/documents/Understanding-SRO.pdf>

²⁸ Urbsworks, *Housing Choices Guide Book: A Visual Guide to Compact Housing Types in Northwest Oregon*, n.d. https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf

A. Saiz and A. Salazar, *Real Trends: The Future of Real Estate in the United States*, Center for Real Estate, Urban Economics Lab, n.d.

of low- and fixed- income people, increasing homelessness, and serious housing instability throughout Oregon.”

It identified the following issues that describe housing need statewide:²⁹

- For housing to be considered affordable, a household should pay up to one-third of their income toward rent, leaving money left over for food, utilities, transportation, medicine, and other basic necessities. Today, half of Oregon renter households pay more than one-third of their income toward rent, and one-third pay more than half of their income toward rent.
- More school children are experiencing housing instability and homelessness. The rate of K–12 homeless children increased by 12% from the 2013–2014 school year to the 2014–2015 school year.
- Oregon has 28,500 rental units that are affordable and available to renters with extremely low incomes. There are about 131,000 households that need those apartments, leaving a gap of 102,500 units.
- Housing instability is fueled by an unsteady, low-opportunity employment market. Over 400,000 Oregonians are employed in low-wage work. Low-wage work is a growing share of Oregon’s economy. When wages are set far below the cost needed to raise a family, the demand for public services grows to record heights.
- Women are more likely than men to end up in low-wage jobs. Low wages, irregular hours, and part-time work compound issues.
- People of color historically constitute a disproportionate share of the low-wage work force. About 45% of Latinos, and 50% of African Americans, are employed in low-wage industries.
- The majority of low-wage workers are adults over the age of twenty, many of whom have earned a college degree or some level of higher education.
- In 2019, minimum wage in Oregon³⁰ was \$11.25, \$12.50 in the Portland Metro, and \$11.00 for nonurban counties.

“Breaking New Ground, Oregon’s Statewide Housing Plan” for 2018 describes the Oregon Housing and Community Services (OHCS) goals and implementation strategies for achieving the goals.³¹ It includes relevant data to help illustrate the rationale for each priority. Oregon’s

²⁹ These conclusions are copied directly from *Oregon’s 2016–2020 Consolidated Plan Amendment* <http://www.oregon.gov/ohcs/docs/Consolidated-Plan/2016-2020-Consolidated-Plan-Amendment.pdf>.

³⁰ The 2016 Oregon Legislature, Senate Bill 1532, established a series of annual minimum wage rate increases beginning July 1, 2016, through July 1, 2022. <https://www.oregon.gov/boli/whd/omw/pages/minimum-wage-rate-summary.aspx>

³¹ Priorities and factoids are copied directly from Oregon Housing and Community Services “Breaking New Ground, Oregon’s Statewide Housing Plan,” November 2018 Draft. <https://www.oregon.gov/ohcs/DO/shp/OregonStatewideHousingPlan-PublicReviewDraft-Web.pdf>

“Statewide Housing Plan” identified six housing priorities to address in communities across the State over 2019 to 2023.

- **Equity and Racial Justice.** *Advance equity and racial justice by identifying and addressing institutional and systemic barriers that have created and perpetuated patterns of disparity in housing and economic prosperity.*
 - Summary of the Issue: In Oregon, 26% of people of color live below the poverty line in Oregon, compared to 15% of the white population.
 - 2019–2023 Goal: Communities of color will experience increased access to OHCS resources and achieve greater parity in housing stability, self-sufficiency, and homeownership. OHCS will collaborate with its partners and stakeholders to create a shared understanding of racial equity and overcome systemic injustices faced by communities of color in housing discrimination, access to housing, and economic prosperity.
- **Homelessness.** *Build a coordinated and concerted statewide effort to prevent and end homelessness, with a focus on ending unsheltered homelessness of Oregon’s children and veterans.*
 - Summary of the Issue: According to the Point-in-Time count, approximately 14,000 Oregonians experienced homelessness in 2017, an increase of nearly 6% since 2015. Oregon’s unsheltered population increased faster than the sheltered population, and the State’s rate of unsheltered homelessness is the third highest in the nation at 57%. The State’s rate of unsheltered homelessness among people in families with children is the second highest in the nation at 52%.
 - 2019–2023 Goal: OHCS will drive toward impactful homelessness interventions by increasing the percentage of people who are able to retain permanent housing for at least six months after receiving homeless services to at least 85 percent. OHCS will also collaborate with partners to end veterans’ homelessness in Oregon and build a system in which every child has a safe and stable place to call home.
- **Permanent Supportive Housing.** *Invest in permanent supportive housing, a proven strategy to reduce chronic homelessness and reduce barriers to housing stability.*
 - Summary of the Issue: Oregon needs about 12,388 units of permanent supportive housing to serve individuals and families with a range of needs and challenges.
 - 2019–2023 Goal: OHCS will increase our commitment to permanent supportive housing by funding the creation of 1,000 or more additional permanent supportive-housing units to improve the future long-term housing stability for vulnerable Oregonians.
- **Affordable Rental Housing.** *Work to close the affordable rental-housing gap and reduce housing cost burden for low-income Oregonians.*

- Summary of the Issue: Statewide, over 85,000 new units are needed to house those households earning below 30% of median family income (MFI) in units affordable to them. The gap is even larger when accounting for the more than 16,000 units affordable at 30% of MFI, which are occupied by households at other income levels.
- 2019–2023 Goal: OHCS will triple the existing pipeline of affordable rental housing—up to 25,000 homes in the development pipeline by 2023. Residents of affordable rental housing funded by OHCS will have reduced cost burden and more opportunities for prosperity and self-sufficiency.
- **Homeownership.** *Provide more low- and moderate-income Oregonians with the tools to successfully achieve and maintain homeownership, particularly in communities of color.*
 - Summary of the Issue: In Oregon, homeownership rates for all categories of people of color are lower than for white Oregonians. For white non-Hispanic Oregonians, the homeownership rate is 63%. For Hispanic and nonwhite Oregonians, it is 42%. For many, homeownership rates have fallen between 2005 and 2016.
 - 2019–2023 Goal: OHCS will assist at least 6,500 households in becoming successful homeowners through mortgage lending products while sustaining efforts to help existing homeowners retain their homes. OHCS will increase the number of homebuyers of color in our homeownership programs by 50% as part of a concerted effort to bridge the homeownership gap for communities of color while building pathways to prosperity.
- **Rural Communities.** *Change the way OHCS does business in small towns and rural communities to be responsive to the unique housing and service needs and unlock the opportunities for housing development.*
 - Summary of the Issue: While housing costs may be lower in rural areas, incomes are lower as well: median family income is \$42,750 for rural counties versus \$54,420 for urban counties. Additionally, the median home values in rural Oregon are 30% higher than in the rural United States, and median rents are 16% higher.
 - 2019–2023 Goal: OHCS will collaborate with small towns and rural communities to increase the supply of affordable and market-rate housing. As a result of tailored services, partnerships among housing and service providers, private industry, and local governments will flourish, leading to improved capacity, leveraging of resources, and a doubling of the housing development pipeline.

Regional and Local Demographic Trends that May Affect Housing Need in McMinnville

Demographic trends that might affect the key assumptions used in the baseline analysis of housing need are (1) the aging population, (2) changes in household size and composition, and (3) increases in diversity.

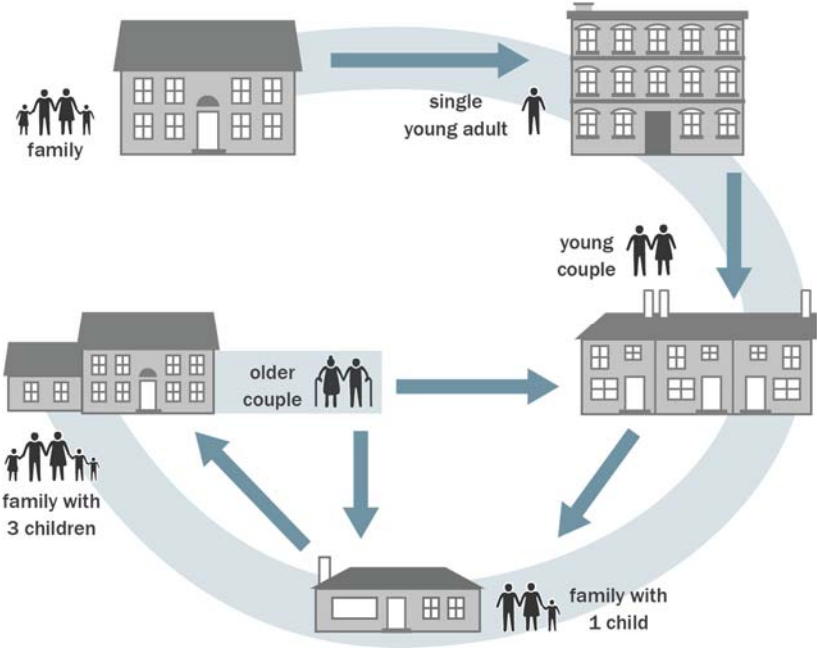
An individual’s housing needs change throughout their life, with changes in income, family composition, and age. The types of housing needed by a 20-year-old college student differ from the needs of a 40-year-old parent with children, or an 80-year-old single adult. As McMinnville’s population ages, different types of housing will be needed to accommodate older residents. The housing characteristics by age data below reveal this cycle in action in McMinnville.

Housing needs and preferences change in predictable ways over time, with changes in marital status and size of family.

Families of different sizes need different types of housing.

Exhibit 27. Effect of Demographic Changes on Housing Need

Source: ECONorthwest, adapted from Clark, William A.V. and Frans M. Dieleman. 1996. *Households and Housing*. New Brunswick, NJ: Center for Urban Policy Research.



Growing Population

McMinnville’s population grew by 88% between 1990 and 2017, adding 15,771 new residents. Over this period, McMinnville’s population grew at an average annual growth rate of 2.4%. McMinnville’s population growth will drive future demand for housing over the planning period.

Exhibit 28. Population, McMinnville, 1990–2017

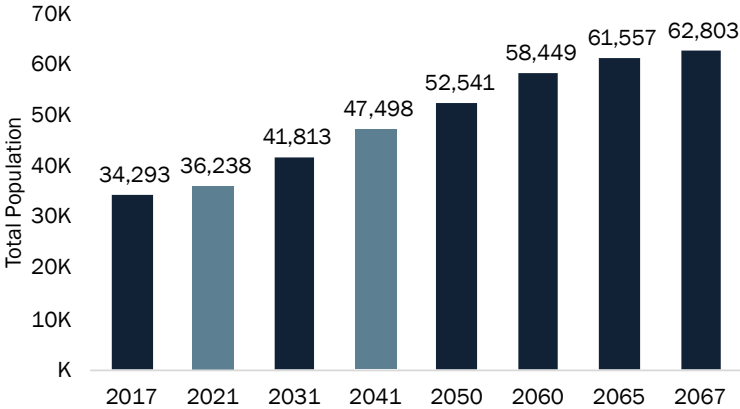
Source: US Decennial Census 1990, 2000, and 2010. Portland State University Population Research Center, 2017 Estimate.

	1990	2000	2010	2017	Change 1990 to 2017		
					Number	Percent	AAGR
U.S.	248,709,873	281,421,906	308,745,538	325,719,178	77,009,305	31%	1.0%
Oregon	2,842,321	3,421,399	3,831,074	4,141,100	1,298,779	46%	1.4%
Yamhill County	65,551	84,992	99,193	106,300	40,749	62%	1.8%
McMinnville	17,894	26,499	32,187	33,665	15,771	88%	2.4%

By 2067, McMinnville’s population within its UGB is expected to exceed 60,000 people.

Exhibit 29. Population Forecast, McMinnville UGB, 2017 through 2067

Source: Population Research Center, Portland State University, June 30, 2017.



McMinnville’s population within its UGB is expected to grow by around 31% (11,260 people) over the 20-year analysis period (2021 to 2041).

Exhibit 30. McMinnville’s 5-, 10-, 20-, and 46-Year Population Forecast, McMinnville UGB, 2021, 2026, 2031, and 2067

Source: Population Research Center, Portland State University, June 30, 2017.

36,238	38,985	41,813	47,498	62,803
2021	2026 (5-year)	2031 (10-year)	2041 (20-year)	2067 (46-year)

A majority of new population growth in Yamhill County and Oregon is because of in-migration.

Exhibit 31. Migrant Share of New Population, Yamhill County and Oregon, 2000–2016

Source: Population Research Center, Portland State University.

Yamhill County	19,998 New Population	13,477 New Migrant Population	67% Migrant Share of Growth
Oregon	654,951 New Population	420,150 New Migrant Population	64% Migrant Share of Growth

Aging Population

This section describes two key characteristics of McMinnville’s population (seniors and young adults, including Millennials), with implications for future housing demand in McMinnville:

- **Seniors.** McMinnville and Yamhill County populations are progressively getting older. As McMinnville’s elderly population grows, it will increase demand for housing that is suitable for elderly residents. By 2040, residents aged 60 years and older will account for 28% of McMinnville’s population, compared to 20% in 2010.

The impact of growth in seniors in McMinnville will depend, in part, on whether older people already living in McMinnville continue to live in their current residence as they age. National surveys show that most households prefer to age in place by continuing to live in their current home and community as long as possible.³²

Growth in the number of seniors will result in demand for housing types specific to seniors, such as small and easy-to-maintain dwellings, assisted-living facilities, or age-restricted developments. Senior households will make a variety of housing choices, including remaining in their homes as long as they are able, downsizing to smaller single-family homes (detached and attached) or multifamily units, or moving into group housing (such as assisted-living facilities or nursing homes) as their health declines. The challenges aging seniors face in continuing to live in their community include changes in healthcare needs, loss of mobility, the difficulty of home maintenance, financial concerns, and increases in property taxes.³³

- **McMinnville has a larger proportion of younger people than the County and State.** About 30% of McMinnville’s population is under 20 years old, compared to 28% of Yamhill County’s population and 25% of the State’s population. The forecast for population growth in McMinnville shows the number of people under 20 years will increase, but the share of younger people will decline marginally from 29% of the population in 2017 to 27% of the population by 2040.

Linfield College offers a partial explanation for McMinnville’s age structure. Data provided by the college indicated that Linfield had 2,588 students enrolled as of May 2018.³⁴ Approximately 1,240 students (48% of the 2,588 students) were at the McMinnville campus as of February 2019.³⁵ As of 2016, the 1,240 students make up approximately 4% of the City’s total population, about 13% of the City’s population under age 20, and about 23% of the City’s population between the ages of 15 and 24. Linfield students are counted in PSU’s population forecast. Linfield requires students to live in campus housing for their first two years.

³² A survey conducted by AARP indicates that 90% of people 50 years and older want to stay in their current home and community as they age. See <http://www.aarp.org/research>.

³³ M. S. Ball, *Aging in Place: A Toolkit for Local Governments*.

³⁴ <https://www.linfield.edu/about/facts-and-figures.html>

³⁵ <https://www.opb.org/news/article/linfield-college-tenured-faculty-cut/>

People who are currently between 18 and 38 years old³⁶ are referred to as the Millennial generation and account for the largest share of the population in Oregon.³⁷ By 2041, Millennials will be about 41 to 61 years of age. The forecast for Yamhill County shows growth in the number of Millennials from about 27,500 people in 2021 to 35,000 people in 2041 (about 28% change). The share of Millennials from 2021 to 2041 is forecast to remain the same (at about 25% of Yamhill County's total population).

McMinnville's ability to retain people in this age group will depend, in part, on whether the City has opportunities for housing that both appeal to and are affordable to Millennials. In the near-term, Millennials may increase demand for rental units. The long-term housing preferences of Millennials are uncertain. Research suggests that Millennials' housing preferences may be similar to Baby Boomers, with a preference for smaller, less-costly units. Recent surveys about housing preference suggest that Millennials want affordable single-family homes in areas that offer transportation alternatives to cars, such as suburbs or small cities with walkable neighborhoods.³⁸

A recent survey of people living in the Portland region shows that Millennials prefer single-family detached housing. The survey finds that housing price is the most important factor in choosing housing for younger residents.³⁹ The survey results suggest Millennials are more likely than other groups to prefer housing in an urban neighborhood or town center. While this survey is for the Portland region, it shows results similar to national surveys and studies about housing preference for Millennials.

Growth in Millennials in McMinnville will increase demand for affordable single-family detached housing (including cottages) in the long-term and affordable town houses and multifamily housing in the near term. The preference for Millennials to locate in urban neighborhoods or town centers may also increase demand for town homes and multifamily housing types. Growth in this population will result in increased demand for both ownership and rental opportunities, with an emphasis on housing that is comparatively affordable.

³⁶ No formal agreement on when the Millennial generation starts or ends exists. For this report, we define the Millennial generation as individuals born in 1980 through 2000.

³⁷ M. Dimock, "Defining Generations: Where Millennials End and Post-Millennials Begin," Pew Research Center, March 2018. <http://www.pewresearch.org/fact-tank/2018/03/01/defining-generations-where-millennials-end-and-post-millennials-begin/>.

³⁸ American Planning Association, "Investing in Place; Two Generations' View on the Future of Communities," 2014. Transportation for America, "Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows."

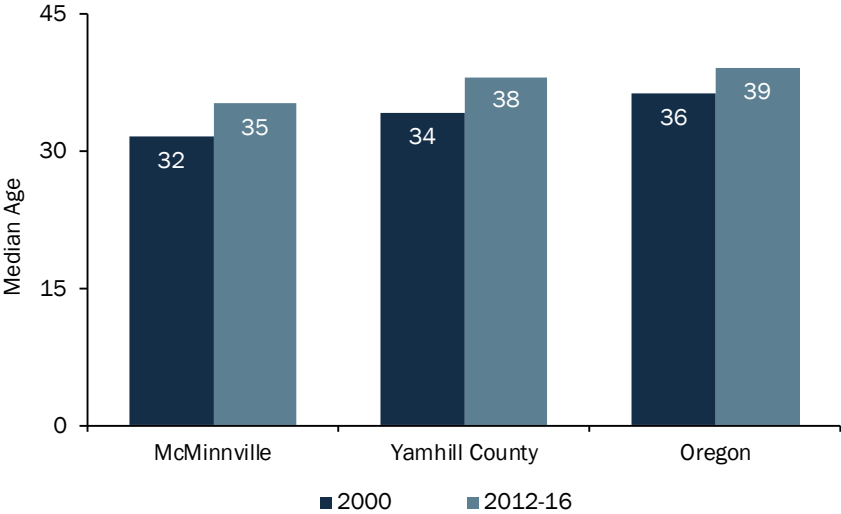
National Association of Home Builders, "Survey Says: Home Trends and Buyer Preferences."

³⁹ Davis, Hibbits & Midghal Research, "Metro Residential Preference Survey," May 2014.

From 2000 to 2012–2016, McMinnville’s median age increased from 31.5 to 35.2 years. Larger regions experienced similar trends.

Exhibit 32. Median Age, Years, McMinnville, Yamhill County, and Oregon, 2000 to 2012–2016

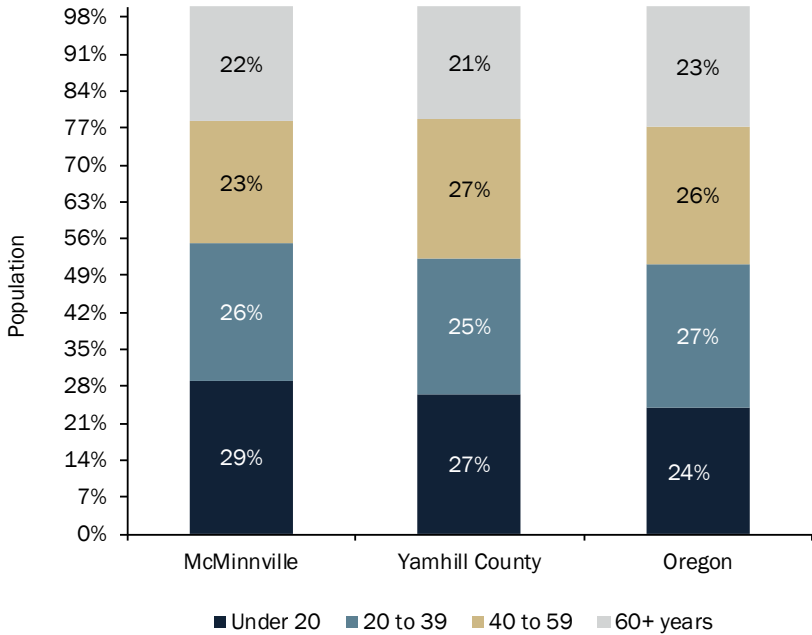
Source: US Census Bureau, 2000 Decennial Census Table B01002, 2012–2016 ACS, Table B01002.



Similar to Yamhill County and Oregon, McMinnville’s population distribution was relatively proportional by age. McMinnville had a slightly larger cohort under the age of 20.

Exhibit 33. Population Distribution by Age, McMinnville, Yamhill County, and Oregon, 2012–2016

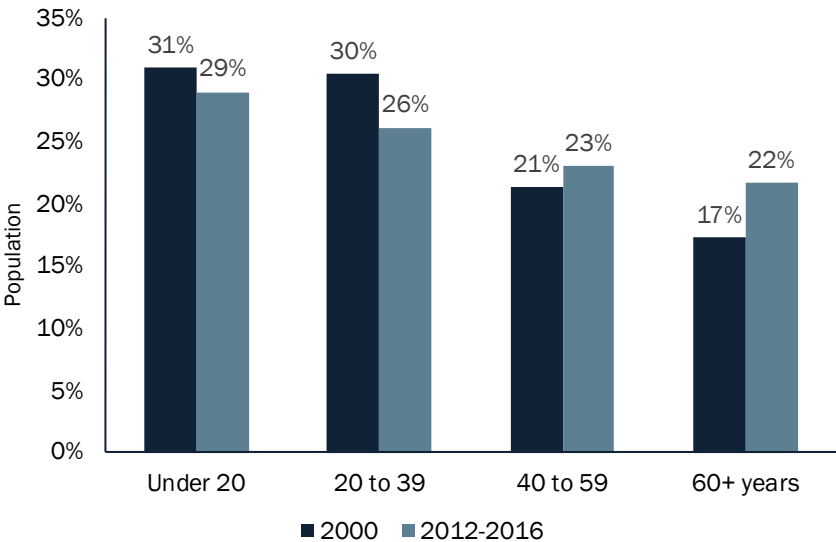
Source: US Census Bureau, 2012–2016, ACS, Table B01001.



Between 2000 and 2012-2016, McMinnville's population distribution shifted toward older age cohorts.

Exhibit 34. Population Distribution by Age, McMinnville, 2000 to 2012-2016

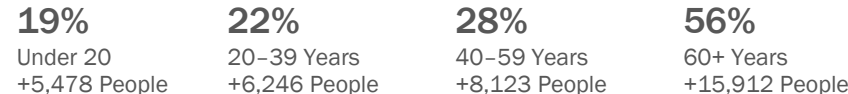
Source: US Census Bureau, 2000 Decennial Census Table P012, 2012-2016 ACS, Table B01001.



The share of Yamhill County's population aged 60 years and older is forecast to grow the fastest (56% from 2017 to 2040).

Exhibit 35. Forecast Growth Rate by Age Group, Yamhill County, 2017 to 2040

Source: Portland State University, Population Research Center, Yamhill County Forecast, June 30, 2017.

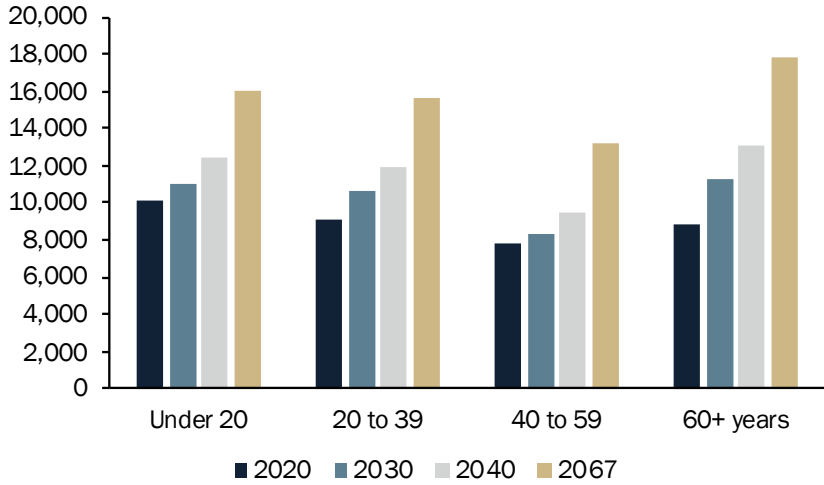


All age groups in McMinnville will add to the population between 2020 and 2040, with the senior population projected to grow the most at 48%.

Populations less than 20 years old, and populations 20 to 39 years old and 40 to 59 years old, will grow at a slower rate (24%, 32%, and 22%).

Exhibit 36. Population Projection by Age Group, McMinnville, 2020, 2030, 2040, and 2067

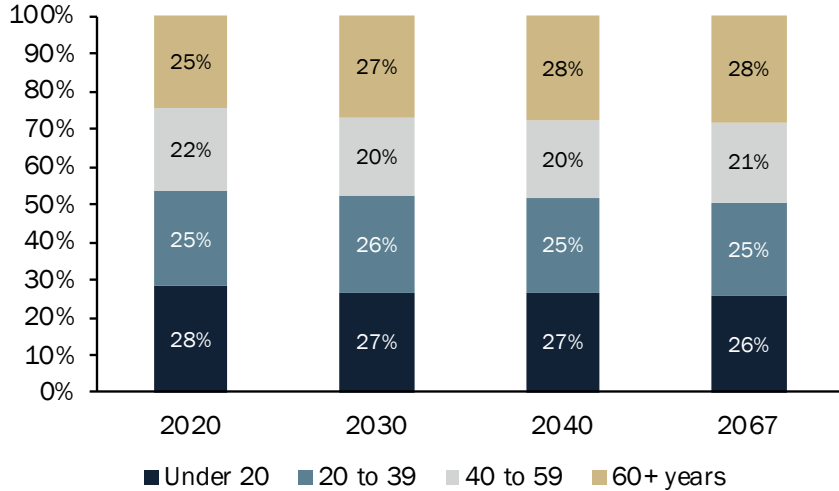
Source: Portland State University, Population Research Center. Note: This exhibit presents trend data from the PSU forecast. It is not forecast data for McMinnville's 2021-2041 planning period. It provides relevant data closely associated to the 2021-2041 planning period.



By 2040, the share of McMinnville's senior population (aged 60+) will grow while the share of the population under 20 years of age and between 40 and 59 years of age will decline.

Exhibit 37. Population Projection Distributed by Age Group, McMinnville, 2020, 2030, 2040, and 2067

Source: Portland State University, Population Research Center.



Increased Diversity⁴⁰

McMinnville is becoming more ethnically diverse. The Hispanic and Latino population grew from 15% of McMinnville’s population in 2000 to 22% of the population in the 2012–2016 period, adding more than 3,426 new Hispanic and Latino residents. Much of this diversity is due to immigration: 14% of McMinnville’s population is foreign born, and of this population, 78% have immigrated from Mexico.

The US Census Bureau forecasts that at the national level, the Hispanic and Latino population will continue growing faster than most other non-Hispanic populations between 2021 and 2041. The Census forecasts that the Hispanic and Latino population will increase 93% from 2016 to 2060 and the foreign-born Hispanic population will increase by about 40% in that same time.⁴¹ According to the *State of Hispanic Homeownership Report* from the National Association of Hispanic Real Estate Professionals,⁴² Hispanics accounted for 28.6% of the nation’s household formation in 2017. Household formations, for Hispanic homeowners specifically, accounted for 15% of the nation’s net homeownership growth. The rate of homeownership for Hispanics increased from 45.4% in 2014⁴³ to 46.2% in 2017. The only demographic that increased their rate of homeownership from 2016 to 2017 was Hispanics.

The *State of Hispanic Homeownership Report* also cites the lack of affordable housing products as a substantial barrier to homeownership. The report finds that Hispanic households are more likely than non-Hispanic households to be nuclear households, comprised of married couples with children and multigeneration households in the same home, such as parents and adult children living together.

The population of McMinnville is now, and has historically been, more ethnically diverse than Yamhill County and Oregon. Continued growth in the Hispanic and Latino population will affect McMinnville’s housing needs in a variety of ways.⁴⁴ Growth in first- and, to a lesser extent, second- and third-generation Hispanic and Latino immigrants will increase demand for larger dwelling units to accommodate the larger average household sizes for these households. Foreign-born households, including Hispanic and Latino immigrants, are more likely to live in multigenerational households, requiring more bedrooms/space. As Hispanic and Latino households integrate over generations, household size typically decreases, and their housing needs become similar to housing needs for all households.

⁴⁰ The US Census Bureau considers race and ethnicity as two distinct concepts. The Census applies two categories for ethnicity, which are Hispanic or Latino (i.e., Latinx) and Not Hispanic or Latino (i.e., Non-Latinx). Latinx is an ethnicity and not a race, meaning individuals who identify as Latinx may be of any race. The share of the population that identifies as Latinx should not be added to percentages for racial categories.

⁴¹ US Census Bureau, *Demographic Turning Points for the United States: Population Projections for 2020 to 2060*, pg. 7.

⁴² National Association of Hispanic Real Estate Professionals, *2017 State of Hispanic Homeownership Report*.

⁴³ Ibid.

⁴⁴ Pew Research Center, *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, February 7, 2012; National Association of Hispanic Real Estate Professionals, *2017 State of Hispanic Homeownership Report*.

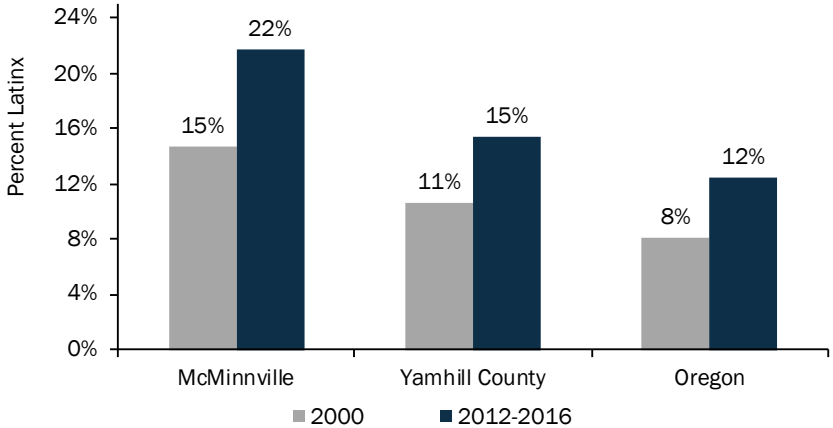
Growth in Hispanic and Latino households will result in increased demand for housing of all types, both for ownership and rentals, with an emphasis on housing that is comparatively affordable and can accommodate multiple generations and larger household sizes.

McMinnville is and has historically been more ethnically diverse than Yamhill County and Oregon.

The share of McMinnville’s population that identifies as Latinx increased by 7% from 2000 to 2012–2016. In this same time, the share of Yamhill County and Oregon’s Latinx population increased by 4%.

Exhibit 38. Latinx Population as a Percent of the Total Population, McMinnville, Yamhill County, and Oregon, 2000 to 2012–2016

Source: US Census Bureau, 2000 Decennial Census Table P008, 2012–2016 ACS Table B03002.



McMinnville and Yamhill County are less racially diverse than the State. McMinnville’s racial composition is similar to that of Yamhill County.

Only about 10% of McMinnville’s population is nonwhite, compared to 15% in Oregon.

Exhibit 39. Race⁴⁵ as a Percent of the Total Population, McMinnville and Comparison Regions, 2012–2016

Source: US Census Bureau, 2012–2016 ACS Table B03002.

Region	White	Black/African American	Asian	Other races
McMinnville	89%	1%	2%	8%
Yamhill Co.	89%	1%	1%	9%
Oregon	85%	2%	4%	9%

⁴⁵ The races categorized as "other races" are American Indian, Alaska Native, Native Hawaiian, other Pacific Islanders, two or more races, and some other races. Note: Latinx is not a race, it is an ethnicity.

Fourteen percent of McMinnville’s population is foreign-born. Of the foreign-born population, most are from Latin America (82%), Mexico specifically (78%).

Exhibit 40. Distribution of Foreign-Born Population, McMinnville, 2012–2016

Source: US Census Bureau, 2012–2016 ACS Table B05006.

82% 3,708 Persons Latin America	11% 495 Persons Asia	7% 315 Persons Europe	0% 15 Persons Oceania	0% 10 Persons Africa
--	-----------------------------------	------------------------------------	------------------------------------	-----------------------------------

About 40% of students in the McMinnville School District identify as Latino or another ethnicity.

Exhibit 41. Ethnicity of School Aged Children, McMinnville School District, 2017–2018

Source: McMinnville School District. Note: percentages do not sum to 100% due to rounding.

61% White	35% Latino	5% Another ethnicity
---------------------	----------------------	--------------------------------

Household Size and Composition

McMinnville’s household size and composition show that households in McMinnville are somewhat different than averages across the State. McMinnville had 12,376 households according to 2013–2017 ACS data. McMinnville’s and Yamhill County’s households are larger and possess fewer nonfamily households.

McMinnville’s average household size is slightly smaller than Yamhill County’s but comparable to the State’s.

Exhibit 42. Average Household Size, McMinnville, Yamhill County, and Oregon, 2013–2017

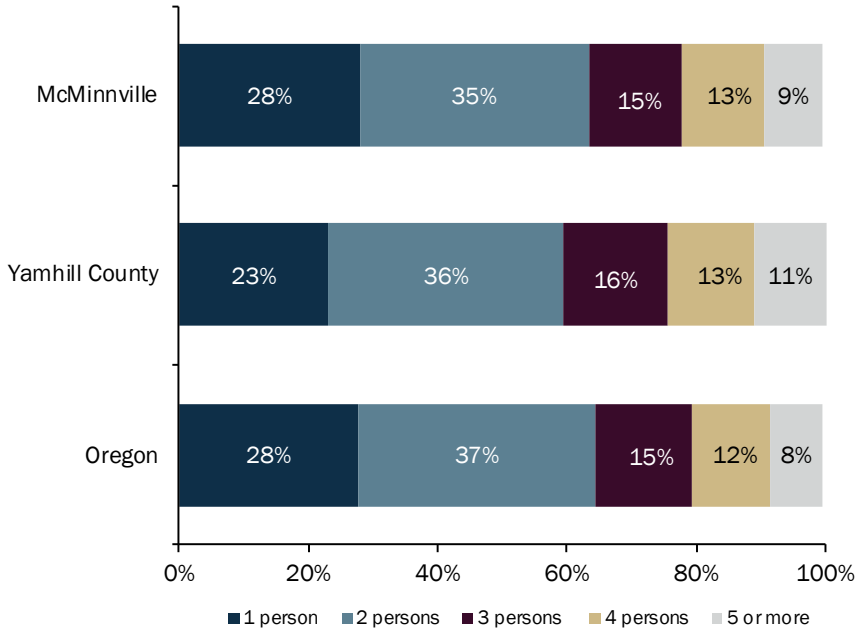
Source: US Census Bureau, 2013–2017 ACS Table B25010. US Census Bureau, 2010 Decennial Census, Table H12H, H12.

(2013–2017) Total Occupied Housing Units	2.55 Persons McMinnville	2.70 Persons Yamhill County	2.50 Persons Oregon
(2010) Total Occupied Housing Units	2.61 Persons McMinnville	2.70 Persons Yamhill County	2.47 Persons Oregon
(2010) Occupied Housing Units with Latino/Hispanic Householder	4.11 Persons McMinnville	4.08 Persons Yamhill County	3.68 Persons Oregon

About 60% of households in McMinnville, Yamhill County, and the State are composed of one and two people.

Exhibit 43. Household Size, McMinnville, Yamhill County, and Oregon, 2013–2017

Source: US Census Bureau, 2013–2017 ACS, Table B25009

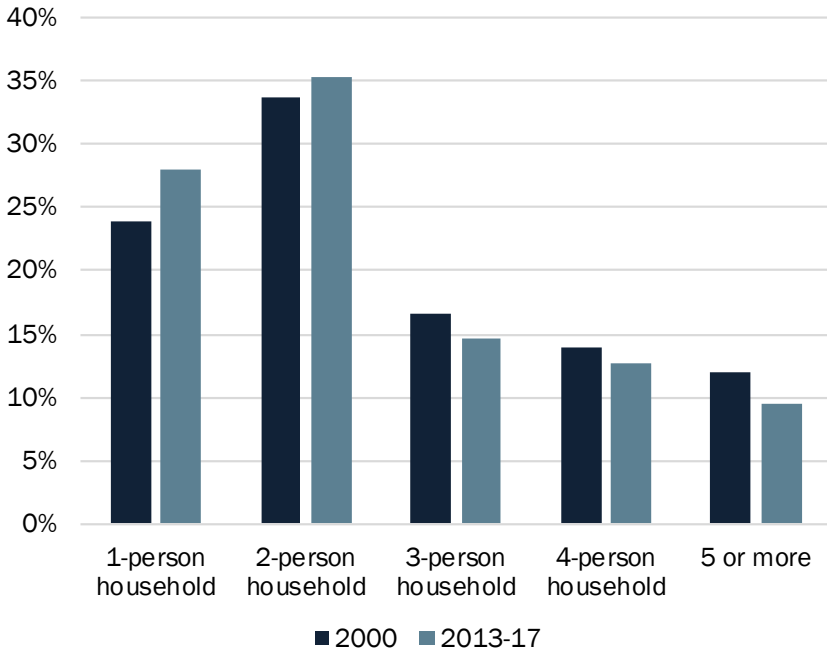


McMinnville’s household size composition stayed relatively constant from 2000 to 2013–2017.

The majority of McMinnville households are composed of one and two people.

Exhibit 44. Household Size, McMinnville, 2000 to 2013–17

Source: US Census Bureau, 2013–2017 ACS, Table B25009.

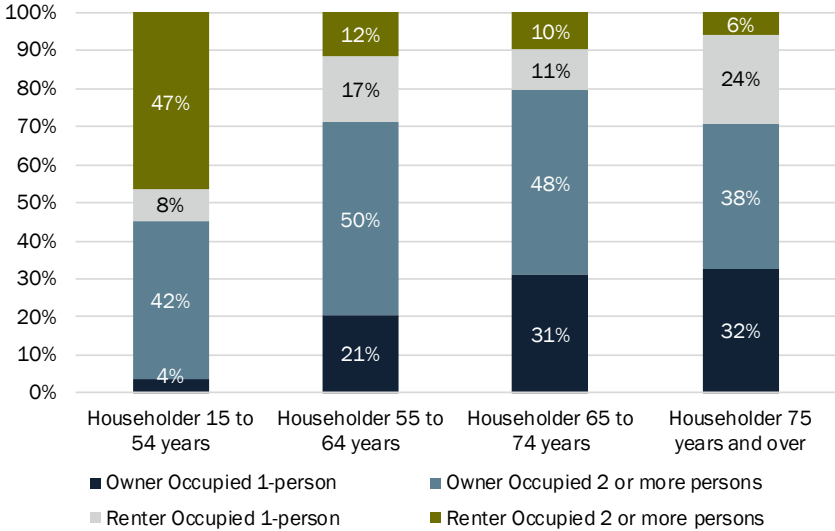


Homeownership rates peak between 65 and 74 years of age—nearly 80% of households in this age group owned their home.

Comparatively, 45% of householders aged 15 to 54 reside in owner-occupied housing, most of which (42%) live in a household with two or more people.

Exhibit 45. Tenure by Household Size by Age of Householder, McMinnville, 2013–2017

Source: US Census Bureau, 2013–2017 ACS, Table B25116.

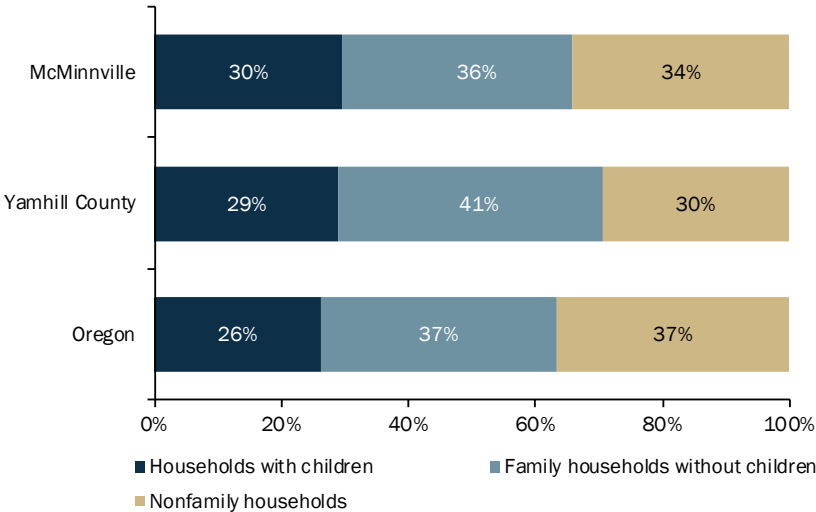


McMinnville and the County have a smaller share of nonfamily households than the State.

In McMinnville, 34% of households are nonfamily, compared to 30% of Yamhill County households and 37% of Oregon households.

Exhibit 46. Household Composition, McMinnville, 2013–2017

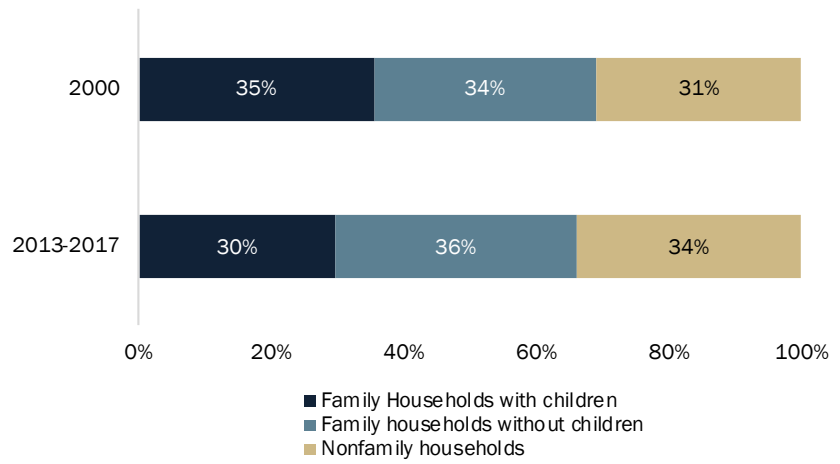
Source: US Census Bureau, 2013–2017 ACS, Table DP02.



The share of family households without children increased in McMinnville from 2000 to 2017.

Exhibit 47. Household Composition, McMinnville, 2000 to 2013-2017

Source: US Census Bureau, 2000 Decennial Census and 2013-2017 ACS, Table DP02.



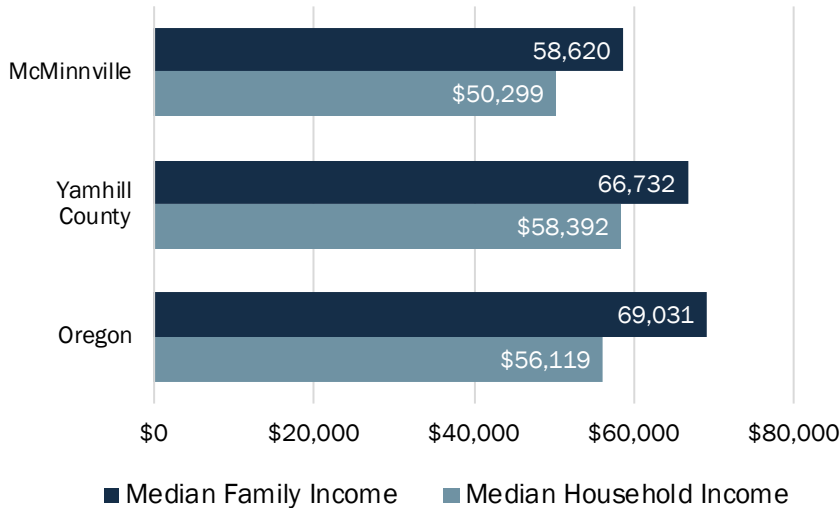
Income of McMinnville Residents

Income is one of the key determinants in housing choice and households' ability to afford housing. Incomes for people living in McMinnville are lower than that of Yamhill County and Oregon.

In the 2013–2017 period, McMinnville’s median household income and median family income was below that of comparison regions.

Exhibit 48. Median Household Income and Median Family Income, McMinnville, Yamhill County, and Oregon, 2013–2017

Source: US Census Bureau, 2013–2017 ACS Table B25119 and B19113.

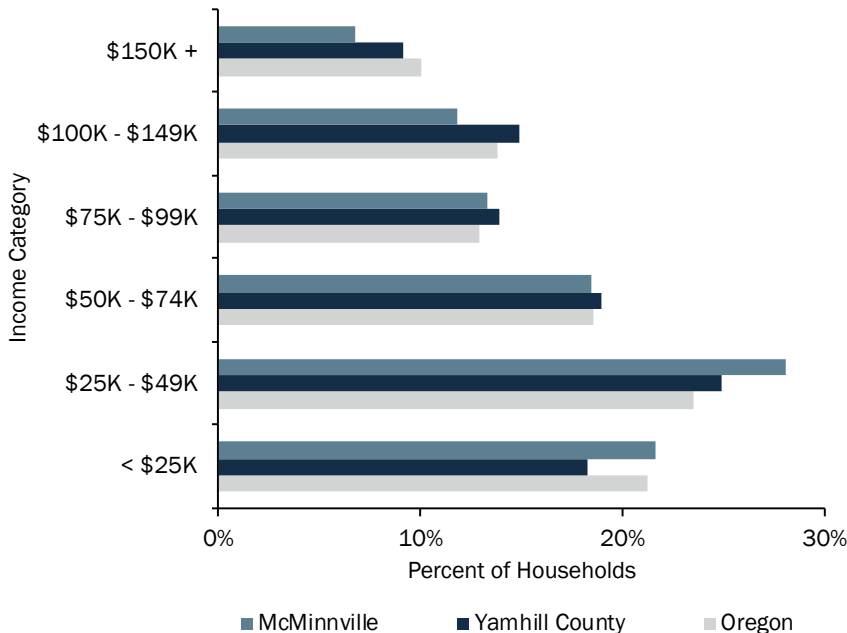


Fifty percent of McMinnville households make \$50,000 or less per year.

In comparison, 43% of Yamhill County and 45% of the State make \$50,000 or less per year.

Exhibit 49. Household Income, McMinnville, Yamhill County, and Oregon, 2013–2017

Source: US Census Bureau, 2013–2017 ACS, Table B19001.

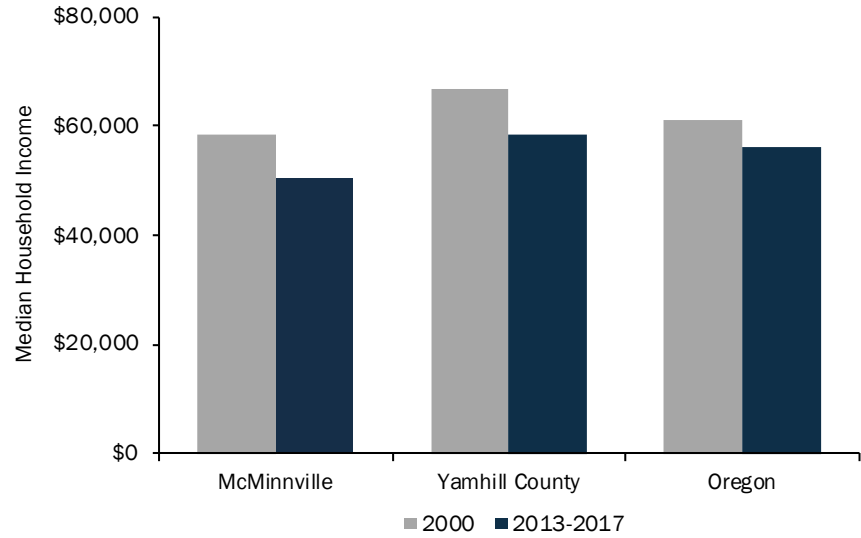


After adjusting for inflation, McMinnville's median household income decreased by 14% from 2000 to 2013-2017, from \$58,356 to \$50,299 per year.

Yamhill County and Oregon also experienced real decreases in median housing income after adjusting for inflation.

Exhibit 50. Median Household Income (2017 Inflation-Adjusted), McMinnville, Yamhill County, Oregon, 2000 and 2013-2017

Source: US Census Bureau, 2000 Decennial Census, Table HCT012, 2013-2017 ACS Table B25119.



Homelessness

The number of homeless persons in Yamhill County increased by over 300 people (30%), from 2015 to 2017.

For Yamhill County, the Point-in-Time homeless estimate was 1,066 persons in 2017 and 1,386 persons in 2018.

Exhibit 51. Point-in-Time Homeless Counts, Sheltered vs. Unsheltered, Yamhill County, 2017 and 2018

Source: Yamhill Community Action Partnership. Note: Point-in-time homeless count took place on January 31, 2018, and January 25, 2017.

2017	21% Percent Sheltered	25% Percent Unsheltered	54% Precariously Housed (e.g., couch surfing)	1,066 Total Homeless (PIT)
2018	17% Percent Sheltered	30% Percent Unsheltered	53% Precariously Housed (e.g., couch surfing)	1,386 Total Homeless (PIT)

In the 2016–2017 school year, 525 students experienced homelessness.

Exhibit 52. Students Experiencing Homelessness, Yamhill County and Oregon, 2016–2017 School Year

Source: Oregon Department of Housing and Community Services.

Yamhill County	3% Percent of Homeless Students	525 Total Homeless Students	16,791 Total Students
Oregon	4% Percent of Homeless Students	25,088 Total Homeless Students	578,947 Total Students

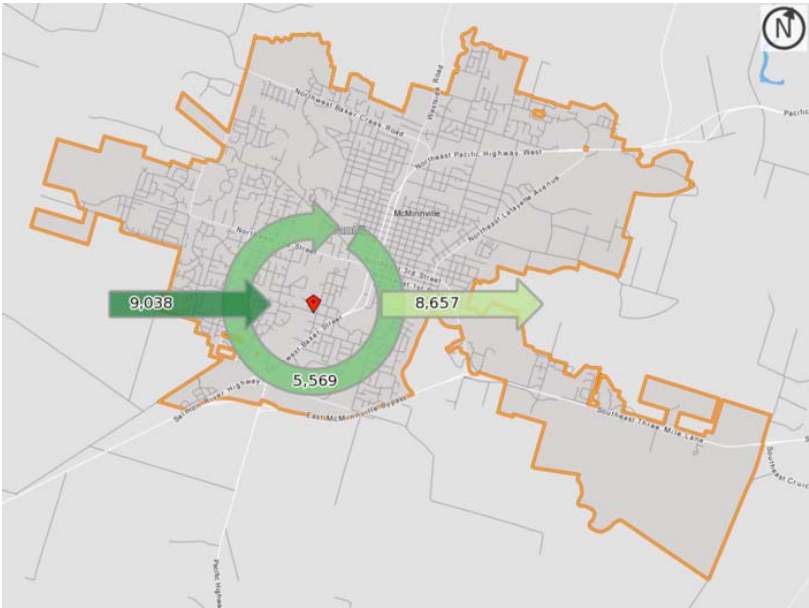
Commuting Trends

McMinnville is part of the complex, interconnected economy of Yamhill County that is considered part of the Portland metropolitan region by the US Census Bureau. Of the more than 14,600 people who work in McMinnville, about 62% of workers commute into McMinnville from other areas, (most notably Portland, Salem, and Newberg).

About 9,038 people commute into McMinnville for work, and 8,657 people commute out of McMinnville for work.

Exhibit 53. Commuting Flows, McMinnville 2015

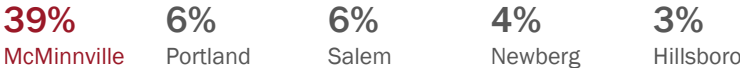
Source: US Census Bureau, Census On the Map.



Nearly 40% of people who live in McMinnville also work in McMinnville.

Exhibit 54. Places Where McMinnville Residents Were Employed, 2015

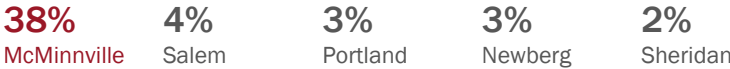
Source: US Census Bureau, Census On the Map.



More than 60% of McMinnville workers live somewhere else and commute into the City.

Exhibit 55. Places Where Workers Who Are Employed in McMinnville Live, 2015

Source: US Census Bureau, Census On the Map.

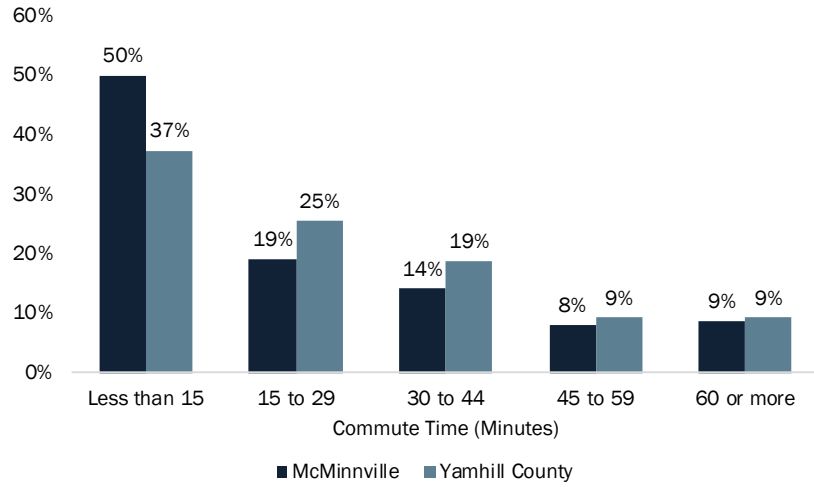


Half of McMinnville residents had a commute time of less than 15 minutes compared to the 37% of Yamhill residents.

Just under 70% of McMinnville residents have a commute time of less than 30 minutes.

Exhibit 56. Commute Time by Place of Residence, McMinnville and Yamhill County, 2012–2016

Source: US Census Bureau, 2012–2016 ACS Table B08303.



Regional and Local Trends Affecting Affordability in McMinnville

This section describes changes in sales prices, rents, and housing affordability in McMinnville, Yamhill County, and comparison cities. The section uses 2012–2016 ACS data, as findings are not safe harbor assumptions (which require use of data from the 2013–2017 census).

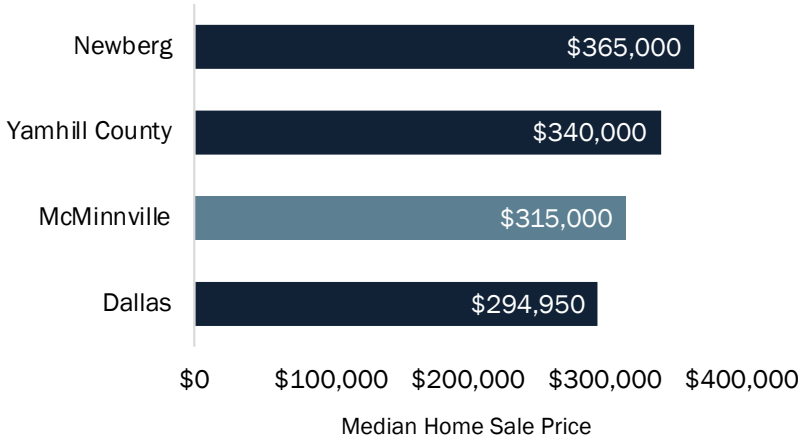
Changes in Housing Costs

With a median sales price of \$315,000 in February 2019, McMinnville’s housing sales prices are slightly lower than that of Yamhill County. McMinnville housing prices are increasing, and they have outpaced growth in median household incomes.

McMinnville’s median home sales price was lower than the County’s median home sales price in February 2019 (by \$25,000).

Exhibit 57. Median Sales Price, McMinnville and Comparison Geographies, February 2019

Source: Redfin.

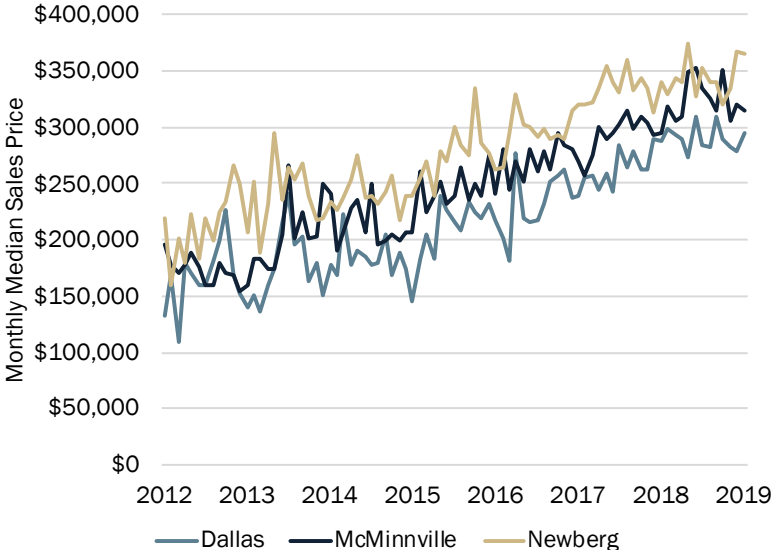


Between February of 2012 and February of 2019, median home sales prices in McMinnville rose steadily, increasing from \$196,400 to \$350,000.

In this same time, McMinnville’s median home sales price increased by 78%. In comparison, Dallas’s median home sales price increased by 108% and Newberg’s by 70%.

Exhibit 58. Monthly Median Sales Price, McMinnville and Comparison Geographies, February 2012 through February 2019

Source: Redfin Median Sales Data 2018.

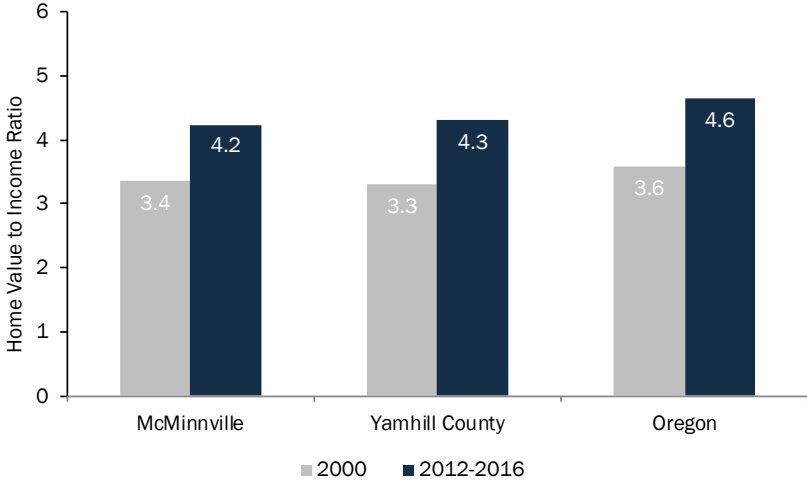


Since 2000, housing costs in McMinnville, like comparison regions, have increased faster than incomes.

The median value of a house in McMinnville was 3.4 times the median household income in 2000 and 4.2 times median household income in 2012–2016.

Exhibit 59. Ratio of Median Housing Value to Median Household Income, McMinnville, Yamhill County, and Oregon, 2000 to 2012–2016⁴⁶

Source: US Census Bureau, 2000 Decennial Census, Tables HCT012 and H085, and 2012–2016 ACS, Tables B19013 and B25077.



⁴⁶ This ratio compares the median value of housing in McMinnville and other places to the median household income. Inflation-adjusted median owner values in McMinnville increased from \$187,469 in 2000 to \$200,800 in 2012–2016. Over the same period, median income decreased from \$55,930 to \$47,460.

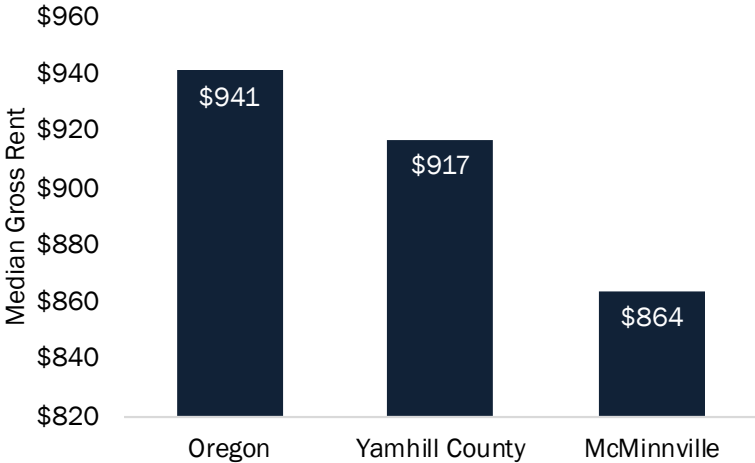
Changes in Rental Costs

Rent costs in McMinnville are lower than in Yamhill County and Oregon as a whole. The following charts show gross rent (which includes the cost of rent plus utilities) for McMinnville in comparison to the County and State. The section uses 2012–2016 ACS data, as findings are not safe harbor assumptions (which require use of data from the 2013–2017 census).

The median gross rent in McMinnville is \$864, which is \$53 lower than Yamhill’s median and \$77 lower than Oregon’s median.

Exhibit 60. Median Gross Rent in McMinnville, Yamhill County, and Oregon, 2012–2016

Source: US Census Bureau, 2012–2016 ACS Table B25064.

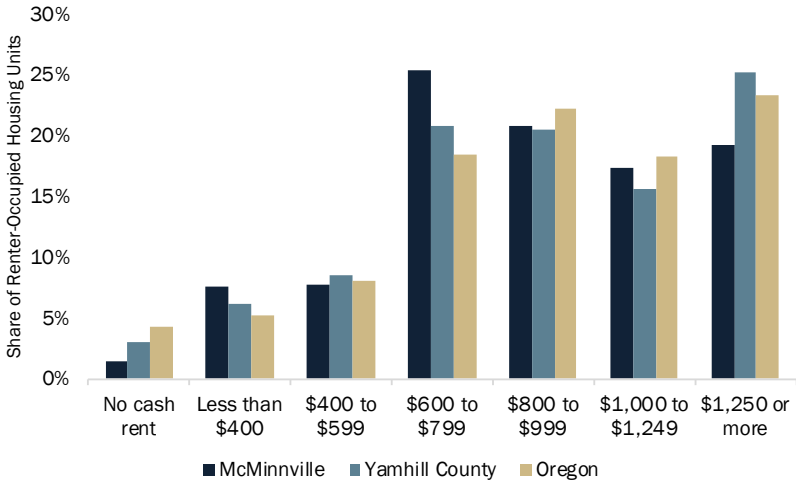


About 62% of renters in McMinnville pay less than \$1,000 per month.

About 19% of McMinnville’s renters pay \$1,250 or more in gross rent per month, a smaller share than Yamhill County (25%) and Oregon (23%).

Exhibit 61. Gross Rent in McMinnville, Yamhill County, and Oregon, 2012–2016

Source: US Census Bureau, 2012–2016 ACS Table B25063.



Housing Affordability

A typical standard used to determine housing affordability is that a household should pay no more than 30% of household income for housing, including payments and interest or rent, utilities, and insurance. HUD guidelines indicate that households paying more than 30% of their income on housing experience “cost burden,” and households paying more than 50% of their income on housing experience “severe cost burden.” Using cost burden as an indicator is one method of determining how well a city is meeting the Goal 10 requirement to provide housing that is affordable to all households in a community.

About 36% of McMinnville’s households are cost burdened. Renters experience much higher rates of cost burden than homeowners: 52% of renter households in McMinnville are cost burdened, compared with 25% of homeowners. Overall, McMinnville has a similar share of cost-burdened households as Yamhill County and the State overall. McMinnville also has a smaller share of cost-burdened households (total) and cost-burdened renter households than other cities in close proximity (Newberg, Independence, and Monmouth).

For example, about 23% of McMinnville households have incomes of less than \$25,000 per year, which is about 50% of McMinnville’s median household income. Based on HUD’s 30% cost-burden threshold, these households can afford monthly housing costs of less than \$629 per month. Most, but not all, of these households are cost burdened. For instance, as Exhibit 66 illustrates, 86% of households earning less than \$20,000 per year are cost burdened while only 20% of households earning between \$50,000 and \$75,000 are cost burdened.

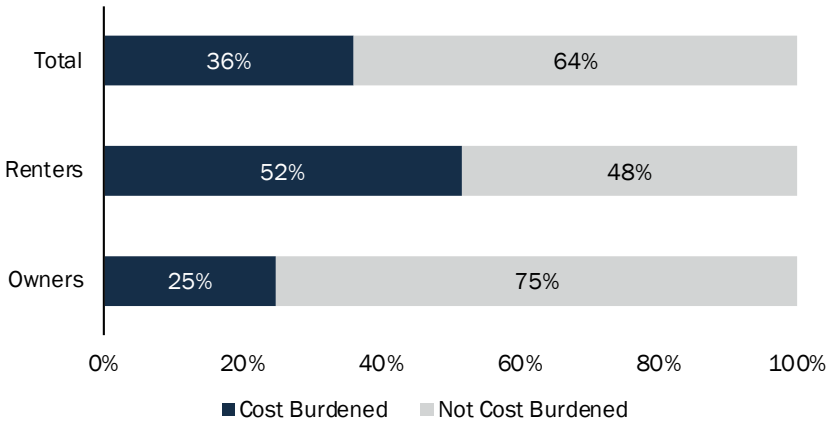
The section uses 2012–2016 ACS data, as findings are not safe harbor assumptions (which require use of data from the 2013–2017 census).

Renters are much more likely to be cost burdened than homeowners.

Cost-burden rates are higher among renters in McMinnville than among homeowners. In 2016, about 52% of renters were cost burdened, compared to 25% of homeowners.

Exhibit 62. Housing Cost Burden by Tenure, McMinnville, 2012–2016

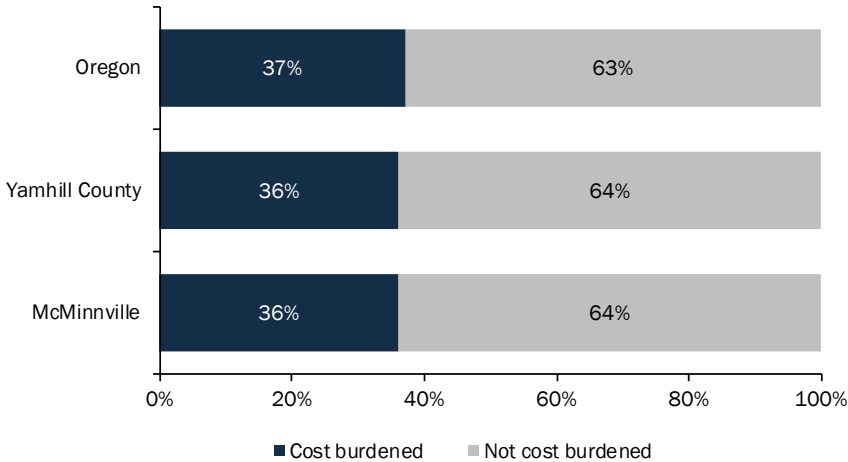
Source: US Census Bureau, 2012–2016 ACS Tables B25091 and B25070.



The share of McMinnville households that are cost burdened is similar to the share of cost-burdened households in the County and State.

Exhibit 63. Housing Cost Burden, McMinnville and Comparison Regions, 2012–2016

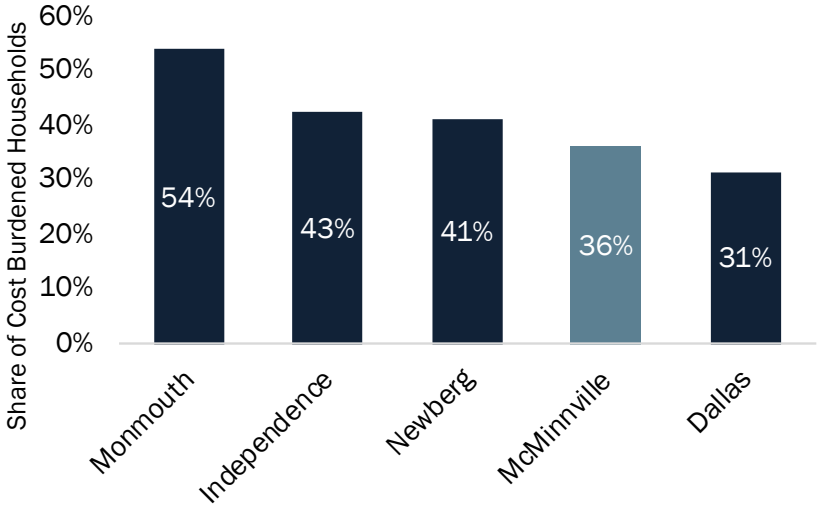
Source: US Census Bureau, 2012–2016 ACS Tables B25091 and B25070.



Other communities in the region have a larger share of cost-burdened households than McMinnville does.

Exhibit 64. Cost-Burdened Households, McMinnville and Comparison Cities, 2012–2016

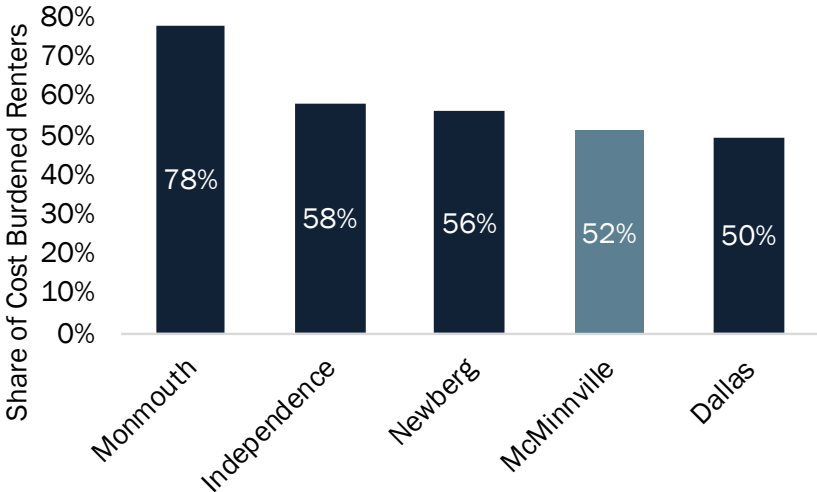
Source: US Census Bureau, 2012–2016 ACS Tables B25091 and B25070.



Similar to other comparison cities in the region, over half of renter households in McMinnville are cost burdened.

Exhibit 65. Cost-Burdened Renter Households, McMinnville and Comparison Cities, 2012–2016

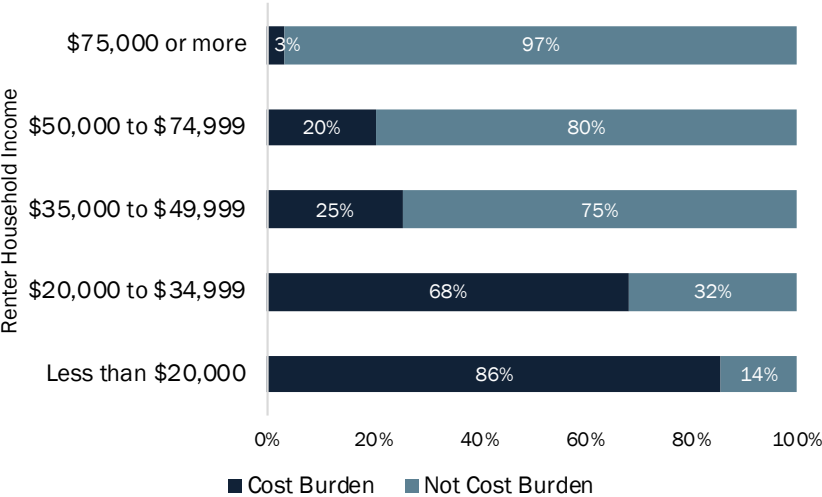
Source: US Census Bureau, 2012–2016 ACS Table B25070.



Households with incomes less than \$35,000 experience much higher rates of cost burden than higher-income households. Eighty-six percent of households, making less than \$20,000 per year were cost burdened and 68% of households making between \$20,000 and \$35,000 were cost burdened.

Exhibit 66. Cost-Burdened Households by Household Income, McMinnville, 2013–2017

Source: US Census Bureau, 2013–2017 ACS Table B25074.



While cost burden is a common measure of housing affordability, it does have some limitations. Two important limitations are:

- A household is defined as cost burdened if the housing costs exceed 30% of their income, regardless of actual income. The remaining 70% of income is expected to be spent on nondiscretionary expenses, such as food or medical care, and on discretionary expenses. Households with higher incomes may be able to pay more than 30% of their income on housing without impacting the household’s ability to pay for necessary nondiscretionary expenses. Thus, some households with higher incomes may choose housing that technically results in cost burden, even if other housing options are available that would not result in cost burden.
- Cost burden compares income to housing costs and does not account for accumulated wealth. As a result, the estimate of how much a household can afford to pay for housing does not include the impact of a household’s accumulated wealth. For example, a household with retired people may have relatively low income but may have accumulated assets (such as profits from selling another house) that allow them to purchase a house that would be considered unaffordable to them based on their household income.

Another way of exploring the issue of financial need is to review housing affordability at varying levels of household income.

Fair market rent for a 2-bedroom apartment in Yamhill County is \$1,330

Exhibit 67. HUD Fair Market Rent (FMR) by Unit Type, Yamhill County, 2018

Source: US Department of Housing and Urban Development.

\$1,026	\$1,132	\$1,330	\$1,935	\$2,343
Studio	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom

A household must earn at least \$25.58 per hour to afford a two-bedroom unit in Yamhill County.

Exhibit 68. Affordable Housing Wage, Yamhill County, 2018

Source: US Department of Housing and Urban Development; Oregon Bureau of Labor and Industries.

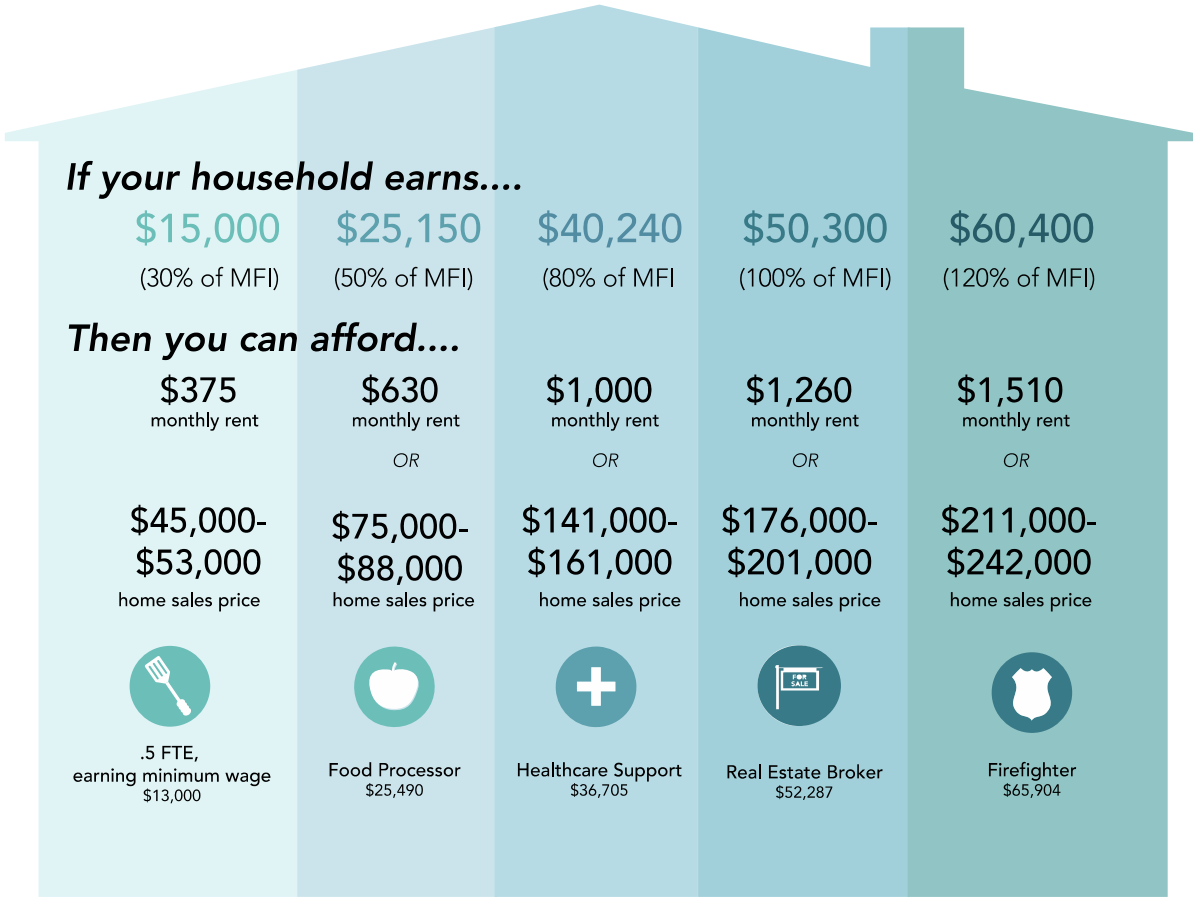
\$25.58/hour

Affordable Housing Wage for Two-Bedroom Unit in Yamhill County

A household earning the median household income (\$50,300) can afford a monthly rent of about \$1,260 or a home roughly valued between \$176,000 and \$201,000, as illustrated in Exhibit 69. A family earning the median family income (\$58,620) can afford a monthly rent of about \$1,470 or a home roughly valued between \$205,000 and \$234,000.

Exhibit 69. Financially Attainable Housing, by Median Household Income (MHI), McMinnville (\$50,300), 2017

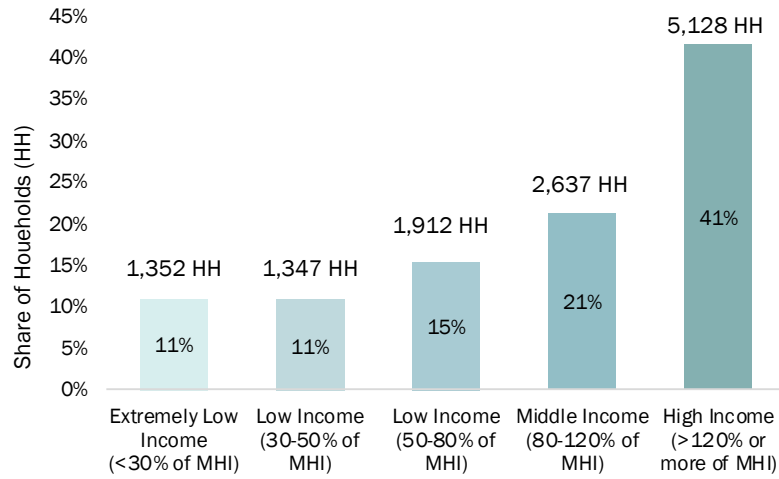
Source: US Census Bureau, 2013–2017 ACS Table B25119.



About 52% of McMinnville’s households have incomes less than \$53,200 and cannot afford a two-bedroom apartment at Yamhill County’s fair market rent (FMR) of \$1,330.

Exhibit 70. Share of Households, by Median Household Income (MHI) for McMinnville (\$50,300), 2017

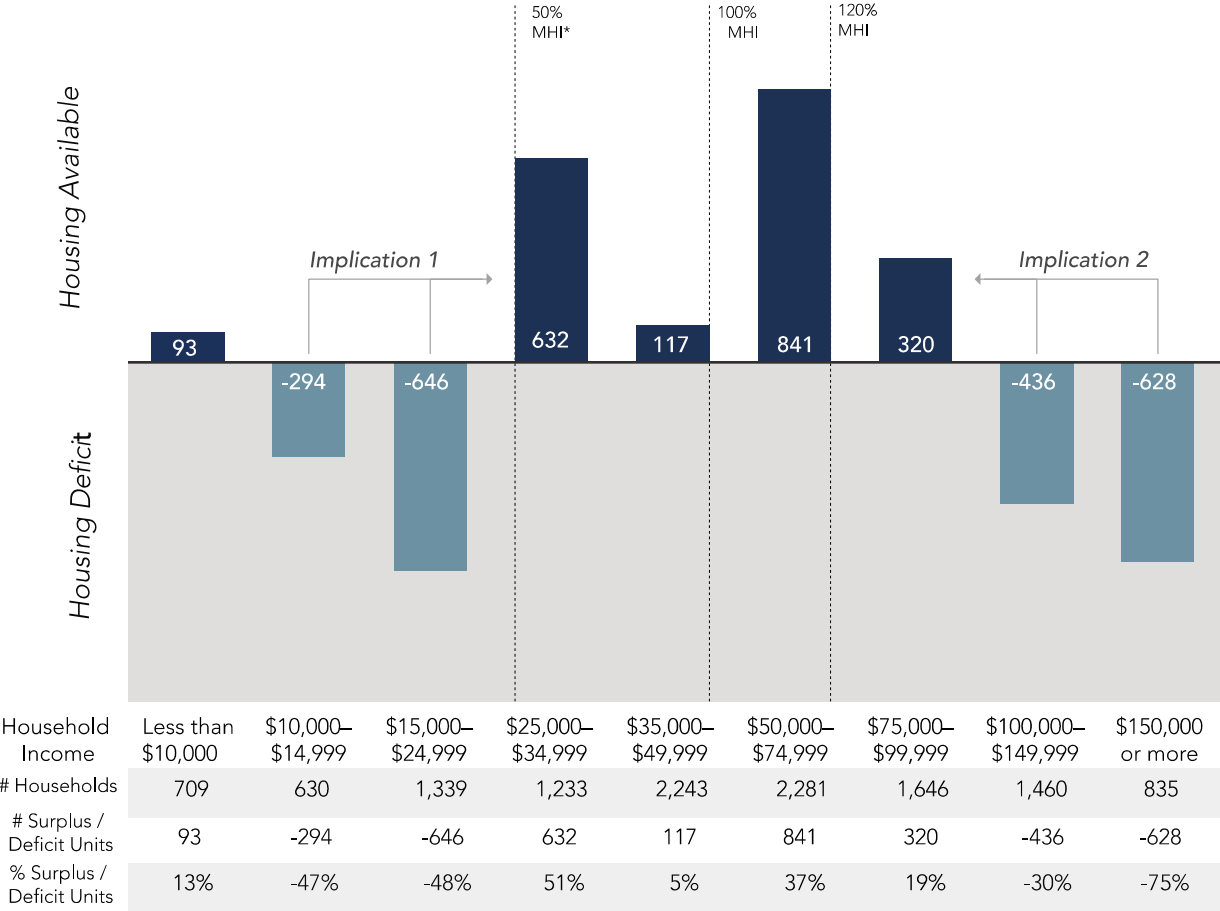
Source: US Census Bureau, 2013–2017 ACS Table 19001 and B25119.



Comparing the number of households by income with the number of units affordable to those households in McMinnville reflects a current deficit of housing affordable to households earning between \$10,000 and \$25,000 annually and households earning \$100,000 or more annually. McMinnville has a deficit of all types of government-assisted housing; more affordable housing types (such as manufactured housing in parks and lots, small-homes, duplexes, triplexes, quadplexes, small-lots, and apartments); and housing types of higher values (such as high-amenity or executive housing).

Exhibit 71. Affordable Housing Costs and Units by Income Level, McMinnville, 2017

Source: US Census Bureau, 2012–2016, ACS Table B19001, B25075, and B25063



*ACS 2013-2017 five-year estimates, table S1903.

Implication 1
Some lower-income households live in housing that is more expensive than they can afford because affordable housing is not available. These households are cost burdened.

Implication 2
Some higher-income households choose housing that costs less than they can afford. This may be the result of the household's preference or it may be the result of a lack of higher-cost and higher-amenity housing that would better suit their preferences.

Summary of the Factors Affecting McMinnville's Housing Needs

The purpose of the analysis thus far has been to provide background on the kinds of factors that influence housing choice, and in doing so, to convey why the number and interrelationships among those factors ensure that generalizations about housing choice are difficult to make and prone to inaccuracies.

There is no question that age affects housing type and tenure. Mobility is substantially higher for people ages 20 to 34. People in this age group will also have, on average, less income than people who are older. These factors mean that younger households are much more likely to be renters, and renters are more likely to be in multifamily housing (58% in McMinnville).

The data conveys what more detailed research has shown and what most people understand intuitively: life cycle and housing choice interact in ways that are predictable in the aggregate; age of the household head is correlated with household size and income; household size and age of household head affect housing preferences; and income affects the ability of a household to afford a preferred housing type. The connection between socioeconomic and demographic factors and housing choice is often described informally by giving names to households with certain combinations of characteristics: the "traditional family," the "never-marrieds," the "dinks" (dual-income, no kids), the "empty nesters."⁴⁷ Simply looking at the long wave of demographic trends can provide good information for estimating future housing demand.

Thus, one is ultimately left with the need to make a qualitative assessment of the future housing market. The following is a discussion of how demographic and housing trends are likely to affect housing in McMinnville over the next twenty years:

- **Growth in housing will be driven by growth in population.** Between 1990 and 2017, McMinnville's population grew by 15,771 people or 88%. The population in McMinnville's UGB is forecast to grow from 36,238 (in 2021) to 47,498 (in 2041), an increase of 11,260 people (31%).⁴⁸
- **Housing affordability will be a growing challenge in McMinnville.** Housing affordability is a challenge in Oregon in general, and McMinnville is affected by this statewide trend. Housing prices are increasing faster than incomes in McMinnville and Yamhill County, consistent with state and national challenges. While 23% of McMinnville housing is multifamily housing, the County has a relatively small supply of multifamily housing (15%), which constrains the supply of affordable housing for the region—thus affecting the City.⁴⁹ For instance, over half of renters in McMinnville are

⁴⁷ See *Planning for Residential Growth: A Workbook for Oregon's Urban Areas* (June 1997).

⁴⁸ This forecast is based on McMinnville's official forecast from the Oregon Population Forecast Program for the 2021 to 2041 period.

⁴⁹ The share of multifamily housing stock is driven by demographics and market factors. Often, as the population within cities increases, the share of single-family detached housing decreases.

cost burdened, which is indicative of a lack of affordable rental units, such as multifamily and other housing types (e.g., single-family detached and single-family attached dwelling units). McMinnville’s key challenge over the next twenty years is providing opportunities for not only the development of housing of all types but development across the affordability spectrum; in particular, there is a need for more affordable housing types, which developers may be less incentivized to develop.

- **Without substantial changes in housing policy (at all levels of government), on average, future housing will look a lot like past housing.** That is the assumption that underlies any trend forecast, and one that allows some quantification of the composition of demand for new housing.

The City’s residential policies can impact the amount of change in McMinnville’s housing market to some degree. If the City adopts policies to increase opportunities to build housing types that are affordable to low- and moderate-income households, a larger percentage of new housing developed over the next twenty years in McMinnville may be relatively affordable compared to the past.

Examples of policies that the City could adopt to achieve this outcome include (1) allowing a wider range of housing types (e.g., duplexes, triplexes, town houses, cottage clusters, or single-lot small-home subdivisions) in single-family zones to promote inclusivity and equity, ensuring that there is sufficient land zoned to allow single-family attached and multifamily housing and other innovative affordable housing development; (2) supporting development of government-subsidized affordable housing, and (3) encouraging multifamily residential development in downtown. Ultimately, the degree of change in McMinnville’s housing market, however, will depend on market demand for these types of housing in McMinnville, Yamhill County, and the greater region.

- **If the future differs from the past, and policy changes are prescribed, the future of housing in McMinnville is likely to move in the direction (on average) of smaller units and more diverse housing types.** Most, but not all, of the demographic evidence suggests that the bulk of the change should be in the direction of smaller average house and lot sizes for single-family housing. This includes providing opportunities for development of smaller single-family detached homes, town homes, and multifamily housing.

Key demographic and economic trends that will affect McMinnville’s future housing needs are: (1) the aging of Baby Boomers, (2) the aging of Millennials, and (3) the continued growth of the Hispanic and Latino population.

- *The Baby Boomer population is continuing to age.* By 2041, people 60 years and older will account for about 28% of the population in McMinnville (up from 23% in 2017). As the population ages, household sizes and homeownership rates will decrease. The majority of Baby Boomers are expected to remain in their homes as long as possible, downsizing or moving when illness or other issues cause them to move. With Baby Boomers’ debt “reaching \$5.3 trillion by 2030. Many retirees may [also] downsize their homes to pay off debt and boost retirement savings,”

which will open up housing opportunities for Gen Xers and Millennials.⁵⁰ Demand for specialized senior housing may grow in McMinnville, such as visitable age-restricted housing and housing in a continuum of care (from independent living to in-home nursing care).

- *Millennials will continue to age.* By 2041, Millennials will be roughly between about 41 years old to 61 years old. As they age, generally speaking, their household sizes will increase, and homeownership rates will peak by about age 55. Between 2021 and 2041, Millennials will be a key driver in demand for housing for families with children. The ability to retain Millennials will depend on availability of affordable rental and ownership housing. The decline in homeownership among the Millennial generation has more to do with financial barriers rather than the preference to rent.⁵¹
- *The Hispanic and Latino population will continue to grow.* The US Census projects that by about 2041, the Hispanic and Latino population will account for about one-quarter of the nation's population. The share of the Hispanic and Latino population in the western United States is likely to be higher. The Hispanic and Latino population currently accounts for about 22% of McMinnville's population. In addition, the Hispanic and Latino population is generally younger than the U.S. average, with many Hispanic and Latino people belonging to the Millennial generation.

Hispanic and Latino population growth will be an important driver in growth of housing demand, both for owner- and renter-occupied housing. Growth in the Hispanic and Latino population will drive demand for larger housing for families with children. Given the lower income for Hispanic and Latino households, especially first-generation immigrants, growth in this group will also drive demand for affordable housing, both for ownership and renting.⁵²

In summary, an aging population, increasing housing costs (although lower than the region), housing affordability concerns for Millennials and the Hispanic and Latino populations, and other variables support the need for a broader array of housing choices than are available today.

⁵⁰ V. Srinivas and U. Goradia, "The Future of Wealth in the United States," Deloitte Insights, 2015. <https://www2.deloitte.com/insights/us/en/industry/investment-management/us-generational-wealth-trends.html>

⁵¹ Ibid.

⁵² The following articles describe housing preferences and household income trends for Hispanic and Latino families, including differences in income levels for first-, second-, and third-generation households. In short, Hispanic and Latino households have a lower median income than the national averages. First- and second-generation Hispanic and Latino households have median incomes below the average for all Hispanic and Latino households. Hispanic and Latino households have a strong preference for homeownership, but availability of mortgages and availability of affordable housing are key barriers to homeownership for this group.

Pew Research Center, *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, February 7, 2012.

National Association of Hispanic Real Estate Professionals, *2014 State of Hispanic Homeownership Report*.

Growth of seniors will drive demand for smaller single-family detached housing and town homes, as well as multifamily rentals, age-restricted housing, and assisted-living facilities. Growth in Millennials and the Hispanic and Latino population will drive demand for smaller and larger affordable housing types, including demand for single-family units (many of which may be ownership units) and for multifamily units (many of which may be rental units). Growth in the Hispanic and Latino population and the aging of the Baby Boomer generation will increase demand for multigenerational housing. McMinnville's share of households (41%) earning more than 120% of median household income will increase demand for high-amenity housing or all types.

The purpose of the housing forecasting in this study is to get an approximate idea about the future so policy choices can be made today. Economic forecasters regard any economic forecast more than three (or at most five) years out as highly speculative. At one year, one is protected from being disastrously wrong by the sheer inertia of the economic machine. But a variety of factors or events could cause growth forecasts to be substantially different.

5. Housing Need in McMinnville

This chapter analyzes housing needs in McMinnville for the next 5, 10, 20, and 46 years. Much of the emphasis is on the 20-year forecast, as it is required by Goal 10. The analysis also provides projections of housing by type. Depending on the development configurations and character of McMinnville’s neighborhoods, different areas of the City may have distinct or dissimilar housing types and densities. The aggregate total density is used in this analysis, as well as densities that correspond to current zoning classifications.

Project New Housing Units Needed in the Next 5, 10, 20, and 46 Years

The results of the housing needs analysis are based on (1) the official population forecast for growth in McMinnville over the 5-, 10-, 20-, and 46-year planning periods, (2) information about McMinnville’s housing market relative to Yamhill County and nearby comparison cities, and (3) the demographic composition of McMinnville’s existing population and expected long-term changes in the demographics of Yamhill County.

Projection for Housing Growth

This section describes the key assumptions and presents an estimate of new housing units needed in McMinnville between 2021 and 2041, shown in Exhibit 72. The key assumptions are based on the best available data and may rely on safe harbor provisions (or safe harbor methodologies), when available.⁵³

- **Population.** A 20-year population forecast (in this instance, 2021 to 2041) is the foundation for estimating needed new dwelling units. McMinnville’s urban area is forecast to grow from 36,238 persons in 2021 to 47,498 persons in 2041, an increase of 11,260 people.⁵⁴
- **Persons in Group Quarters.** Typically, persons in group quarters do not consume standard housing units: thus, any forecast of new people in group quarters is typically derived from the population forecast for the purpose of estimating housing demand. Group quarters can have a big influence on housing in cities with colleges (dorms), prisons, or a large elderly population (nursing homes). In general, any new requirements for these housing types will be met by institutions (colleges,

⁵³ A safe harbor is an assumption that a city can use in a housing needs analysis, which the State has said will satisfy the requirements of Goal 14. OAR 660-024 defines a safe harbor as “an optional course of action that a local government may use to satisfy a requirement of Goal 14. Use of a safe harbor prescribed in this division will satisfy the requirement for which it is prescribed. A safe harbor is not the only way, or necessarily the preferred way, to comply with a requirement and it is not intended to interpret the requirement for any purpose other than applying a safe harbor within this division.”

⁵⁴ This forecast is based on McMinnville’s official forecast from the Oregon Population Forecast Program for the 2021 to 2041 period.

government agencies, health-care corporations) operating outside what is typically defined as the housing market. Nonetheless, group quarters require residential land. They are typically built at densities that are comparable to that of multifamily dwellings.

The 2013–2017 American Community Survey shows that 5% of McMinnville’s population was in group quarters. However, the population in group quarters, in total number, has declined over the last decade. City of McMinnville staff and the Project Advisory Committee considered three options⁵⁵ to address the population in group quarters. Staff recommended—and the majority of the Project Advisory Committee agreed—that for the purpose of this analysis, we assume that group quarters will be met through the same land needs as the net new population without allocating housing to group quarters separately (option 3). This assumption does not mean that we are assuming zero group quarters for the planning periods.

- **Household Size.** OAR 660-024 established a safe harbor assumption for average household size—which is the figure from the current Decennial Census at the time of the analysis. According to the 2013–2017 American Community Survey, the average household size in McMinnville was 2.55 people. Thus, for the 2021 to 2041 period, we assume an average household size of 2.55 persons.
- **Vacancy Rate.** The Census defines vacancy as "unoccupied housing units . . . determined by the terms under which the unit may be occupied, e.g., for rent, for sale, or for seasonal use only." The Census determines vacancy status and other characteristics of vacant units by enumerators obtaining information from property owners and managers, neighbors, rental agents, and others.

Vacancy rates are cyclical and represent the lag between demand and the market’s response to demand for additional dwelling units. Vacancy rates for rental and

⁵⁵ **Option 1:** Use the “share method,” then assign one person per group quarter, and assign group quarters to land need at the same density as multifamily development.

Option 2a: Use the “share method,” then assign an analogous household size, and then apply that to the population to calculate land needs. Two Project Advisory Committee members requested this method instead of Option 1.

Option 2b: Use the “share method,” then assign a direct group quarters population per acre estimate. This method directly assigns population density for group quarters rather than rely on use of an interim assignment step analogous to household size.

Option 3: Do not use the “share method.” Instead, use assumptions and methods based on McMinnville-specific group quarters data and PSU’s official population forecast for McMinnville. This option assigns all new net population growth to housing units. This method assumes the population in group quarters at Linfield and the jail will remain relatively constant. The population in other group quarters represents less than 1% of McMinnville’s current population. Group quarters have also remained relatively constant and have not experienced a consistent growth trend in recent years. The group quarters population segment represents a declining share of overall population. The needed housing mix reflects a higher share of multifamily housing than the historic share. The land needs and densities for multifamily housing and group quarters are assumed to be equivalent. Without differentiating between population in multifamily housing and group quarters, the identified land needs would meet the same needs, whether the population is in housing or in group quarters.

multifamily units are typically higher than those for owner-occupied and single-family dwelling units.

OAR 660-024 established a safe harbor assumption for vacancy rate—which is the figure from the current Census. According to the 2013–2017 American Community Survey, McMinnville’s vacancy rate was 5.4%. For the 2021 to 2041 period, we assume a vacancy rate of 5.4%.

McMinnville will need 4,657 new dwelling units over the 20-year period from 2021 to 2041, or an average of 233 dwelling units annually.

Exhibit 72. Forecast of Demand for New Dwelling Units, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest

Variable	New Dwelling Units (2021-2041)
Change in persons	11,260
Average household size	2.55
New occupied DU	4,416
<i>times</i> Aggregate vacancy rate	5.4%
<i>equals</i> Vacant dwelling units	241
Total new dwelling units (2021-2041)	4,657
Annual average of new dwelling units	233

Exhibit 73 presents McMinnville’s forecast of demand for new dwelling units over McMinnville’s other various planning horizons. It shows that McMinnville will have demand for about 1,136 new dwelling units between 2021 and 2026, and another 1,169 new dwelling units between 2026 and 2031 (totaling 2,305 for the 10-year period). McMinnville will have demand for approximately 10,986 new dwelling units for the 46-year period between 2021 and 2067.

Exhibit 73. Forecast of Demand for New Dwelling Units in 5, 10, 20, and 46 years, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

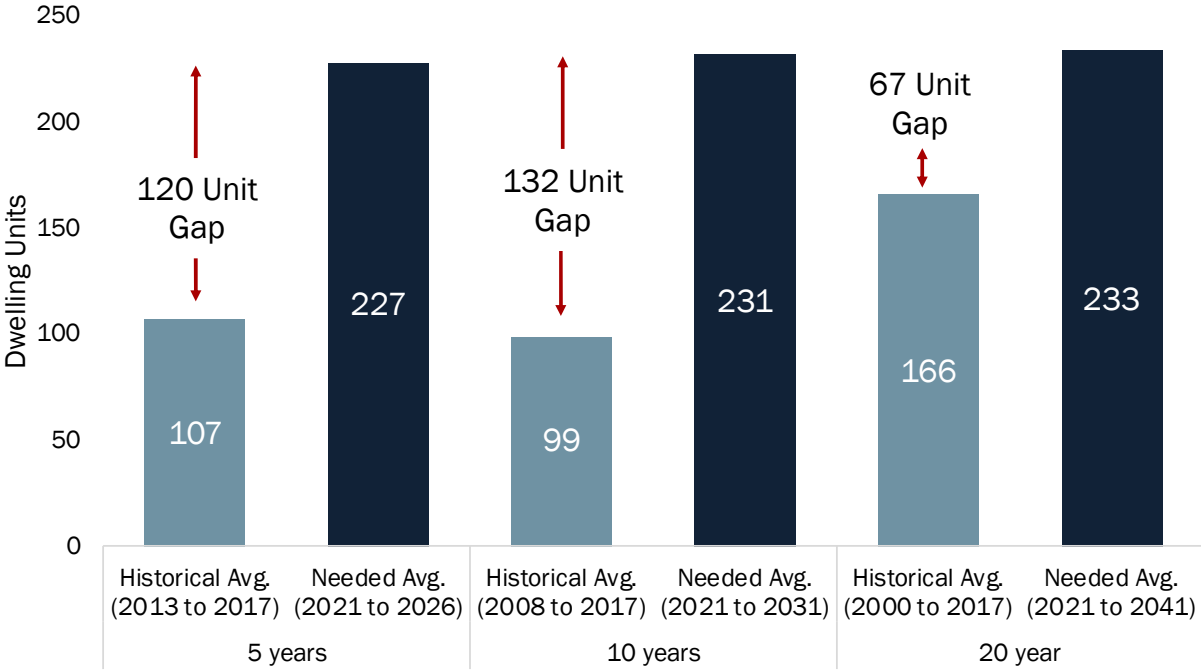
Source: Calculations by ECONorthwest

Variable	New Dwelling Units			
	5-Year (2021 to 2026)	10-Year (2021 to 2031)	20-Year (2021 to 2041)	46-Year (2021 to 2067)
Change in persons	2,746	5,575	11,260	26,565
Average household size	2.55	2.55	2.55	2.55
New occupied DU	1,077	2,186	4,416	10,418
<i>times</i> Aggregate vacancy rate	5.4%	5.4%	5.4%	5.4%
<i>equals</i> Vacant dwelling units	59	119	241	568
Total new dwelling units	1,136	2,305	4,657	10,986
Annual average of new dwelling units	227	231	233	234

As illustrated in Exhibit 74, if production of housing in McMinnville follows historic trends, the market will not produce enough housing to meet all of McMinnville’s projected housing needs.

Exhibit 74. Comparison of Historical Production and Future Demand for Housing, McMinnville, 2000–2017 and 2021–2041

Source: City of McMinnville permit database. Calculations by ECONorthwest.



Projection for Housing Growth Before 2021

McMinnville’s 20-year planning horizon begins in 2021, resulting in an interim period during which time McMinnville will have additional population growth, new residential development, and consumption of buildable land. McMinnville’s housing strategy will address these shorter-term needs, and the land-sufficiency analysis will reflect the additional land consumed between 2018 and 2021.

The Portland State University population forecast shows growth of about 1,480 people between 2018 and 2021, resulting in a need for 612 new dwelling units.⁵⁶ The population locating in McMinnville between 2018 and 2021 is considered part of the “existing population” at the beginning of the planning period, which begins in 2021. The existing population does not need to be added into the population forecast for 2021 to 2041 or the forecasts for the 5-, 10-, and 46-year planning periods. Buildable land is required to accommodate these units. Therefore, to estimate the capacity of the land supply in 2021 (at the beginning of the 20-year planning period), this analysis deducts the housing units which require buildable land between 2018-

⁵⁶ According to Portland State University’s Population Research Center, McMinnville UGB had 34,293 people in 2017. ECONorthwest extrapolated the population in 2017 to 34,758 persons in 2018. McMinnville UGB forecasted that the population in 2021 will be 36,238 people (Exhibit 29), resulting in 1,480 new persons between 2018 and 2021. Using the assumptions presented in Exhibit 75, McMinnville will have demand for approximately 612 new dwelling units between 2018 and 2021.

2021 from the capacity of land in 2018 to determine the remaining capacity of land in 2021. This analysis is presented in Chapter 6.

McMinnville will have demand for 612 new dwelling units between 2018 and 2021.

Exhibit 75. Forecast of Demand for New Dwelling Units, McMinnville UGB, 2018 to 2021

Source. Calculations by ECONorthwest.

Variable	New Dwelling Units (2018-2021)
Change in persons	1,480
Average household size	2.55
New occupied DU	580
times Aggregate vacancy rate	5.4%
equals Vacant dwelling units	32
Total new dwelling units (2018-2021)	612

Projection for Housing Growth by Housing Type

This section describes the factors that influenced the assumptions for the housing forecast. It also presents the housing forecast by housing type. Appendix B outlines the scenario models presented to the Project Advisory Committee, which informed their recommendation for housing mix (a core assumption for the housing forecast).

Factors Influencing the Needed Mix and Density Determination

With a population over 25,000, McMinnville is subject to the provisions of ORS 197.296(1)-(9). Goal 10 requires cities to make a housing needs projection. OAR 660-008(4) provides the specific guidance:

- (4) A housing needs projection refers to a local determination, justified in the plan, of the mix of housing types, amounts, and densities that will be:
 - (a) commensurate with the financial capabilities of present and future area residents of all income levels during the planning period;
 - (b) consistent with any adopted regional housing standards, state statutes, and Land Conservation and Development Commission administrative rules; and
 - (c) consistent with Goal 14 requirements.

To make the housing needs determination, we use the information presented in the housing needs analysis. We use the following definitions to distinguish between housing need and housing market demand, which we believe to be consistent with definitions in state policy:

- *Housing need* can be defined broadly or narrowly. The broad definition is based on the mandate of Goal 10 that requires communities to plan for housing that meets the needs of households at all income levels. Goal 10, though it addresses housing, emphasizes the

impacts on the households that need that housing. Since everyone needs shelter, Goal 10 requires that a jurisdiction address, at some level, how every household (and group quarters population) will be affected by the housing market over a 20-year period. In short, housing need is addressed through the local housing needs projection.

- *Housing market demand* is what households demonstrate they are willing or able to purchase (own or rent) in the market place. Growth in population means growth in the number of households, which implies an increase in demand for housing units. That demand is met primarily by the construction of new housing units by the private sector based on its judgments about the types of housing that will be absorbed by the market. ORS 197.296 includes a market supply component, called a buildable land needs analysis,⁵⁷ which must consider the density and mix of housing developed over the previous five years or since the current periodic review, whichever is greater. In concept, what got built in that five-year period, or longer, was the effective demand for new housing of those who can afford to purchase housing in the market: it is the local equilibrium of demand factors, supply factors, and price.

Cities are required to determine the average density and mix of needed housing over the next 20 years (ORS 197.296(7)). McMinnville is using a 2021 to 2041 analysis period. The determination of needed density and mix over the 2021 to 2041 period must consider the five factors listed in ORS 197.296(5) that may affect future housing need:

(a) Except as provided in paragraphs (b) and (c) of this subsection, the determination of housing capacity and need pursuant to subsection (3) of this section must be based on data relating to land within the urban growth boundary that has been collected since the last periodic review or five years, whichever is greater. The data shall include:

(A) the number, density, and average mix of housing types of urban residential development that have actually occurred;

(B) trends in density and average mix of housing types of urban residential development;

(C) demographic and population trends;

(D) economic trends and cycles; and

(E) the number, density, and average mix of housing types that have occurred on the buildable lands described in subsection (4)(a) of this section.

(5)(A)(A) AND (E) AVERAGE DENSITY AND MIX

Subsections (A) and (E) require similar data. Subsection (A) requires the number, density, and average mix of housing types of urban residential development that have actually occurred; while (E) requires the same data but for housing types that have occurred on the buildable lands. The density and mix analysis presented in Chapter 3 of this report is intended to comply

⁵⁷ ORS 197.296 (E) The number, density and average mix of housing types that have occurred on the buildable lands described in subsection (4)(a) of this section.

with these two requirements. Exhibit 76 shows the average housing mix of units by type for each zone and net density by type for each zone, and overall by zone and type.

Exhibit 76. Historical Average Density and Mix, McMinnville, 2000 through July 2018

Source: City of McMinnville Permit Database.

Plan Designation and Zone	Single-Family Detached		Single-Family Attached		Multifamily		TOTAL	
	Mix of Units	Net Density	Mix of Units	Net Density	Mix of Units	Net Density	Mix of Units	Net Density
Commercial	0%	-	0%	-	33%	31.2	10%	31.2
C-3	0%	-	0%	-	33%	31.2	10%	31.2
Residential	100%	4.8	100%	12.3	67%	16.5	90%	6.0
O-R	0%	-	0%	-	6%	7.6	2%	7.6
R-1	21%	4.0	12%	9.5	0%	-	14%	4.1
R-2	47%	4.8	45%	12.3	23%	18.6	39%	5.8
R-3	5%	5.9	19%	10.6	1%	-	5%	6.8
R-4	27%	5.4	24%	17.6	37%	19.1	30%	7.9
Total	62%	4.8	8%	12.3	31%	18.2	100%	6.6

(5)(A)(B) TRENDS IN DENSITY AND AVERAGE MIX OF HOUSING TYPES OF URBAN RESIDENTIAL DEVELOPMENT

Housing mix is the mixture of housing types (e.g., single-family detached, single-family attached, or multifamily) within a city. State law requires a determination of the future housing mix in the community and allows that determination to be based on different periods: (1) the mix of housing built in the past five years or since the most recent periodic review, whichever time period is greater, (2) a shorter time period if the data will provide more accurate and reliable information, or (3) a longer time period if the data will provide more accurate and reliable information (ORS 197.296).

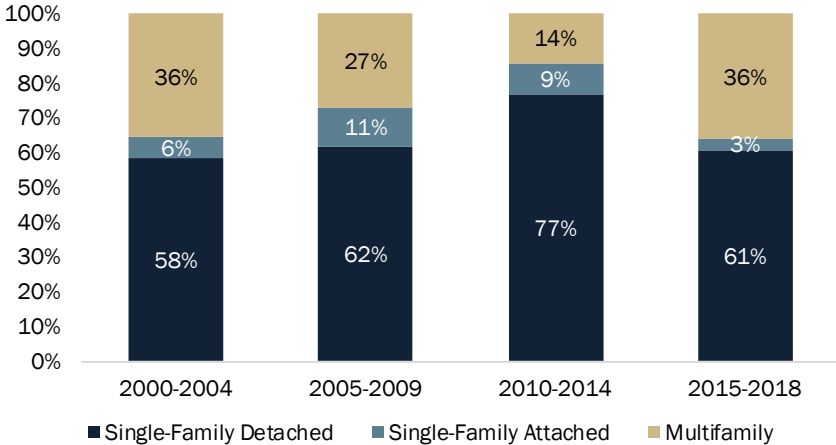
A majority share of new housing built in McMinnville, since 2000, has been single-family detached housing. Since 2015, about 36% of new housing built was multifamily, consistent with trends in the early 2000s. Single-family attached housing has consistently made up a smaller share of new housing built.

Since 2000, single-family detached housing predominated McMinnville’s housing market.

Single-family attached housing consistently makes up a smaller share of the housing stock built since 2000.

Exhibit 77. Trends in Housing Mix of New Units, McMinnville, 2000 to July 2018

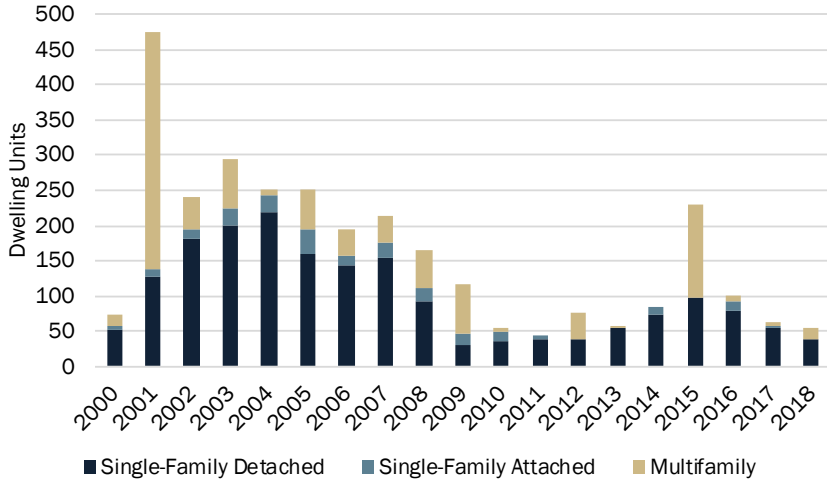
Source: McMinnville Building Permit Database.



Since 2000, 62% of housing permitted in McMinnville was single-family detached, 8% was single-family attached, and 31% was multifamily.

Exhibit 78. Trends in Housing Mix of New Units, McMinnville, 2000 to July 2018

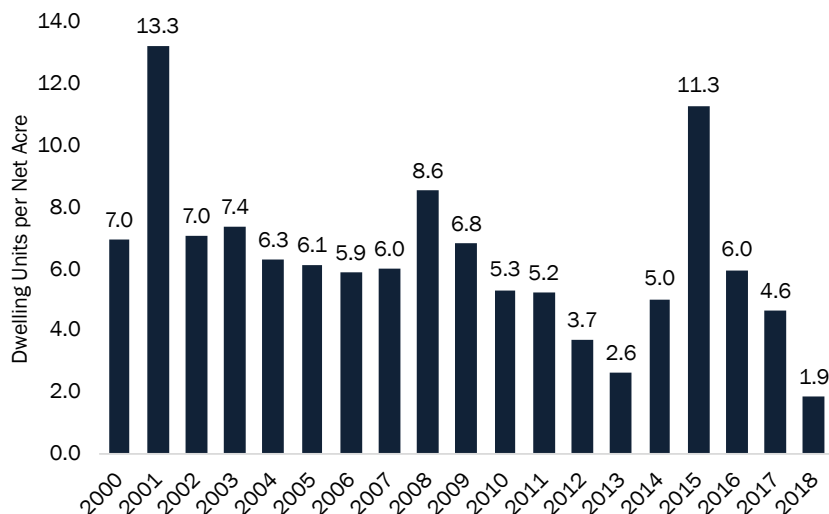
Source: McMinnville Building Permit Database.



Since 2000, McMinnville's average net density was 6.6 dwelling units per net acre.

Exhibit 79. Trends in Net Density of New Units, McMinnville, 2000 to July 2018

Source: McMinnville Building Permit Database. Note: Net density is dwelling units per net acre.



Housing density is the density of residential units by structure type, expressed in dwelling units per net or gross acre. The US Census does not track residential development density, so this study analyzes housing density based on new development between 2000 and July 2018.

Consistent with trends observed in other cities, considerable variation exists in residential density from year to year. While housing density averaged around 6.6 dwelling units per net acre since 2000, some years show a spike in density of over 10 dwelling units per net acre. In other years, density dipped below five dwelling units per net acre. Density is affected by many factors—housing type, housing mix, lot configurations, etc. With limited annual permitting, one large multifamily project can considerably change annual density findings (such as in 2001 and 2015).

(5)(A)(C) DEMOGRAPHIC AND POPULATION TRENDS

To understand what will influence McMinnville's housing market, it is important to consider demographic and population trends. The following factors will influence needed mix and density in McMinnville's future:

- Population in McMinnville is growing faster than the State and national average since 1990.
- Population in McMinnville is aging, and the cohort aged 60+ in Yamhill County will increase by about 56% by 2041.
- The share of the population that is Hispanic and Latino is growing faster than County and State averages since 2000. Per the most recent Decennial Census, Latino and Hispanic households were on average 1.5 persons larger.
- Overall, average household size is shrinking and the share of 1-person households in McMinnville has increased since 2000.

- Median household income and median family income is below County and State median incomes.
- While 41% of McMinnville households earn more than 120% of McMinnville’s median household income, about 50% of McMinnville households earn less than \$50,000 per year, compared to 43% of Yamhill County households.
- From 2017 to 2018, Point-in-Time homelessness increased by 30%.
- In the 2016–2017 school year, 3% of students experienced homelessness in Yamhill County.
- Approximately 13,500 people work in McMinnville, but 60% of those workers commute into McMinnville from other areas.

These trends—coupled with the forecast of new housing in McMinnville’s UGB for the 2021 to 2041 period (Exhibit 72)—suggest that, in the future, the need for new housing developed in McMinnville will include housing that is generally more affordable, with some housing located in walkable areas with access to services. Findings additionally suggest that in the future, McMinnville will need high-amenity housing types for the large share of households earning over 120% of McMinnville’s median family income. This assumption is additionally based on the following findings in the previous chapters:

- Demographic changes suggest moderate increases in demand for small-lot, small-home detached single-family housing, attached single-family housing, and multifamily housing. The key demographic trends that will affect McMinnville’s future housing needs are (1) the aging of Baby Boomers, (2) the aging of Millennials, and (3) the continued growth of the Hispanic and Latino population. Growth of these groups has the following implications for housing need in McMinnville:
 - *Baby Boomers.* Growth in the number of seniors will have the biggest impacts on demand for new housing through demand for housing types specific to seniors, such as assisted-living facilities or age-restricted developments. These households will make a variety of housing choices, including remaining in their homes as long as they are able, downsizing to smaller single-family homes (detached and attached) or multifamily units, moving into age-restricted manufactured home parks (if space is available), or moving into group housing (such as assisted-living facilities or nursing homes) as their health declines. Minor increases in the share of Baby Boomers who downsize to smaller housing will result in increased demand for smaller single-family detached, single-family attached, multifamily, and multigenerational housing types like accessory dwelling units. Some Baby Boomers may prefer housing in walkable neighborhoods with access to services.
 - *Millennials.* Over the next twenty years, Millennial households will continue to grow, but their share of the population will stay stable at about 25% of the population. The aging of Millennials will still result in increased demand for both ownership and rental opportunities, with an emphasis on housing that is

comparatively affordable. Some Millennials may prefer to locate in traditional single-family detached housing, others in town houses or multifamily housing.

- *The Hispanic and Latino population.* Growth in the number of Hispanic and Latino households will result in increased demand for housing of all types, both for ownership and rentals, with an emphasis on housing that is comparatively affordable. Hispanic and Latino households, particularly those that are foreign-born (11% of McMinnville’s population as of 2016) are more likely to be larger than average, often having more children and living in multigenerational households. The housing types that are most likely to be affordable to the majority of Hispanic and Latino households are existing lower-cost single-family housing, single-family housing with an accessory dwelling unit, and multifamily housing.
- About 36% of McMinnville’s households are cost burdened. Fifty-two percent of McMinnville’s renters are cost burdened, compared to 25% of homeowners. These factors indicate that McMinnville needs more affordable housing types, especially for renters. A household earning median household income (about \$50,300) could afford a home roughly valued between \$176,000 and \$201,000, which is below the current 2018 median sales price for single-family housing in McMinnville (about \$349,000).

McMinnville’s share of multifamily housing accounts for about 23% of the City’s housing stock. The majority of McMinnville’s multifamily buildings are five or more units (73%), indicating few “missing middle” multifamily housing types.

These findings suggest that McMinnville’s needed housing mix is for a broader range of housing types than are currently available in McMinnville’s housing stock, both for ownership and rent, as well as across the affordability spectrum. McMinnville will need to provide development opportunities over the next twenty years for traditional single-family detached housing, smaller single-family detached housing (e.g., cottages or small-lot single-family detached units), manufactured housing, accessory dwelling units, town houses, duplexes, triplexes, quadplexes, and apartment buildings. McMinnville needs housing across the affordability spectrum from affordable housing (including government-assisted housing) to high-amenity housing.

(5)(A)(D) ECONOMIC TRENDS AND CYCLES

Population growth in Oregon tends to follow economic cycles. Historically, Oregon’s economy is more cyclical than the nation’s, growing faster than the national economy during expansions and contracting more rapidly than the nation during recessions. Oregon grew more rapidly than the United States in the 1990s (which was generally an expansionary period) but lagged behind the United States in the 1980s. Oregon’s slow growth in the 1980s was primarily due to the nationwide recession early in the decade. As the nation’s economic growth slowed during 2007, Oregon’s population growth began to slow.

Despite this, McMinnville has grown at an average annual growth rate of 2.4% since 1990, faster than the nation, State, and County (1.0%, 1.4%, 1.8%). Migration is the largest component of

population growth in McMinnville. From 2000 to 2016, 67% of Yamhill County's new population (13,477 people) was a result of migration. According to the Joint Center for Housing Studies of Harvard, immigration will continue to play a role in accelerating growth in the coming years unless affected by macro-politics.

Building activity had not picked up since the recession, until the past three to five years. McMinnville is experiencing pent-up demand for housing, and competition has grown. As a result of increased housing costs and competition, McMinnville is experiencing a decrease in first-time homebuyers due to limited options and competition from wealthier households.

Housing instability is increasing in McMinnville, fueled by an unsteady and low-opportunity employment market. As of 2019, the minimum wage in Oregon was \$11.25 (an annual salary of \$23,400, or about 47% of median family income in McMinnville). A household must earn at least \$25.58 per hour to afford a two-bedroom unit in Yamhill County at fair market rent. Wages in Oregon remain below the national average, but they are at its highest point relative to the early 1980s. The Office of Economic Analysis reports that new Oregon Employment Department research "shows that median hourly wage increase for Oregon workers since 2014 has been 3.1 percent annually for the past three years."⁵⁸ These wage increases are "substantially stronger for the Oregonians who have been continually employed over the last three years."⁵⁹

By the end of 2018, the OEA forecasts 41,700 jobs will be added to Oregon's economy. This is an approximate annual growth of 2.2% in total nonfarm employment relative to 2017 levels.⁶⁰ The leisure and hospitality, construction, professional and business services, and health services industries are forecasted to account for well over half of the total job growth in Oregon for 2018. Oregon continues to have an advantage in job growth compared to other states, due to its industrial sector and in-migration flow of young workers in search of jobs. This information explains that, as the housing market continues to recover, and as Oregon's economy improves, Oregon will likely see an increase in household formation rates. Yamhill County and McMinnville will be affected by these state trends, which will result in continued demand for new houses.

⁵⁸ Office of Economic Analysis, "Oregon Economic and Revenue Forecast," 38(3), September 2018. <https://www.oregon.gov/das/OEA/Documents/forecast0918.pdf>.

⁵⁹ *Ibid.*

⁶⁰ *Ibid.*

Housing Forecast by Housing Type

The Project Advisory Committee recommended that Scenario 2 needed a housing mix assumption to inform the housing forecast by housing type (see Appendix B for a description of each scenario). The recommendation is presented below. The basis for the determination of needed housing mix in McMinnville is the demographic trends suggesting continued demand for a wider variety of housing types as well as the following assumptions:

- McMinnville’s official forecast for population growth shows that the City will add 11,260 people over the 20-year period. This new population will result in the need for 4,657 new dwelling units over the 20-year period.
- The recommended mix assumption for McMinnville’s needed housing mix was Scenario 2:
 - 55% of new housing will be single-family detached, a category which includes manufactured housing, accessory dwelling units, and cottage clusters. In the 2013–2017 period, 68% of McMinnville’s total existing housing stock was single-family detached.
 - 12% of new housing will be single-family attached. In the 2013–2017 period, 9% of McMinnville’s total existing housing stock was single-family attached.
 - 33% of new housing will be multifamily, a category which includes redevelopment. In the 2013–2017 period, 23% of McMinnville’s total existing housing stock was multifamily.

McMinnville will have demand for 4,657 new dwelling units over the 20-year period, 55% of which will be single-family detached housing.

Exhibit 80. Forecast of Demand for New Dwelling Units by Type, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest. Note: DU is dwelling unit.

Variable	Needed Mix
Needed new dwelling units (2021-2041)	4,657
Dwelling units by structure type	
Single-family detached	
Percent single-family detached DU	55%
<i>equals</i> Total new single-family detached DU	2,561
Single-family attached	
Percent single-family attached DU	12%
<i>equals</i> Total new single-family attached DU	559
Multifamily	
Percent multifamily	33%
<i>equals</i> total new multifamily	1,537
Total new dwelling units (2021-2041)	4,657

This analysis accounts for units accommodated through infill and redevelopment of land classified as “developed.” Results and assumptions are documented below.

- **Infill and Redevelopment.** Infill (which includes accessory dwelling units) and redevelopment is development that occurs on fully developed lots; the property owner may add additional units to the property or demolish the dwelling unit(s) that are already in place to build one or more units on the property. The McMinnville Project Advisory Committee recommended assumption for infill and redevelopment is 8%. For the 2021 to 2041 period, we assume 8% of new housing will be accommodated through infill and redevelopment. This results in 373 units that will be accommodated through infill and redevelopment.

Over the 20-year period, McMinnville will accommodate 373 needed units through infill and redevelopment (approximately 19 units per year).

Exhibit 81. Forecast of Demand for Infill and Redevelopment, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest.

Variable	New Dwelling Units (2021-2041)
New units accommodated through infill and redevelopment	373
Subset of total new dwelling units (2021-2041)	373

Over the 20-year period, McMinnville will accommodate 373 needed new units through infill (including accessory dwelling units) and redevelopment.

Exhibit 82. Forecast of Demand for New Dwelling Units on Vacant and Partially Vacant Lands, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest. Note: DU is dwelling unit.

Variable	Needed Mix
DUs Accommodated by Infill or Redevelopment	
Single-family detached	37
Single-family attached	
Multifamily	335
Total Units in Infill or Redevelopment	373
DUs Requiring Vacant / Partially Vacant Unconstrained Land	
Single-family detached	2,524
Single-family attached	559
Multifamily	1,202
Total DUs Requiring Vacant or Partially Vacant Land	4,284

This results in McMinnville having demand for 4,284 new dwellings units on vacant or partially vacant land.

To summarize Exhibit 80, Exhibit 81, and Exhibit 82, McMinnville will have demand for 4,657 new dwelling units over the 20-year period. Of these 4,657 dwelling units, 2,561 dwelling units are forecast to be single-family detached housing and 1,537 are forecast to be multifamily housing (see Exhibit 80). After accounting for the 373 forecasted units accommodated by infill and redevelopment (Exhibit 81), McMinnville will have demand for 2,524 single-family detached units on vacant or partially vacant land and 1,202 multifamily units on vacant or partially vacant land (Exhibit 82). Exhibit 83 presents a summary.

Exhibit 83. Summary of Resulting Mix of Units on Vacant and Partially Vacant Land, McMinnville UGB, 2021 to 2041

Source: Calculations by ECOnorthwest.

Housing Type	Total Needed Dwelling Units		Dwelling Units Accomodated by Infill & Redevelopment On Developed Land			Dwelling Units Requiring Vacant / Partially Vacant Land		
	#	%	#	% of Total Needed Units	% of Infill / Redeveloped Units	#	% of Total Needed Units	% of Units of V / PV Land
Single-Family Detached	2,561	55%	37	1%	10%	2,524	54%	59%
Single-Family Attached	559	12%	-	0%	0%	559	12%	13%
Multifamily	1,537	33%	335	7%	90%	1,202	26%	28%
Total	4,657	100%	373	8%	100%	4,284	92%	100%

Redevelopment typically involves the replacement of one or more units with a larger number of units. Multifamily is a reasonable assumption for redevelopment, as it matches historical redevelopment trends in McMinnville. Redevelopment has historically not occurred as single-family attached housing in McMinnville. Infill (which includes accessory dwelling units [ADUs]) may be attached or detached, but they have characteristics of multifamily housing. ADUs do not have separate fee simple ownership—ownership is not separate from the primary dwelling unit—similar to a duplex or other multifamily housing product. Single-family detached infill is likely to entail small partitions of small lots classified as developed with limited remaining capacity based on zoning.

The needed mix for new dwelling units is 55% single-family detached housing, 12% single-family attached housing, and 33% multifamily housing. However, once dwelling units that are accommodated by infill/redevelopment are removed, the adjusted housing mix for housing requiring vacant/partially vacant land is 59% single-family detached housing, 13% single-family attached housing, and 28% multifamily housing.

Exhibit 84 through Exhibit 86 replicate the forecast of demand for new dwelling units (including infill/redevelopment) for housing demand in the 5-, 10-, 20-, and 46-year planning horizons.

Exhibit 87 through Exhibit 89 replicate the forecast for demand for new dwelling units (including infill/redevelopment) for housing growth between 2018 and 2021.

Exhibit 84. Forecast of Demand for New Dwelling Units by Type in 5, 10, 20, and 46 years, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Source: Calculations by ECONorthwest

Variable	New Dwelling Units by Type			
	5-Year (2021 to 2026)	10-Year (2021 to 2031)	20-Year (2021 to 2041)	46-Year (2021 to 2067)
Needed new dwelling units	1,136	2,305	4,657	10,986
Dwelling units by structure type				
Single-family detached				
Percent single-family detached DU	55%	55%	55%	55%
<i>equals</i> Total new single-family detached DU	625	1,268	2,561	6,042
Single-family attached				
Percent single-family attached DU	12%	12%	12%	12%
<i>equals</i> Total new single-family attached DU	136	277	559	1,318
Multifamily				
Percent multifamily	33%	33%	33%	33%
<i>Total new multifamily</i>	375	760	1,537	3,626
<i>equals</i> Total new dwelling units	1,136	2,305	4,657	10,986

Exhibit 85. Forecast of Demand for Infill and Redevelopment, in 5, 10, 20, and 46 years, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Source: Calculations by ECONorthwest

Variable	New Dwelling Units			
	5-Year (2021 to 2026)	10-Year (2021 to 2031)	20-Year (2021 to 2041)	46-Year (2021 to 2067)
New units accommodated through infill and redevelopment	91	184	373	879
Subset of total new dwelling units	91	184	373	879

Exhibit 86. Forecast of Demand for New Dwelling Units by Type through Infill and Redevelopment and on Vacant and Partially Vacant Lands, in 5, 10, 20, and 46 years, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Source: Calculations by ECONorthwest.

Variable	5-Year (2021 to 2026)	10-Year (2021 to 2031)	20-Year (2021 to 2041)	46-Year (2021 to 2067)
DUs Accomodated by Infill or Redevelopment				
Single-family detached	9	18	37	88
Single-family attached				
Multifamily	82	166	335	791
Total Units in Infill or Redevelopment	91	184	373	879
DUs Requiring Vacant / Partially Vacant Unconstrained Land				
Single-family detached	616	1,250	2,524	5,954
Single-family attached	136	277	559	1,318
Multifamily	293	594	1,202	2,835
Total DUs Requiring Vacant or Partially Vacant Land	1,045	2,121	4,284	10,107

McMinnville will have demand for 612 new dwelling units between 2018 and 2021, 55% of which will be single-family detached housing.

Exhibit 87. Forecast of Demand for New Dwelling Units by Type, McMinnville UGB, 2018–2021

Source: Calculations by ECONorthwest

Variable	Needed Mix
Needed new dwelling units (2018-2021)	612
Dwelling units by structure type	
Single-family detached	
Percent single-family detached DU	55%
<i>equals</i> Total new single-family detached DU	337
Single-family attached	
Percent single-family attached DU	12%
<i>equals</i> Total new single-family attached DU	73
Multifamily	
Percent multifamily	33%
<i>equals</i> total new multifamily	202
Total new dwelling units (2018-2021)	612

Between 2018 and 2021, McMinnville will accommodate 49 needed units through infill and redevelopment.

Exhibit 88. Forecast of Demand for Infill and Redevelopment, McMinnville UGB, 2018–2021

Source: Calculations by ECONorthwest

Variable	New Dwelling Units (2018-2021)
New units accommodated through infill and redevelopment	49
Subset of total new dwelling units (2018-2021)	49

Between 2018 and 2021, McMinnville will accommodate 49 needed new units through infill and redevelopment.

This results in McMinnville having demand for 563 new dwellings units on vacant or partially vacant land before 2021.

Exhibit 89. Forecast of Demand for New Dwelling Units by Type through Infill and Redevelopment and on Vacant and Partially Vacant Lands, McMinnville UGB, 2018–2021

Source: Calculations by ECONorthwest

Variable	Needed Mix
DUs Accommodated by Infill or Redevelopment	
Single-family detached	5
Single-family attached	
Multifamily	44
Total Units in Infill or Redevelopment	49
DUs Requiring Vacant / Partially Vacant Unconstrained Land	
Single-family detached	332
Single-family attached	73
Multifamily	158
Total DUs Requiring Vacant or Partially Vacant Land	563

McMinnville allows the following types of housing in zoning districts:

- **R-1 Single-Family Residential** will primarily accommodate new single-family detached housing, with some opportunities for single-family attached housing and duplexes on corner lots.
- **R-2 Single-Family Residential** will accommodate a mixture of new single-family detached and single-family attached housing, as well as duplexes on corner lots.
- **R-3 Two-Family Residential** will accommodate a mixture of new single-family detached and single-family attached housing, as well as duplexes.
- **R-4 Multifamily Residential** will accommodate single-family detached and attached housing, as well as duplexes and multifamily housing.
- **O-R Office/Residential** will accommodate single-family detached and attached housing, as well as duplexes and multifamily housing.
- **Residential Plan Designations with County Zoning**⁶¹ will accommodate single-family detached and single-family attached units, duplexes, and multifamily units.
- **C-3 General Commercial** will accommodate multifamily housing.

This analysis assumes that housing types will locate in zones that permit the dwelling unit outright. The City of McMinnville will be implementing Great Neighborhood Principles, which may affect the location and distribution of the dwelling units. Current zoning practices separate dwelling units by type and zoning district. If the principles are implemented, the same average mix and average density could be achieved, but in a different configuration that is consistent with the principles.

Needed Density

ORS 197.296(7) requires cities to “determine the overall average density and overall mix of housing types at which residential development of needed housing types must occur in order to meet housing needs over the next 20 years.” This section describes historic residential densities and needed residential densities for McMinnville’s planning period. Appendix B presents the scenario model that was presented to the Project Advisory Committee, which informed their recommendation for needed residential densities.

Densities in this section are presented in net acres and converted to gross acres⁶² to account for land needed for rights-of-way. Rights-of-way conversion factors are based on empirical analysis of existing rights-of-way by zone in McMinnville. For example, when developing a new area

⁶¹ Residential plan designations with county zoning are lands with the City’s residential plan designation and county rural zoning that will need to be rezoned to urban zones prior to development.

⁶² OAR 660-024-0010(6) defines net buildable acre as land that “consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads.” While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

such as a subdivision, it is necessary to account for land needed for roads, sidewalks, on-street parking, etc., which requires a gross density estimate. The conversion from net acres to gross acres in this analysis is based on the average amount of land in rights-of-way throughout the McMinnville UGB by zone.⁶³

Analysis of Historic Densities

ECONorthwest analyzed building permit data to determine historic densities. Exhibit 90 presents the assessment of historic densities for housing built in McMinnville over the 2000 to July 2018 period.

- **R-1 Single-Family Residential:** 4.1 dwelling units per net acre, with 24% of land used for rights-of-way, results in a gross density of 3.1 dwelling units per gross acre.
- **R-2 Single-Family Residential:** 5.8 dwelling units per net acre, with 26% of land used for rights-of-way, results in a gross density of 4.3 dwelling units per gross acre.
- **R-3 Two-Family Residential:** 6.8 dwelling units per net acre, with 29% of land used for rights-of-way, results in a gross density of 4.8 dwelling units per gross acre.
- **R-4 Multiple-Family Residential:** 7.9 dwelling units per net acre, with 23% of land used for rights-of-way, results in a gross density of 6.1 dwelling units per gross acre.
- **O-R Office/Residential:** 7.6 dwelling units per net acre, with 17% of land used for rights-of-way, results in a gross density of 6.3 dwelling units per gross acre.
- **Residential Plan Designations with County Zoning:** an assumed 6.6 dwelling units per net acre (of which the basis is the overall average density achieved in 2000–2018), with 25% of land used for rights-of-way, results in a gross density of 4.3 dwelling units per gross acre. The 25% factor is an average of all other rights-of-way conversion factors from each zone.
- **C-3 General Commercial:** 31.2 dwelling units per net acre, with 30% of land used for rights-of-way, results in a gross density of 21.8 dwelling units per gross acre.

⁶³ The assumptions about land needed for rights-of-way is based on the historical percentages of land needed for rights-of-way, from empirical analysis of the 2021 McMinnville Buildable Lands Inventory.

Exhibit 90. Historical Densities and Land for Rights-of-Way by Zone for Housing Built in the McMinnville UGB, 2000 through July 2018

Source: Calculations by ECONorthwest. Note 1: DU is dwelling unit. Note 2: Density listed for county zoning is historic average.

Zoning Districts	Average Net Density (DU/Net Acre)	Percentage for Rights-of-Way	Average Gross Density (DU/Gross Acre)
R-1 Single Family Residential	4.1	24%	3.1
R-2 Single Family Residential	5.8	26%	4.3
R-3 Two Family Residential	6.8	29%	4.8
R-4 Multiple-Family Residential	7.9	23%	6.1
O-R Office/Residential	7.6	17%	6.3
C-3 General Commercial	31.2	30%	21.9
County Zoning	6.6	25%	4.9
Average	6.6	25%	4.9

Exhibit 91. Historical Densities and Land for Rights-of-Way by Housing Type for Housing Built in the McMinnville UGB, 2000 through July 2018

Source: Calculations by ECONorthwest. Note: DU is dwelling unit.

Housing Type	Average Net Density (DU/Net Acre)	Percentage for Rights-of-Way	Average Gross Density (DU/Gross Acre)
Single-Family Detached	4.8	25%	3.6
Single-Family Attached	12.3	25%	9.3
Multifamily	18.2	25%	13.7
Total	6.6	25%	4.9

The average density observed in the 2002 McMinnville Housing Needs Analysis was 5.9 dwelling units per net acre. The density analysis in the 2002 HNA was based on permit data between 1988 and 2000. The net density observed for the 2000 through 2018 period was 6.6 dwelling units per net acre—a 12% increase in actual density. This increase in land-use efficiency saved 55 net acres during the 2000–2018 period.

Final Results: Needed Density

The assessment of needed densities was based on the five factors stated in ORS 197.296(5), discussed in greater detail in the previous subsection as well as McMinnville’s historical residential densities (2000 to July 2018).

Needed densities over the planning period will be driven by the recommended housing mix assumption. The PAC recommended a housing mix that increased the share of multifamily housing and single-family attached housing and decreased the share of single-family detached housing compared to the mix of new development that occurred between 2000 and 2018. If single-family detached, single-family attached, and multifamily housing develop at densities consistent with historic average densities (4.9 dwelling units per gross acre), McMinnville’s overall residential density will increase to 5.3 dwelling units per gross acre over the twenty-year planning period—an 8% increase in gross residential density.

This document is a baseline analysis. The density results are based on McMinnville’s current zoning and land-use regulations. Efficiency measures enacted as part of the housing strategy could affect final density.

Needed Housing by Income Level

The next step in the housing needs analysis is to develop an estimate of needed housing by income and housing type. This requires an estimate of the income distribution of current and future households in the community. The estimates presented in this section are based on (1) secondary data from the Census, and (2) analysis by ECONorthwest.

This analysis is based on American Community Survey data about income levels of existing households in McMinnville. Income is categorized into market segments using McMinnville’s median household income (MHI) of \$50,300. The analysis uses current household income distribution, assuming that approximately the same percentage of households will be in each market segment in the future.

Twenty-two percent of McMinnville’s future households will have incomes at or below 50% of McMinnville’s median household income (MHI). Thirty-six percent will have incomes between 50% and 120% of McMinnville’s MHI.

Forty-one percent will have incomes greater than 120% of McMinnville’s MHI.

Exhibit 92. Future (New) Households, by Median Household Income (MHI) for McMinnville (\$50,300), McMinnville UGB, 2021 to 2041

Source: US Department of Housing and Urban Development and US Census Bureau, 2012–2016 ACS Table 19001 and B25119.

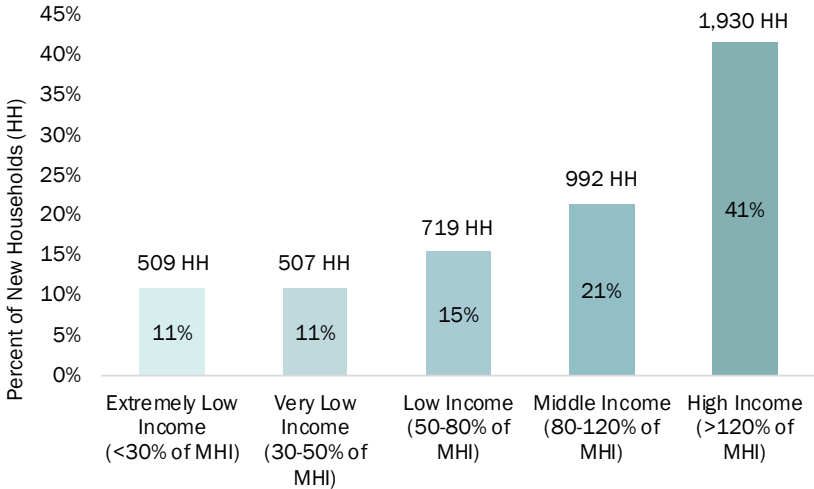


Exhibit 93. Future (New) Households in 5-, 10-, 20-, and 46-years, by Median Household Income (MHI) for McMinnville (\$50,300), McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Source: US Department of Housing and Urban Development and US Census Bureau, 2012–2016 ACS Table 19001 and B25119.

Market Segment by Income	New Households				% of Households
	5-Year (2021 to 2026)	10-Year (2021 to 2031)	20-Year (2021 to 2041)	46-Year (2021 to 2067)	
High Income (>120% of MFI)	471	955	1,930	4,552	41%
Middle Income (80-120% of MFI)	242	491	992	2,340	21%
Low Income (50-80% of MFI)	176	356	719	1,697	15%
Very Low Income (30-50% of MFI)	124	251	507	1,196	11%
Extremely Low Income (<30% of MFI)	124	253	509	1,200	11%
Total New Households	1,137	2,306	4,657	10,985	100%

Need for Government-Subsidized, Farmworker, and Manufactured Housing

ORS 197.303, 197.307, 197.312, and 197.314 requires cities to plan for government-subsidized housing, manufactured housing on lots, and manufactured housing in parks.

- **Government-subsidized housing.** Government subsidies can apply to all housing types (e.g., single-family detached, single-family attached, and multifamily). McMinnville allows development of government-assisted housing in all residential zones, with the same development standards for market-rate housing. This analysis assumes that McMinnville will continue to allow government housing in all of its residential zones. Because government-assisted housing is similar in character to other housing (with the exception being the subsidies), it is not necessary to develop separate forecasts for government-subsidized housing.
 - Homelessness is a growing concern in McMinnville and Yamhill County. Between 2017 and 2018, homelessness grew by about 30% in Yamhill County. To alleviate this issue, government subsidized housing (including shelters) is needed for individuals and households earning 0% to 30% of McMinnville’s median household income (less than \$15,000 per year). While a separate forecast for government-subsidized housing is not needed, the City may need to exert specialized effort in planning for shelters and other housing types that will meet the needs of those at risk of homelessness or who are experiencing homelessness.
- **Farmworker housing.** Farmworker housing can also apply to all housing types, and the City allows development of farmworker housing in all residential zones with the same development standards as market-rate housing. This analysis assumes that McMinnville will continue to allow farmworker housing in all of its residential zones. Because it is similar in character to other housing (with the possible exception of government subsidies, if population restricted), it is not necessary to develop separate forecasts for farmworker housing.

- **Manufactured housing on lots.** McMinnville allows manufactured homes on lots in the R-1 and R-2 zones, which are the zones where single-family detached housing is allowed. McMinnville also allows single-family detached housing in R-3, R-4, and O-R zones, but manufactured housing on lots are not permitted in those zones. McMinnville does not have special siting standards for manufactured homes on lots, so it is not necessary to develop separate forecasts for manufactured housing on lots.
- **Manufactured housing in parks.** OAR 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned, zoned, or generally used for commercial, industrial, or high-density residential development. According to the Oregon Housing and Community Services Manufactured Dwelling Park Directory,⁶⁴ McMinnville has twelve manufactured home parks within the UGB, with 1,014 spaces. One manufactured park (separate from manufactured housing subdivision) is within the O-R zone, two are within the C-3 zone, four are within the R-3 zone, and five are within the R-4 zone.

ORS 197.480(2) requires McMinnville to project need for mobile home or manufactured dwelling parks based on (1) population projections, (2) household income levels, (3) housing market trends, and (4) an inventory of manufactured dwelling parks sited in areas planned, zoned, or generally used for commercial, industrial, or high-density residential development.

- The housing forecast showed that McMinnville will need 4,657 dwelling units over the 2021 to 2041 period.
- Analysis of housing affordability shows that about 22% of McMinnville's new households will be extremely low income or very low income, earning 50% or less of McMinnville's median family income. One type of housing affordable to these households is manufactured housing.
- Manufactured housing in parks accounts for about 8% (about 1,014 dwelling units) of McMinnville's current housing stock.
- National, State, and regional trends since 2000 showed that manufactured housing parks were closing, rather than being created. For example, between 2000 and 2015, Oregon had 68 manufactured parks close, with more than 2,700 spaces. Discussions with several stakeholders familiar with manufactured home park trends suggest that over the same period, few to no new manufactured home parks have opened in Oregon.

⁶⁴ Oregon Housing and Community Services, "Oregon Manufactured Dwelling Park Directory." <http://o.hcs.state.or.us/MDPCRParcs/ParkDirQuery.jsp>

- Households most likely to live in manufactured homes in parks are those with incomes between about \$15,000 and \$25,150 (30% to 50% of McMinnville’s median household income), which includes 11% of McMinnville’s households. However, households in other income categories may also live in manufactured homes in parks.

Manufactured home park development is an allowed use in the R-3 and R-4 zone. The national and State trends of manufactured home park closures, and the fact that no new manufactured home parks have opened in Oregon in over the last fifteen years, demonstrate that development of new manufactured home parks in McMinnville is unlikely.

Our conclusion from this analysis is that development of new manufactured home parks in McMinnville over the 2021 to 2041 planning period is unlikely. It is, however, likely that manufactured homes will continue to locate on individual lots in McMinnville. The forecast of housing assumes that no new manufactured home parks will be opened in McMinnville over the 2021 to 2041 period. The forecast includes new manufactured homes on lots in the category of single-family detached housing.

- Over the next twenty years (or longer) one or more manufactured home parks may close in McMinnville as a result of manufactured home park landowners selling or redeveloping their land for uses with higher rates of return, rather than lack of demand for spaces in manufactured home parks. Manufactured home parks contribute to the supply of low-cost affordable housing options, especially for affordable homeownership.

While there is statewide regulation of manufactured home park closures designed to lessen the financial difficulties of this closure for park residents,⁶⁵ the City has a role to play in ensuring that there are opportunities for housing for the displaced residents. The City’s primary role is to ensure that there is sufficient land zoned for new multifamily housing, or other housing meeting the same need, and to reduce barriers to residential development to allow for development of new, relatively affordable housing. The City may use a range of policies to encourage development of relatively affordable housing, such as allowing a wider range of moderate-density housing (e.g., cottages or missing-middle housing types) in the R-1 and R-2 zones, designating more land for multifamily housing, removing barriers to multifamily housing development, using tax credits to support affordable housing production, developing an inclusionary

⁶⁵ ORS 90.645 regulates rules about closure of manufactured dwelling parks. It requires that the landlord give at least one year’s notice of park closure and pay the tenant between \$5,000 to \$9,000 for each manufactured dwelling park space, in addition to not charging tenants for demolition costs of abandoned manufactured homes.

zoning policy, or partnering with a developer of government-subsidized affordable housing.

Other Needs

This section includes needs for special housing, land to accommodate households before 2021, and other uses on residential land.

Need for Special Housing

Need for special housing, such as transitional housing to provide services in conjunction with housing, is accounted for in total numbers; however, the housing strategy can discuss opportunities to ensure codes are responsive to planning that should address opportunities for providers of transitional housing and services within the broader planning context.

Need for Households Locating in McMinnville before 2021

The Portland State University population forecast shows growth of about 1,480 people between 2018 and 2021, resulting in a need for 612 new dwelling units.⁶⁶ After deducting dwelling units accommodated by infill and redevelopment (8% or 49 units), McMinnville needs to accommodate 563 new dwelling units on vacant or partially vacant lands before 2021. To accommodate the 563 dwelling units at historic densities,⁶⁷ it is expected that the market would consume about 115 gross acres of existing buildable land before 2021. In 2021, the City of McMinnville could update their buildable lands inventory to deduct the actual amount of land consumed prior to 2021 from the inventory.

Need for Other Uses on Residential Land

The residential land needs analysis and capacity analysis accounts for land that will be needed for new streets within residential areas by applying a net-to-gross-buildable-acreage factor and density factor.

However, the housing needs analysis and residential land needs analysis don't account for other uses that will occur on lands planned and zoned for residential use. The City has initiated an urbanization study with a broader scope that will evaluate the capacity of the UGB to meet needs for all uses during the planning period. That analysis will identify forecast demand for other uses expected to occur on residential land. These can include uses such as schools, parks,

⁶⁶ According to Portland State University's Population Research Center, McMinnville UGB had 34,293 people in 2017. ECONorthwest extrapolated the population in 2017 to 34,758 people in 2018. McMinnville UGB forecasted that the population in 2021 will be 36,238 people (Exhibit 29), resulting in 1,480 new people between 2018 and 2021. Using the assumptions presented in Exhibit 75, McMinnville will have demand for approximately 612 new dwelling units between 2018 and 2021.

⁶⁷ McMinnville's average overall residential density between 2000 and July 2018 was 6.6 dwelling units per net acre and 4.9 dwelling units per gross acre.

public facilities, etc. Some of these have critical locational siting requirements in proximity to population as part of a public facilities system.

Once this portion of the urbanization study has been completed, the additional demand for residential land will be factored into the sufficiency determination to calculate the extent of deficit.

Because the need for other uses on residential land has not yet been determined, Chapter 6 addressed only the residential land need for housing before 2021.

6. Residential Land Sufficiency within McMinnville

This chapter presents an evaluation of the sufficiency of vacant residential land in McMinnville to accommodate expected residential growth over the 2021 to 2041 period. This chapter includes an estimate of residential development capacity (measured in new dwelling units) and an estimate of McMinnville's ability to accommodate needed new housing units for the 2021 to 2041 period based on the analysis in the housing needs analysis. The chapter ends with a discussion of the conclusions and recommendations for the housing needs analysis. This section also presents the final land-sufficiency results for McMinnville for the 5-, 10-, and 46-year planning periods.

Statutory Guidance

The language of Goal 10⁶⁸ and ORS 197.296⁶⁹ refers to housing need: it requires communities to provide needed housing types for households at all income levels. Goal 10's broad definition of need covers all households—from those with no home to those with second homes.

McMinnville is required to make a local housing needs projection⁷⁰ that determines the needed mix of housing types and densities that are (1) consistent with the financial capabilities of present and future area residents of all income levels during the planning period, (2) consistent with adopted housing standards, and (3) consistent with requirements of Goal 10, Goal 14⁷¹, OAR 660-008,⁷² and ORS 197.296.

With a population over 25,000, McMinnville is subject to the provisions of ORS 197.296, which provide additional guidance on determining housing need. Specifically, ORS 197.296(5) requires that cities consider five factors in determining needed density and mix. These factors are discussed in detail in Chapter 5.

The final determination of needed mix and density was:

- **Needed Housing Mix:** 55% single-family detached housing, 12% single-family attached housing, and 33% multifamily housing
- **Needed Housing Density:** 5.3 dwelling units per gross acre (average overall)

⁶⁸ Goal 10: Housing, <https://www.oregon.gov/lcd/OP/Documents/goal10.pdf>

⁶⁹ ORS 197.296, https://www.oregonlegislature.gov/bills_laws/ors/ors197.html

⁷⁰ OAR 660-008-0005(4)

⁷¹ Goal 14: Urbanization, <https://www.oregon.gov/lcd/OP/Pages/Goal-14.aspx>

⁷² OAR 660-008, <https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3058>

Residential Capacity Analysis

The buildable lands inventory provides a supply analysis (buildable land by type), and the housing needs analysis provided a demand analysis (population growth leading to demand for more residential development). The comparison of supply and demand allows the determination of land sufficiency.

There are two ways to get estimates of supply and demand into common units of measurement so that they can be compared: (1) housing demand can be converted into acres, or (2) residential land supply can be converted into dwelling units. A complication of either approach is that not all land has the same characteristics. Factors such as zone, slope, parcel size, and shape can all affect the ability of land to accommodate housing. Methods that recognize this fact are more robust and produce more realistic results. This analysis uses the second approach: it estimates the ability of vacant residential lands within the UGB to accommodate new housing. This analysis, sometimes called a “capacity analysis,”⁷³ can be used to evaluate different ways that vacant residential land may build out by applying different assumptions. The process is to estimate capacity based on historic densities and then to evaluate land-use efficiency measures that would achieve housing needs.

McMinnville Capacity Analysis Results

The capacity analysis estimates the development potential of vacant and partially vacant residential land to accommodate new housing. We base our analysis on several assumptions:

- **Buildable residential land.** The capacity estimates start with the number of buildable acres in the residential plan designations and residential zones.
- **Water Zone 1 and Water Zone 2 land.** Land in Water Zone 1 is available to be serviced with water now. Based on discussions with McMinnville Water & Light, land in Water Zone 2 will likely not be serviced with water for approximately ten years.
- **Capacity in C-3.** Previous findings in McMinnville’s 2013 Economic Opportunities Analysis suggests a deficit of land in C-3 areas needed for commercial uses. For this reason, this analysis assumed no residential capacity on current C-3 areas after 2021. The average historic density calculations of 4.9 dwelling units per gross acre include the densities achieved in the C-3 zone, which could be achieved by rezoning county land to achieve average needed densities.

⁷³ There is ambiguity in the term “capacity analysis.” It would not be unreasonable for one to say that the capacity of vacant land is the maximum number of dwellings that could be built based on density limits defined legally by plan designation or zoning, and that development usually occurs—for physical and market reasons—at something less than full capacity. For that reason, we have used the longer phrase to describe our analysis: “Estimating how many new dwelling units the vacant residential land in the UGB is likely to accommodate.” That phrase is, however, cumbersome, and it is common in Oregon and elsewhere to refer to that type of analysis as capacity analysis, so we use that shorthand occasionally in this memorandum.

- **Residential demand in unincorporated areas with city residential plan designation and county rural zoning.** These lands are not available to develop at urban densities until they annex. For this reason, some of the analysis provides subtotals for city and county zoned lands separately in the calculations. This method allows ECONorthwest to calculate overall land needs (surpluses and deficits) under the assumption that these lands will be available once annexed over during the planning period.
- **Needed densities.**⁷⁴ The analysis models capacity at both historic and needed densities. The rationale and factual basis for the density assumptions is ORS 197.262(5), described in the previous section. In essence, the population is growing, and households are increasingly housing insecure due to rising housing costs and increased competition from wealthier households migrating into the jurisdiction. Since 2000, a majority of new housing developed in McMinnville has been single-family detached housing at prices that are unaffordable to many households in the region. In addition to these factors, as residents in McMinnville age, there will be more demand for smaller units. McMinnville will need a larger share of single-family attached and multifamily housing than the community had in the past, which will result in higher densities.

Exhibit 94. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1 and 2) with Baseline Capacity, McMinnville UGB, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres (Water Zone 1 & 2)	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
R-1 Single Family Residential	145	3.1	449
R-2 Single Family Residential	131	4.3	561
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	21	6.1	127
O-R Office/Residential	0	6.3	3
C-3 General Commercial	61	21.9	-
County Zoning	358	4.9	1,753
TOTAL	721	4.1	2,921

Exhibit 94 shows that McMinnville has 721 acres of unconstrained buildable lands, (approx. 660 acres in residential zones are assigned residential capacity), with capacity for 2,921 dwelling units using historical densities by zoning district (before deducting acreage for housing development between 2018 and 2021). Exhibit 95 shows that McMinnville has 588 acres of

⁷⁴ This document is a baseline analysis. The density results are based on McMinnville's current zoning and land-use regulations. Efficiency measures enacted as part of the housing strategy could affect final density.

unconstrained buildable lands in Zone 1,⁷⁵ with capacity for 2,360 dwelling units (before deducting acreage for housing development between 2018 and 2021 and by using historical densities by zoning district).

Exhibit 95. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1) with Baseline Capacity, McMinnville UGB, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres <i>(Water Zone 1)</i>	Density Assumption <i>(DU/Gross Acre)</i>	Capacity <i>(Dwelling Units)</i>
R-1 Single Family Residential	109	3.1	338
R-2 Single Family Residential	86	4.3	368
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	21	6.1	127
O-R Office/Residential	0	6.3	3
C-3 General Commercial	61	21.9	-
County Zoning	305	4.9	1,496
TOTAL	588	4.0	2,360

Note: All housing development occurring between 2018 and 2021 is assumed to be in Water Zone 1 as Water Zone 2 will not be serviceable during that time. The report presents this deduction in the following sub-section.

⁷⁵ The analysis assumes that Zone 2 acreage is available within the 20-year period planning period, but not before the 10-year period.

Residential Land Sufficiency in McMinnville

The next step in the analysis of the sufficiency of residential land within McMinnville's UGB is to compare the demand for housing with the capacity of land. This analysis is partially based on capacity of land by existing zoning and plan designations. It is a baseline analysis. Land-sufficiency results may change based on implementation of actions in the housing strategy, including implementation of McMinnville's Great Neighborhood Principles.

This section presents the land-sufficiency results for McMinnville for several periods:

- 5-year period (2021–2026)
- 10-year period (2021–2031)
- 20-year period (2021–2041)
- 46-year period (2021–2067)

Notes about the final results:

- Results incorporate assumptions for land needed to accommodate new population and housing between 2018 and 2021.⁷⁶
- Results reflect demand for new dwelling units which require vacant and partially vacant lands.⁷⁷

These estimates provide context for consumption of McMinnville's remaining buildable residential lands. For the purpose of the UGB, only the 2021–2041 estimates are relevant.

Exhibit 96 shows the capacity for each planning period in 2018 and in 2021, with subtotals for capacity within Water Zones 1 and 2. It shows the number of new dwelling units needed on vacant and partially vacant lands, and the resulting surplus / deficit of dwelling units and acreage (with calculations for both historic and needed density).

As discussed above, these calculations are based on average densities. Rezoning land may be required to have sufficient lands zoned to achieve the specified capacity. Because zoning may change, or because a diverse housing zone may be implemented, capacity and acreage are calculated without assignment to specific zones. The 563 dwelling units needed between 2018–2021 will need about 115 acres at McMinnville's historic density of 4.9 du/gross acre.

⁷⁶ This section approximates the number of vacant and partially vacant buildable acres in 2021 (2021 Buildable Land Inventory). Each planning period begins with the 2021 capacity.

⁷⁷ Forecasted demand for infill and redevelopment will not require vacant or partially vacant lands.

Exhibit 96. Comparison of Capacity of Existing Residential Land with Demand for New Dwelling Units and Land Surplus or Deficit, McMinnville UGB, for the periods through 2026, 2031, 2041, and 2067

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The 2,360 DU capacity total includes 864 DUs in City Limits and 1,496 DUs in the county. Note3: The 2,921 DU capacity total includes 1,168 DUs in City Limits and 1,753 DUs in the county.

	Planning Period			
	5-Year (2021 to 2026)	10-Year (2021 to 2031)	20-Year (2021 to 2041)	46-Year (2021 to 2067)
2018 Capacity (DUs)				
Water Zone 1	2,360	2,360	2,360	2,360
Water Zone 2	NA	NA	561	561
Total	2,360	2,360	2,921	2,921
2018-2021 Demand (DUs on buildable land)	563	563	563	563
2021 Capacity (DUs)				
Water Zone 1	1,797	1,797	1,797	1,797
Water Zone 2	NA	NA	561	561
Total	1,797	1,797	2,358	2,358
Post-2021 Demand (DUs on buildable land)	1,045	2,121	4,284	10,107
Surplus/Deficit at Horizon Year (Dus)	752	(324)	(1,926)	(7,749)
<i>Capacity Based on Land in Water Zone:</i>	<i>1</i>	<i>1</i>	<i>1&2</i>	<i>1&2</i>
Surplus/Deficit @ 4.9 du/ac (hist), gross acres	153	(66)	(393)	(1,581)
Surplus/Deficit @ 5.3 du/ac (need), gross acres	142	(61)	(363)	(1,462)
Difference, gross acres	12	(5)	(30)	(119)

Conclusions

McMinnville’s UGB is forecast to grow from 36,238 people in 2021 to 47,498 people in 2041, an increase of 11,260 people. This population growth will occur at an average annual growth rate of 1.36%. In addition to population growth, McMinnville’s households have grown smaller on average. After considering a number of factors, including household size and residential vacancy rates, McMinnville will have demand for about 4,657 new dwelling units over the 20-year planning period (2021 to 2041). McMinnville will have demand for about 1,136 new dwelling units for the 5-year period between 2026 and 2031, about 2,305 new dwelling units for the 10-year period between 2021 and 2031, and about 10,986 new dwelling units for the 46-year period between 2021 and 2067.

McMinnville will need to accommodate an average development trajectory of 233 new dwelling units annually over the 20-year planning horizon. Over the 20-year planning period, McMinnville will accommodate 373 needed dwelling units through redevelopment and infill—these units will not require vacant or partially vacant lands. Accordingly, this will result in McMinnville needing to accommodate 4,284 needed new dwelling units on vacant and partially vacant buildable residential lands.

In the future, McMinnville will plan for an increased share of single-family attached dwelling units and multifamily units to meet the City’s housing needs. Currently, about 68% of McMinnville’s housing stock is single-family detached housing, 9% is single-family attached housing, and 23% is multifamily housing. Based on Project Advisory Committee recommendations, McMinnville will plan for a different mix in new housing, which will result in a slight change to McMinnville’s aggregate overall mix of existing and new housing. McMinnville will plan for a decrease in share of single-family detached housing (55% of new housing stock) to provide opportunities for more single-family attached housing (12% of new housing) and multifamily housing (33% of new housing).

McMinnville is planning for slightly higher overall average density than it has in the past. As McMinnville shifts toward more single-family attached housing and multifamily housing, McMinnville’s average housing density (for new dwelling units) will increase from 4.9 dwelling units per gross acre (historic average density) to 5.3 dwelling units per gross acre (needed average density)—an 8% increase.⁷⁸

McMinnville’s existing deficit of relatively affordable housing on both sides of the affordability spectrum indicates a need for a wider range of housing types for renters and homeowners. About 36% of McMinnville’s households are cost burdened (paying more than 30% of their income on housing), including a cost-burden rate of 52% for renter households. Without diversification of housing types, lack of affordability will continue to be a problem—possibly

⁷⁸ This calculation is based on average historical density by housing type. The existing analysis presented in Chapter 6 is calculated using average historical density by zone.

growing in the future if incomes continue to grow at a slower rate than housing costs. Under the current conditions between 2021 and 2041, about:

- **1,016 of the forecasted new households will have incomes of \$25,150 or less.** These households often cannot afford market-rate housing without government subsidy.
- **1,711 new households will have incomes between \$25,150 and \$60,359.** These households will need access to relatively affordable housing, such as single-family detached housing (e.g., tiny homes, cottages, small-lot, and traditional), single-family attached housing (e.g., town homes), and multifamily products (particularly middle housing types such as duplexes, triplexes, quadplexes, and apartments/multifamily condominiums).
- **1,930 new households will have incomes over \$60,359.** These households will need higher-amenity housing types such as single-family detached housing, single-family attached housing, and higher-end multifamily products (particularly condominiums).

McMinnville’s UGB will not accommodate all of McMinnville’s housing needs. Over the planning period through 2041, McMinnville has a deficit of capacity for 1,926 dwelling units, which means the City has an approximate deficit of about 363 gross acres by 2041. Housing demand results for the 5-, 10-, 20-, and 46-year periods are summarized in Exhibit 97.

Exhibit 97. Summary of New Dwelling Units, for the Periods through 2026, 2031, 2041, and 2067

Source: Calculations by ECONorthwest.

	New Dwelling Units			
	5-Year (2021 to 2026)	10-Year (2021 to 2031)	20-Year (2021 to 2041)	46-Year (2021 to 2067)
Total New D.U.s:	1,136	2,305	4,657	10,986
Less Infill/Redev (8%)	(91)	(184)	(373)	(879)
Equals D.U.s requiring Vacant/Partially Vacant Land	1,045	2,121	4,284	10,107

Appendix A. Residential Buildable Lands Inventory Methods

The general structure of the residential buildable land (supply) inventory is generally based on the DLCD HB 2709 workbook “*Planning for Residential Growth – A Workbook for Oregon’s Urban Areas*,” which specifically addresses residential lands. The buildable lands inventory uses methods and definitions that are consistent with Goal 10/OAR 660-008.

ECONorthwest used 2018 and 2017 (assessor tax year) data for this report. The following provides an overview of the buildable lands inventory methodology.

Overview of the Methodology

The McMinnville BLI includes all residential land designated in zones or plan designations within the McMinnville UGB. From a practical perspective, this means that all lands within tax lots identified by the Yamhill County Assessment and Taxation Department that fall within the UGB were inventoried. ECONorthwest used the most recent tax lot shapefile (that was available at the time of the analysis) and assessor’s roll data from Yamhill County for the analysis. The inventory then builds from the tax lot-level database to calculate estimates of buildable land by zone.

The buildable lands analysis was completed through several sequential steps.

Step 1: Generate land base. Per Goal 10, this involves selecting all of the tax lots in the McMinnville UGB with residential zones and “lands that may be used for a mix of residential and employment uses under the existing planning or zoning.”

ECONorthwest included the following zones in the residential inventory based on statutory requirements in ORS 197.296(4)(a):

- R-1 Single-Family Residential
- R-2 Single-Family Residential
- R-3 Two-Family Residential
- R-4 Multifamily Residential
- O-R Office/Residential
- C-3 General Commercial

Since McMinnville has a single residential plan designation, the land base includes these zones as well as any additional tax lots within the residential plan designation. For lands in the UGB that have the residential plan designation but still retain County zoning, properties within the residential plan designation were included in the BLI.

Step 2: Classify lands by development status. Next, the analysis classified each parcel into one of the following categories based on development status.

- Developed land
- Vacant land
- Partially vacant land
- Public or Exempt land

Step 3: Identify constraints. Consistent with the Division 8 rule, this includes floodways, floodplains (including lands in McMinnville’s floodplain zone), regulated wetlands, lands with slopes of 25% or greater, landslide hazards (including the DOGAMI SLIDO database and lands with high or very high susceptibility to landslides), and service constrained lands. All constraints were merged into a single constraint file, which was used to identify the area of each tax lot that is constrained. These areas were deducted from lands that were identified as vacant or partially vacant.

Step 4: Verification. ECONorthwest used a multistep verification process to ensure the accuracy of the BLI. The first verification step included a rapid visual assessment of land classifications using GIS and recent aerial photos to verify uses on the ground. The second round of verification involved City staff verifying the rapid visual assessment output. ECONorthwest amended the BLI based on City staff review and a discussion of the City’s comments.

The inventory was completed primarily using Geographic Information Systems (GIS) mapping technology. The output of this analysis is a database of land inventory information, which is summarized in both tabular and map format in Chapter 2. Although data for the inventory was gathered and evaluated at the parcel level, the inventory does not present a parcel-level analysis of lot availability and suitability. The results of the inventory have been aggregated by zone (City limits) and plan designation (outside City limits and in UGB), consistent with State planning requirements.

Data used for the analysis was provided by the City of McMinnville and the Yamhill County Assessor and Taxation Department, as well as statewide and national data sets. Specific data that was used included City/urban growth boundaries, tax lots, zoning, the National Wetlands Inventory, DOGAMI landslide hazards and susceptibility, floodway and floodplains, conservation easements, and slopes. The tax lot data was current as of August 2018.

Residential Land Base

Exhibit 98 (on the following page) shows the zones and plan designations included in the residential land base. This BLI includes lands in the R-1, R-2, R-3, R-4, O-R, and C-3 zones, as well as other land in the residential plan designation. Tax lots with a residential use in the F-P zone or F-P plan designation were also included on a case-by-case basis based on proximity to other residential land or using property class data to determine if the tax lot has a residential use. Land in zones that do not allow residential use were not included. These tax lots were

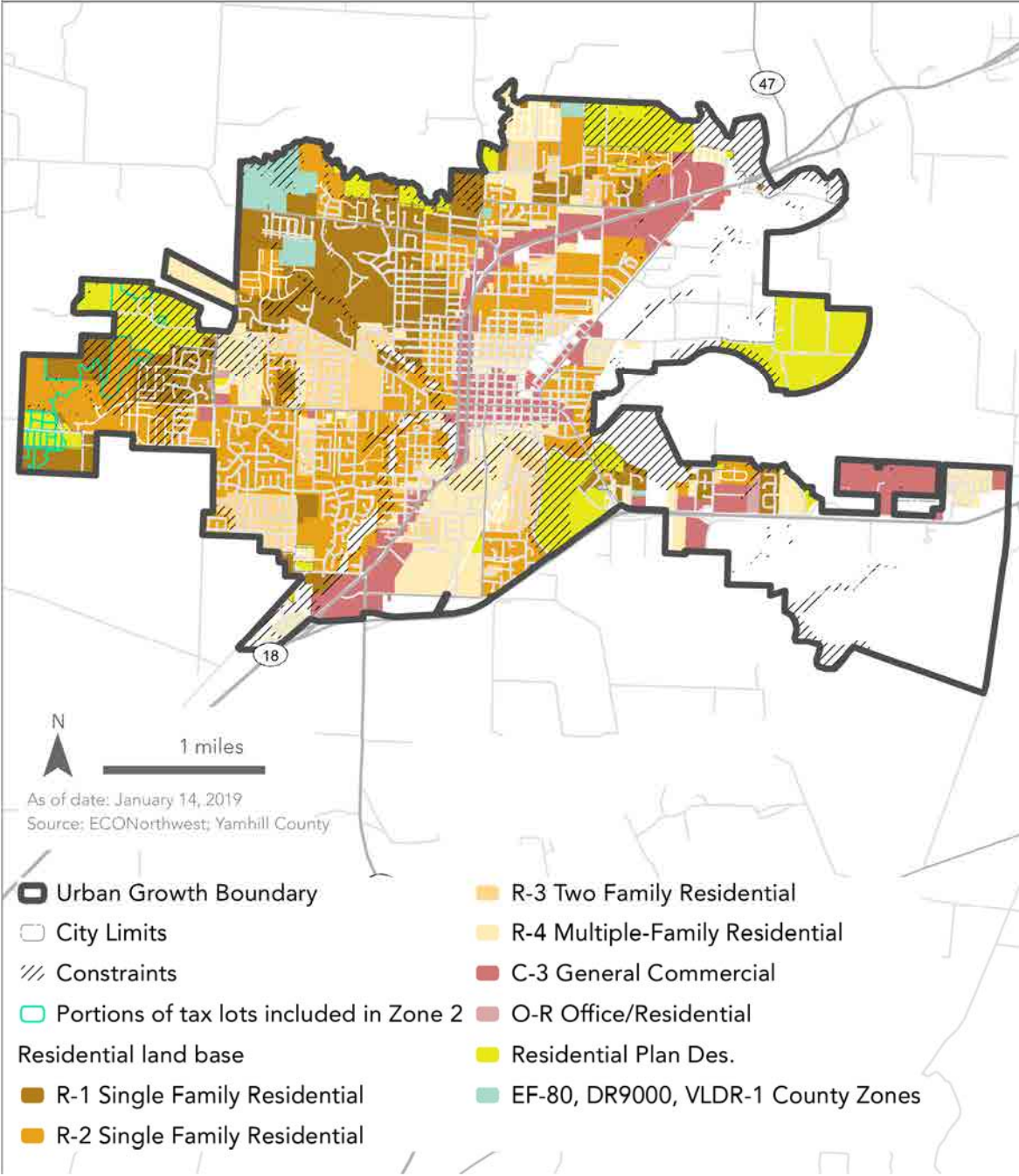
assigned a residential zone or plan designation based on proximity to other residential zones, since the floodplain zone was included as a constraint.

Land in the Zone 2 contour was also identified due to additional considerations for capacity. Using the Intersect tool in GIS, land in tax lots either completely within or partially within the Zone 2 were calculated separately from land in those tax lots in Zone 1.

Exhibit 98. Residential Land Base by Zone and Plan Designation, McMinnville UGB, 2018

McMinnville Buildable Lands Inventory

Residential Land Base by Zone



Appendix B. Scenario Modeling

ECONorthwest developed scenario models to inform Project Advisory Committee discussions about needed housing mix and density. This appendix presents the models for reference.

Housing Forecast by Housing Type

This section documents the process in determining needed housing mix and density assumptions. To inform the Project Advisory Committee's recommendation for the housing mix assumption, ECONorthwest modeled four housing mix scenarios. ECONorthwest used the scenarios to illustrate how housing mix impacts capacity and land sufficiency. The four scenarios were:

- **Existing Mix (ACS 2013–2017):** 68% single-family detached, 9% single-family attached, and 23% multifamily
- **Historical Mix (Housing Permitted 2000 to 2018):** 62% single-family detached, 8% single-family attached, and 31% multifamily
- **Scenario 1 (Preliminary Needed Mix):** 60% single-family detached, 10% single-family attached, and 30% multifamily
- **Scenario 2 (Preliminary Needed Mix):** 55% single-family detached, 12% single-family attached, and 33% multifamily

Using the four scenarios, ECONorthwest forecasted needed housing in McMinnville by housing type. Exhibit 99 presents a 20-year forecast (using the four scenarios), and Exhibit 100 presents the 5-, 10-, 20-, and 46-year forecasts (using the historic mix scenario).

Exhibit 99. Scenario Model: Forecast of Demand for New Dwelling Units, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest. Note: Baseline housing mix is McMinnville's existing housing mix per US Census, 2013–2017 ACS, Table B25024.

Variable	Existing Mix (ACS 2013- 2017)	Historic Mix (2000 to 2018)	Scenario 1	Scenario 2
Needed new dwelling units (2021-2041)	4,424	4,424	4,424	4,424
Dwelling units by structure type				
Single-family detached				
Percent single-family detached DU	68%	62%	60%	55%
<i>equals</i> total new single-family detached DU	3,009	2,733	2,654	2,433
Single-family attached				
Percent single-family attached DU	9%	8%	10%	12%
<i>equals</i> total new single-family attached DU	399	332	442	531
Multifamily				
Percent multifamily	23%	31%	30%	33%
<i>equals</i> total new multifamily	1,016	1,359	1,328	1,460
<i>equals</i> Total new dwelling units (2021-2041)	4,424	4,424	4,424	4,424

Exhibit 100. Scenario Model: 5-, 10-, and 46-year Forecast of Demand for New Dwelling Units, McMinnville UGB, 2021 to 2067

Source: Calculations by ECONorthwest. Note: This exhibit uses the historic mix scenario.

Variable	Baseline Forecast			
	2021 to 2026 (5-Year)	2021 to 2031 (10-Year)	2021 to 2041 (20-Year)	2021 to 2067 (46-year)
Needed new dwelling units	1,079	2,190	4,424	10,435
Dwelling units by structure type				
Single-family detached				
Percent single-family detached DU	62%	62%	62%	62%
<i>equals</i> Total new single-family detached DU	667	1,353	2,733	6,447
Single-family attached				
Percent single-family attached DU	8%	8%	8%	8%
<i>equals</i> Total new single-family attached DU	81	164	332	783
Multifamily				
Percent multifamily	31%	31%	31%	31%
<i>Total new multifamily</i>	331	673	1,359	3,205
<i>equals</i> Total new dwelling units	1,079	2,190	4,424	10,435

The housing mix determination over the 2021 to 2041 period will impact McMinnville's overall housing mix in 2041. Exhibit 101 displays what McMinnville's overall housing mix would be in 2041 based on each of the four scenarios. Exhibit 102 displays what McMinnville's overall housing mix would be at the end of McMinnville's various planning horizons (2026, 2031, 2041, and 2067)

Exhibit 101. Scenario Model: Estimated Aggregate Future Housing Mix, McMinnville UGB, 2041

Source: Calculations by ECONorthwest. Note: According to the US Census, McMinnville had 8,902 single-family detached units, 1,180 single-family attached units, and 3,007 multifamily units (totaling 13,089 dwelling units) in the 2013–2017 period. The 17,513 (total) is the 13,089 units, plus the 4,424 needed new units.

	Existing Mix (ACS 2013- 2017)	Historic Mix (2000 to 2018)	Scenario 1	Scenario 2
Single-Family Detached				
Number	11,911	11,635	11,556	11,335
Percent	68%	66%	66%	65%
Single-Family Attached				
<i>Number</i>	1,579	1,512	1,622	1,711
<i>Percent</i>	9%	9%	9%	10%
Multifamily Units				
<i>Number</i>	4,023	4,366	4,335	4,467
<i>Percent</i>	23%	25%	25%	26%
Total	17,513	17,513	17,513	17,513

Exhibit 102. Scenario Model: Estimated Aggregate Future Housing Mix, McMinnville UGB, 2026, 2031, 2041, and 2067

Source: Calculations by ECONorthwest. Note: According to the US Census, McMinnville had 8,902 single-family detached units, 1,180 single-family attached units, and 3,007 multifamily units (totaling 13,089 dwelling units) in the 2013-2017 period. The totals are 13,089 units, plus the number of units needed in 5, 10, 20, and 46 years.

	Single-Family Detached		Single-Family Attached		Multifamily Units		Total
	Number	Percent	Number	Percent	Number	Percent	
2026 (5-year)							
Existing Mix	9,636	68%	1,277	9%	3,255	23%	14,168
Baseline Historic Mix	9,570	68%	1,261	9%	3,338	24%	14,169
Scenario 1	9,549	67%	1,288	9%	3,331	24%	14,168
Scenario 2	9,495	67%	1,309	9%	3,363	24%	14,168
2031 (10-year)							
Existing Mix	10,391	68%	1,377	9%	3,510	23%	15,279
Baseline Historic Mix	10,255	67%	1,344	9%	3,680	24%	15,279
Scenario 1	10,216	67%	1,399	9%	3,664	24%	15,279
Scenario 2	10,107	66%	1,443	9%	3,730	24%	15,279
2041 (20-year)							
Existing Mix	11,911	68%	1,579	9%	4,023	23%	17,513
Baseline Historic Mix	11,635	66%	1,512	9%	4,366	25%	17,513
Scenario 1	11,556	66%	1,622	9%	4,335	25%	17,513
Scenario 2	11,335	65%	1,711	10%	4,467	26%	17,513
2067 (46-year)							
Existing Mix	15,999	68%	2,121	9%	5,404	23%	23,524
Baseline Historic Mix	15,349	65%	1,963	8%	6,212	26%	23,524
Scenario 1	15,163	64%	2,224	9%	6,138	26%	23,524
Scenario 2	14,641	62%	2,432	10%	6,451	27%	23,524

Allocation of Needed Housing

ECONorthwest modeled allocation analyses for each of the four housing mix scenarios. The scenario models for the 20-year planning period are presented in Exhibit 103 through Exhibit 106 and do not reflect updated group quarters assumptions or account for units accommodated by infill or redevelopment. The revised methodology presented in the main report does not use this methodology, however. Thus, these tables are for reference into the process only.

The first step in the allocation analysis (presented here) is based on McMinnville's historic share of housing developed in each of McMinnville's existing zones between 2000 and 2018. For example, between 2000 and 2018, 16% of McMinnville's housing development occurred in R-1, 44% occurred in R-2, 6% in R-3, and 34% in R-4.

Exhibit 103. Scenario Model: Allocation of Needed Housing by Housing Type and Zone Designation, Existing Mix Scenario, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest.

Zoning Designations	Residential Plan Designation					County Zoning	C-3	Total
	R-1	R-2	R-3	R-4	O-R			
Dwelling Units								
Single-family detached	575	1,504	88	842	-	-	-	3,009
Single-family attached	44	89	44	222	-	-	-	399
Multifamily	68	391	115	442	-	-	-	1,016
Total	687	1,984	247	1,506	-	-	-	4,424
Percent of Units								
Single-family detached	13%	34%	2%	19%	0%	0%	0%	68%
Single-family attached	1%	2%	1%	5%	0%	0%	0%	9%
Multifamily	2%	9%	3%	10%	0%	0%	0%	23%
Total	16%	45%	6%	34%	0%	0%	0%	100%

Exhibit 104. Scenario Model: Allocation of Needed Housing by Housing Type and Zone Designation, Historic Mix Scenario, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest.

Housing Type	Residential Plan Designation					County Zoning	C-3	Total
	R-1	R-2	R-3	R-4	O-R			
Dwelling Units								
Single-family detached	575	1,406	88	664	-	-	-	2,733
Single-family attached	44	89	44	155	-	-	-	332
Multifamily	68	473	115	703	-	-	-	1,359
Total	687	1,968	247	1,522	-	-	-	4,424
Percent of Units								
Single-family detached	13%	32%	2%	15%	0%	0%	0%	62%
Single-family attached	1%	2%	1%	4%	0%	0%	0%	8%
Multifamily	2%	11%	3%	16%	0%	0%	0%	31%
Total	16%	44%	6%	34%	0%	0%	0%	100%

Exhibit 105. Scenario Model: Allocation of Needed Housing by Housing Type and Zone Designation, Scenario 1, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest.

Housing Type	Residential Plan Designations					County Zoning	C-3	Total
	R-1	R-2	R-3	R-4	O-R			
Dwelling Units								
Single-family detached	575	1,416	88	575	-	-	-	2,654
Single-family attached	44	110	66	222	-	-	-	442
Multifamily	88	442	133	665	-	-	-	1,328
Total	707	1,968	287	1,462	-	-	-	4,424
Percent of Units								
Single-family detached	13%	32%	2%	13%	0%	0%	0%	60%
Single-family attached	1%	2%	1%	5%	0%	0%	0%	10%
Multifamily	2%	10%	3%	15%	0%	0%	0%	30%
Total	16%	44%	6%	33%	0%	0%	0%	100%

Exhibit 106. Scenario Model: Allocation of Needed Housing by Housing Type and Zone Designation, Scenario 2, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest.

Housing Type	Residential Plan Designations					County Zoning	C-3	Total
	R-1	R-2	R-3	R-4	O-R			
Dwelling Units								
Single-family detached	531	1,283	88	531	-	-	-	2,433
Single-family attached	44	221	44	222	-	-	-	531
Multifamily	133	442	133	752	-	-	-	1,460
Total	708	1,946	265	1,505	-	-	-	4,424
Percent of Units								
Single-family detached	12%	29%	2%	12%	0%	0%	0%	55%
Single-family attached	1%	5%	1%	5%	0%	0%	0%	12%
Multifamily	3%	10%	3%	17%	0%	0%	0%	33%
Total	16%	44%	6%	34%	0%	0%	0%	100%

Needed Densities

A city's average residential density is influenced by its housing mix. Using the four housing mix scenarios and McMinnville's historic densities (Exhibit 91), ECONorthwest illustrated how average gross densities increase as the share of single-family detached housing decreases.

Exhibit 107. Scenario Model: Estimated Aggregate Residential Densities, McMinnville UGB, 2021 to 2041

Source: Calculations by ECONorthwest.

Variable	Existing Mix (ACS 2013- 2017)	Historic Mix (2000 to 2018)	Scenario 1	Scenario 2
Dwelling units by structure type				
Single-family detached	3,009	2,733	2,654	2,433
Average gross density SFD	3.6	3.6	3.6	3.6
<i>equals</i> gross acres needed for SFD	836	759	737	676
Single-family attached	399	332	442	531
Average gross density SFA	9.3	9.3	9.3	9.3
<i>equals</i> gross acres needed for SFA	43	36	48	57
Multifamily	1,016	1,359	1,328	1,460
Average gross density MF	13.7	13.7	13.7	13.7
<i>equals</i> gross acres needed for MF	74	99	97	107
Total				
Housing Units	4,424	4,424	4,424	4,424
Average Gross Density	4.6	4.9	5.0	5.3
Gross Acres	953	894	882	839

Land Sufficiency Approximations for the 2021 to 2041 Planning Period

Exhibit 108, Exhibit 109, Exhibit 110, and Exhibit 111 show the residential land sufficiency results, modeled using each of the four housing mix scenarios. Notes about the models:

- Modeled results in this appendix do not reflect land needed to accommodate housing development before 2021, which is addressed in the main report.
- Modeled results in this appendix used a different methodology for group quarters, resulting in a different estimate for housing demand.
- Modeled results do not reflect assumptions for dwelling units accommodated through infill or redevelopment.

The scenario models show that McMinnville's 721 buildable acres (660 in residential zones) available for residential development has capacity for 2,921 dwelling units. Over the 2021 to 2041 planning period, McMinnville will have demand for 4,424 dwelling units. At densities observed between 2000 and 2018, this translates into a land deficit of (1) 321 gross acres in the existing mix scenario, (2) 320 gross acres in the historical mix scenario, (3) 325 gross acres in scenario 1, and (4) 323 gross acres in scenario 2. Each scenario showed that McMinnville does

not have sufficient capacity to accommodate needed new housing in R-1, R-2, R-3, and R-4 areas.

Note: Due to the way demand was allocated to zones in the allocation scenario models (see Exhibit 103, Exhibit 104, Exhibit 105, and Exhibit 106 as well as the corresponding basis), the approximate land surplus and deficit are relatively similar across models. Accordingly, the models allocate housing demand to zones comparably across models and at an average density applied on total units per zone.

Exhibit 108. Scenario Model: Comparison of Capacity of Existing Residential Land with Need for New Dwelling Units and Land Surplus or Deficit, Existing Mix, McMinnville UGB, 2021 to 2041

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Zoning Districts	Capacity (Dwelling Units)	Demand (Dwelling Units)	Capacity minus Demand (Dwelling Units)	Approx. Land Surplus or (Deficit) -Gross Acres-
R-1 Single Family Residential	449	687	(238)	(77)
R-2 Single Family Residential	561	1984	(1,423)	(331)
R-3 Two Family Residential	28	247	(219)	(46)
R-4 Multiple-Family Residential	127	1506	(1,379)	(226)
O-R Office/Residential	3	0	3	0
C-3 General Commercial	-	0	0	0
County Zoning	1,753	0	1,753	358
Total	2,921	4,424	(1,503)	(321)

Exhibit 109. Scenario Model, Comparison of Capacity of Existing Residential Land with Need for New Dwelling Units and Land Surplus or Deficit, Historical Mix, McMinnville UGB, 2021 to 2041

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Zoning Districts	Capacity (Dwelling Units)	Demand (Dwelling Units)	Capacity minus Demand (Dwelling Units)	Approx. Land Surplus or (Deficit) -Gross Acres-
R-1 Single Family Residential	449	687	(238)	(77)
R-2 Single Family Residential	561	1968	(1,407)	(327)
R-3 Two Family Residential	28	247	(219)	(46)
R-4 Multiple-Family Residential	127	1522	(1,395)	(229)
O-R Office/Residential	3	0	3	0
C-3 General Commercial	-	0	0	0
County Zoning	1,753	0	1,753	358
Total	2,921	4,424	(1,503)	(320)

Exhibit 110. Scenario Model: Comparison of Capacity of Existing Residential Land with Need for New Dwelling Units and Land Surplus or Deficit, Scenario 1, McMinnville UGB, 2021 to 2041

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Zoning Districts	Capacity (Dwelling Units)	Demand (Dwelling Units)	Capacity minus Demand (Dwelling Units)	Approx. Land Surplus or (Deficit) -Gross Acres-
R-1 Single Family Residential	449	707	(258)	(83)
R-2 Single Family Residential	561	1,968	(1,407)	(327)
R-3 Two Family Residential	28	287	(259)	(54)
R-4 Multiple-Family Residential	127	1,462	(1,335)	(219)
O-R Office/Residential	3	-	3	0
C-3 General Commercial	-	-	0	0
County Zoning	1,753	-	1,753	358
Total	2,921	4,424	(1,503)	(325)

Exhibit 111. Scenario Model: Comparison of Capacity of Existing Residential Land with Need for New Dwelling Units and Land Surplus or Deficit, Scenario 2, McMinnville UGB, 2021 to 2041

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note: DU is dwelling unit.

Zoning Districts	Capacity (Dwelling Units)	Demand (Dwelling Units)	Capacity minus Demand (Dwelling Units)	Approx. Land Surplus or (Deficit) -Gross Acres-
R-1 Single Family Residential	449	708	(259)	(84)
R-2 Single Family Residential	561	1,946	(1,385)	(322)
R-3 Two Family Residential	28	265	(237)	(49)
R-4 Multiple-Family Residential	127	1,505	(1,378)	(226)
O-R Office/Residential	3	-	3	0
C-3 General Commercial	-	-	0	0
County Zoning	1,753	-	1,753	358
Total	2,921	4,424	(1,503)	(323)

City of McMinnville

**Addendum 1 to June 2019 Draft Housing Needs Analysis (HNA):
Description of June 2020 Revisions to Residential Capacity Analysis,
as Reflected in June 2020 Draft Urbanization Report**

Summary

This addendum provides supplemental analysis that revises certain aspects of the residential capacity analysis for the Buildable Land Inventory (BLI) in the June 2019 Draft Housing Needs Analysis (HNA). This updated analysis and revision to the June 2019 Draft HNA is reflected in the June 2020 Draft Urbanization Report. The updates address the issues below.

1. Corrections to BLI Acreages Due to Split-Zoned Lots Identified During EOA Work
2. Capacity of Exception Areas in the UGB
 - a. OAR 660-024-0067(6) Analysis
 - b. Density Assumptions
 - c. Other: Serviceability
3. Analysis Under ORS 197.296 as Amended by HB 2001
4. Small Lot Status and Capacity
5. Add capacity for vacant already platted lots within landslide constraint area

Any assumptions used in the June 2019 HNA which are revised by this addendum are described herein in detail.

The table below summarizes the revisions provided in this addendum.

In summary, the housing need remains unchanged; it is the capacity of the buildable lands which is revised. The need for 5,269 additional dwellings by 2041 remains the same. ***The updated analysis results in a reduction in the capacity of buildable lands, when compared to the 2019 Draft HNA, from 2,921 dwellings to 2,129 dwellings, a net capacity reduction of 792 dwellings.***

This means there is a deficit of buildable lands to meet the needs for 3,053 of the 5,269 needed dwellings by 2041. At a historic density of 4.9 du/gross acre, this is a deficit of 623 gross buildable acres. At the “needed” density of 5.3 du/gross acre, this is a deficit of 576 gross buildable acres.

Note: *The City is undertaking inventory and analysis of additional Goal 7 hazards, Goal 5 natural and cultural resources, and constraints which could be subject to adoption of protection measures which could potentially render certain areas unbuildable or could reduce capacity. While this addendum may provide additional information and discussion relating to these constraints, these other constraints have not been introduced into or applied to this revised capacity analysis.*

Summary Table - 2018-2041 Residential Capacity Analysis Revisions

Component	Description	Capacity - Dwelling Units		
		Original	Revised	Difference
2018 Capacity				
Total Relative to June 2019 Draft HNA		2,921	2,129	(792)
Adjustments				
1. Revised Total After Split-Zoned Lot Adjust.	BLI Buildable Res. Acres Adjusted to Split-Zoned Ac.	2,921	2,822	(99)
2. Exception Areas <2 acres	OAR 660-024-0067(6)	342	18	(324)
3. Exception Areas >=2 acres	Revise Avg. Hist. Density to R-1 Hist. Density	687	434	(253)
4. Elevation >415' (Potential Zone 3)	Subtract 6.5 bld ac in except. area @ R-1 Hist. Density	68	48	(20)
5. Small City Lot Adjustments*	Non-Exception Area < 2ac	366	251	(115)
6. Add Capacity to Platted Vacant Lots w/LSC	19 Small Vac. Platted Subd. Lots with Landslide Constr.	-	19	19
2018-41 Demand (for Vac/PV)				
Total		5,269	5,269	-
Adjustments				
7a. Vacant/Partially Vacant	To Address HB 2001 Amendments to ORS 197.296	4,847	5,182	335
7b. Infill/Redevelopment	To Address HB 2001 Amendments to ORS 197.296	422	87	(335)
2041 Deficit (for Vac/PC)				
Deficit: DUs		(1,926)	(3,053)	(1,127)
*Adjustments for small lots in Exception Areas are calculated separately above per OAR 660-024-0067(6) provisions				
2041 Deficit (Acres)				
Deficit: Acres @ Hist. 4.9 du/ac		(393)	(623)	(230)
Deficit: Acres @ Needed 5.3 du/ac		(363)	(576)	(213)

The following table summarizes the residential capacity analysis revisions by zone.

Zone	Capacity																		Subtotal with Cap Adjust			
	Orig Capacity by Zone	1			2			3			4			5			6			Before	After	Diff
		Before	After	Diff	Before	After	Diff	Before	After	Diff	Before	After	Diff	Before	After	Diff						
R-1	449	449	428	-21									93	61	-32				449	415	-34	
R-2	561	561	569	8									90	71	-19				561	550	-11	
R-3	28	28	28	0									29	23	-6				28	22	-6	
R-4	127	127	110	-17									61	55	-6				127	104	-23	
County	1753	1753	1687	-66	342	18	-324	687	434	-253	68	48	-20	93	41	-52			1753	1638	-115	
SUM	2916	2916	2822	-94	342	18	-324	687	434	-253	68	48	-20	366	251	-115			2916	2129	-787	
	(2921 in Table 94)	2921 in table	-99 in table																Orig	Rev	Diff	
																			2921 in table	2129 in table	-792 in table	

1. Corrections to BLI Acreages Due to Split-Zoned Lots Identified During EOA Work

Following completion of work on the June 2019 Draft HNA, the City began work on an update to the Economic Opportunities Analysis (EOA). During that work, it was observed that there were some split-zoned tax lots. While some tax lots had only a small portion of the acreage in a second zone, in other cases, there were a few larger tax lots that had a significant percentage of acreage in each zone. For example, some tax lots were split-zoned with some acreage in a residential zone and some acreage in a commercial zone. During the HNA work, the split-zoned tax lots had the entire acreage assigned to the zone in which the majority of the tax lot was located. This approach helped avoid issues with “slivers” that can result with technical issues associated with minor mapping alignments.

However, it was insufficient to address those few split-zoned tax lots with a significant percentage of the acreage in each zone. Therefore, during the Buildable Lands Inventory (BLI) work for the EOA, those tax lots were split at the zone boundary, and the acreage within each zone was addressed within the respective residential or employment buildable lands inventory. Acres in the residential portions were assigned to the residential BLI and acres in commercial or industrial portions were assigned to the employment BLI. The analysis dates for the cut-off date for the BLI work for the HNA and EOA work were also aligned for consistency.

The buildable lands inventory and capacity analysis for the HNA is updated accordingly. This is shown below for Exhibits 94 and 95. With the adjustments to buildable acres for the residential portions of the split zoned lots, the capacity is 2,822 dwellings.

Original Exhibits 94 and 95:

The original assumptions for the capacity analysis of buildable lands within the UGB used in the HNA, including status of unincorporated exception areas previously added to the UGB, was summarized in Tables 94 and 95, below.

Exhibit 94. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1 and 2) with Baseline Capacity, McMinnville UGB, 2018
 Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres (Water Zone 1 & 2)	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
R-1 Single Family Residential	145	3.1	449
R-2 Single Family Residential	131	4.3	561
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	21	6.1	127
O-R Office/Residential	0	6.3	3
C-3 General Commercial	61	21.9	-
County Zoning	358	4.9	1,753
TOTAL	721	4.1	2,921

Exhibit 94 shows that McMinnville has 721 acres of unconstrained buildable lands, (approx. 660 acres in residential zones are assigned residential capacity), with capacity for 2,921 dwelling units using historical densities by zoning district (before deducting acreage for housing development between 2018 and 2021). Exhibit 95 shows that McMinnville has 588 acres of unconstrained buildable lands in Zone 1, 75 with capacity for 2,360 dwelling units (before deducting acreage for housing development between 2018 and 2021 and by using historical densities by zoning district).

Exhibit 95. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1) with Baseline Capacity, McMinnville UGB, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres (Water Zone 1)	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
R-1 Single Family Residential	109	3.1	338
R-2 Single Family Residential	86	4.3	368
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	21	6.1	127
O-R Office/Residential	0	6.3	3
C-3 General Commercial	61	21.9	-
County Zoning	305	4.9	1,496
TOTAL	588	4.0	2,360

Note: All housing development occurring between 2018 and 2021 is assumed to be in Water Zone 1 as Water Zone 2 will not be serviceable during that time. The report presents this deduction in the following sub-section.

Updated Exhibits 94 and 95:

Exhibits 94 and 95 with the updated buildable lands and capacity analysis reflecting the adjustments for split-zoned properties are provided below:

Exhibit 94. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1 and 2) with Baseline Capacity, McMinnville UGB, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres (Water Zone 1 & 2)	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
R-1 Single Family Residential	138	3.1	428
R-2 Single Family Residential	132	4.3	569
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	18	6.1	110
C-3 General Commercial	5	21.9	-
City Sub-Total	300	-	1,135
County Zoning	344	4.9	1,687
County Sub-Total	344	-	1,687
TOTAL	644	-	2,822

Exhibit 95. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1) with Baseline Capacity, McMinnville UGB, 2018

Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres (Water Zone 1)	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
R-1 Single Family Residential	102	3.1	317
R-2 Single Family Residential	88	4.3	376
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	18	6.1	110
C-3 General Commercial	5	21.9	-
City Sub-Total	219	-	831
County Zoning	292	4.9	1,430
County Sub-Total	292	-	1,430
TOTAL	511	-	2,261

2. Capacity of Exception Areas in the UGB

2a. OAR 660-024-0067(6) Analysis

As applied to the exception areas added to the UGB, the provisions of OAR 660-024-0067(6) provide for reduced capacity assumptions for tax lots less than two acres.

This is based on research and analysis that was conducted for the “HB 2554 Report.” In September 2015, The University of Oregon Community Service Center published a final report for the HB 2254 Rules Advisory Committee, “Analysis of Development on Rural Residential Lands: A Report to the HB 2254 Rules Advisory Committee.”

Some of the key findings excerpted from the report are as follows:

- Lots under two acres are much less likely to divide and develop at urban densities than lots over two acres.
- Across all zones, parcelization of lots (e.g., land divisions) less than 1 acre is very infrequent. Within Rural Residential zones, 2 to 5 acre parcels are the most common to parcelize. If cities are adding existing developed Rural Residential subdivisions with lots less than 2 acres, it is not likely that any capacity exists on these lands.
- Development and parcelization in all unincorporated areas inside UGBs has slowed tremendously since the implementation of the Statewide Planning Program but is still occurring in some jurisdictions. Continued development in incorporated areas, particularly on parcels less than 2 acres, will have long term implications for UGB expansion as parcels less than 2 acres are unlikely to subdivide inside UGBs.

OAR 660-024-0067(6) was adopted in response to these findings, and the OAR provides:

(6) For vacant or partially vacant lands added to the UGB to provide for residential uses:

- (a) Existing lots or parcels one acre or less may be assumed to have a development capacity of one dwelling unit per lot or parcel. Existing lots or parcels greater than one acre but less than two acres shall be assumed to have an aggregate development capacity of two dwelling units per acre.
- (b) In any subsequent review of a UGB pursuant to this division, the city may use a development assumption for land described in subsection (a) of this section for a period of up to 14 years from the date the lands were added to the UGB.

This applies to lands within three exception areas that were added to the UGB: Riverside South, Redmond Hill Road, and Fox Ridge Road.

The tables below show the total tax lots in these areas, total acres before deducting constraints, and total buildable acres. All tax lots in these areas are privately owned, except for three tax lots in Fox Ridge Road which would be unavailable for development. Two of these are public sites for water infrastructure and one of these is a cemetery. Those are included in the calculations for total tax lots and acres, but excluded from the calculations for buildable residential properties in the tables below.

Of the original capacity of 2,921 dwelling units within the UGB shown in the original Exhibit 94 of the HNA, capacity of 1,029 dwellings is assumed within the exception areas, as shown in the table below.

Capacity of Exception Areas and Other Lands

Areas	Capacity (DUs)
Exception Areas	1,029
Other Lands	1,892
Total	2,921

The breakdown of that 1,029 dwelling unit capacity for each exception area in the UGB is shown in the table below as calculated in the original June 2019 Draft HNA.

Capacity of Exception Areas

Area	Tot. Tls	Tot. Ac	Buildable Acres			DU/Gross Ac	Capacity (DUs)
			Zone 1	Zone 2+	Total		
Fox Ridge Road	29	145	0	23	23	4.9	113
Redmond Hill Road	15	44	10	30	40	4.9	196
Riverside South	76	191	147	0	147	4.9	720
SUM	120	380	158	53	210		1,029

Not all tax lots or acreage within tax lots is private land available for development. Some are public lands, and some private acreage is constrained by natural features or hazards. The following table provides a breakdown of the tax lots with buildable acreage by size class. Properties in the smaller size classes (<=1ac, >1<2 ac) will have the provisions of OAR 660-024-0067(6) applied, while the same density assumptions as the original method are applied to the larger size class (>=2 ac) in this section.

4-9-2021 DRAFT

Exception Areas Tax Lots with Unconstrained Residential Capacity by Size Class

Area	# Unc. TLs <=1 Bld Ac			# Unc. TLs >1<2 Bld Ac			# Unc. TLs >=2 Bld Ac			SUM		
	w/DU	w/o DU	Total	w/DU	w/o DU	Total	w/DU	w/o DU	Total	w/DU	w/o DU	Total
Fox Ridge Road	1	1	2	1	0	1	1	0	1	3	1	4
Redmond Hill Road	1	0	1	1	0	1	8	5	13	10	5	15
Riverside South	20	1	21	14	1	15	35	5	40	69	7	76
SUM	22	2	24	16	1	17	44	10	54	82	13	95

The result of applying the OAR 660-024-0067(6) provisions to these tax lots based on size class results in revised capacity as provided in the table below.

Exception Areas Capacity with OAR 660-024-0067 Adjustments

Area	Capacity			TOTAL
	<=1 unconstr ac	>1<2 unconstr ac	>=2 unconstr ac	
Fox Ridge Road	1	1	119	121
Redmond Hill Road	0	1	160	161
Riverside South	1	14	408	423
SUM	2	16	687	705

The table below compares the original and revised capacity calculations. Capacity of lots less than two buildable acres is reduced from 342 DUs to 18 DUs. The result is reduced capacity from 1,029 DUs to 705 DUs within the three exception areas. This a difference of 324 fewer DUs for the exception areas resulting from applying OAR 660-024-0067(6) to parcels of two acres or smaller.

Exception Areas Capacity Comparison

Bld Ac	Original	Revised	Difference
Lots <2 bld ac	342	18	(324)
Lots >=2 bld ac	687	687	-
SUM	1,029	705	(324)

This means the overall capacity of lands within the UGB is reduced by 324 DUs, from the original 2,921 DUs as shown in the original Exhibit 94 of the HNA to 2,597 DUs as shown below, before accounting for the adjustments associated with issue #1 above and other issues below.

Capacity of Exception Areas and Other Lands

Areas	Capacity (DUs)		
	Original	Revised	Difference
Exception Areas	1,029	705	(324)
Other Lands	1,892	1,892	-
Total	2,921	2,597	(324)

2b. Revised Capacity and Density Assumptions for Exception Area Tax Lots >= 2 Acres

The density factor of 4.9 du/gross acre applied to the exception areas, calculated in the tables above, is the average density for all urban residential zones because the exception areas still have county rural zoning, and haven't yet had city urban residential zoning applied. Capacity

assumptions will need to be adjusted based on a determination of zoning to be applied to these areas, which is further discussed in a separate section below.

Since the average density for all zones was used to calculate capacity for exception areas, capacity assumptions need to be adjusted based on further determinations of suitability of zoning to be applied to these different areas. Capacity can be calculated based on the historic densities by zoning district, which for the R-1, R-2, and R-3 zones, are respectively 3.1 du/gross acre, 4.3 du/gross acre, and 4.8 du/gross acre. The high percentage of exception area small parcels with no capacity or low capacity under the OAR 660-024-0067(6) calculations, and their spatial distribution within these areas influences the consideration of the appropriate zoning for these areas.

Further, with the above findings and assumptions regarding parcels of two acres or smaller, efficiencies are not achieved on those smaller properties. This means significantly higher densities would be required on parcels ≥ 2 acres to achieve the overall average “needed” density of 4.9 du/acre within the exception areas, with insufficient numbers of parcels ≥ 2 acres to achieve this average. This means assumptions for exception areas need to recognize that these areas are incapable of realistically achieving production of housing averaging 4.9 du/gross acre in the baseline analysis.

The calculations below show the capacity of these areas after applying the OAR 660-024-0067(6) provisions to tax lots of < 2 acres, then applying an R-1 density assumption of 3.1 du/gross acre for tax lots ≥ 2 unconstrained acres, and how that would affect the overall capacity of lands in the UGB, versus the 4.9 du/gross acre assumption used above for the baseline analysis in the June 2019 Draft HNA.

Exception Areas Capacity with OAR 660-024-0067 Adjustments for Parcels Smaller than 2 acres and Revised Density Calculations for Parcels ≥ 2 Acres (at 3.1 du/gross acre).

Area	Capacity			TOTAL
	≤ 1 unconstr ac	$> 1 < 2$ unconstr ac	≥ 2 unconstr ac	
Fox Ridge Road	1	1	75	77
Redmond Hill Road	0	1	101	102
Riverside South	1	14	258	273
SUM	2	16	434	452

**applying 3.1 du/gross acre density factor to exception area properties ≥ 2 unconstrained acres*

Exception Areas Capacity Comparison

Bld Ac	Original	Revised	Difference
Lots < 2 bld ac	342	18	(324)
Lots ≥ 2 bld ac	687	434	(253)
SUM	1,029	452	(577)

**applying 3.1 du/gross acre density factor to exception area properties ≥ 2 unconstrained acres for revised*

Capacity of Exception Areas and Other Lands

Areas	Capacity (DUs)		
	Original	Revised	Difference
Exception Areas	1,029	452	(577)
Other Lands	1,892	1,892	-
Total	2,921	2,344	(577)

**applying 3.1 du/gross acre density factor to exception area properties ≥ 2 unconstrained acres for revised*

2c. Other: Serviceability: Elevation >415' Elevation (Potential Water Pressure Zone 3)

In the June 2019 Draft Residential Buildable Lands Inventory and Capacity Analysis, it was assumed that lands with elevations above 275' elevation were in water pressure service Zone 2, which requires development of Zone 2 water infrastructure to serve those properties, including water storage tanks. The assumptions for the BLI were that Zone 2 infrastructure would not be developed for approximately 10 years, but that Zone 2 could still be serviced approximately during the second half of the 2-year planning period.

However, water pressure Zone 2 is an elevation band between approximately 275'-415' elevation. Therefore, properties (and future structures) with elevation over 415' elevation would need to be further evaluated to determine whether they could be served from Zone 2 infrastructure, or whether a new Zone 3 (and/or additional Zones for substantially higher elevations) and associated infrastructure, would be necessary to serve properties with elevation over 415' elevation. Depending on the elevation, the ultimate extent and size of the service area, water provider standards and performance policies, fire pressure and fireflow requirements, and public drinking water standards, there may need to be analysis of options for private booster pumps, public pump stations, an/or ultimately additional water storage facilities.

A portion of the Fox Ridge area, approximately 6.5 acres, and a small portion of the Redmond Hill Road area, approximately 0.5 acre, are above 415' elevation. The current water system master plan doesn't currently include Zone 3 service. If the elevation above 415' elevation can't be served from Zone 2 facilities, or if Zone 3 service isn't addressed in the master plan, then approximately 6.5 acres of the Fox Ridge Road area would not be available for development within the 20-year planning horizon, reducing capacity of that area by approximately 32 additional DUs if applying the density factor of 4.9 du/gross acre. As addressed in 2b above, a density factor of 3.1 du/gross acre is assumed for this area, and this would reduce the capacity of this area by approximately 20 additional DUs.

3. Analysis under ORS 197.296 as Amended by HB 2001

HB 2001 was signed into law after the City finished the preliminary work to produce the June 2019 Draft HNA with recommendations from the Project Advisory Committee. HB 2001 amends ORS 197.296(6) in part to specify that, when a City is expanding its UGB and/or including new measures to accommodate growth within the UGB, that it must:

“adopt findings regarding the density expectations assumed to result from the measures adopted under this paragraph based upon the factors listed in ORS 197.303(2) and data in subsection (5)(a) of this section. The density expectations may not project an increase in residential capacity above achieved density by more than three percent without quantifiable validation of such departures. For a local government located outside a metropolitan service district, a quantifiable validation must demonstrate that the assumed housing capacity has been achieved in areas that are zoned to allow no greater than the same authorized density level within the local jurisdiction or a jurisdiction in the same region.”

This statute prescribes what assumptions cities are to apply when considering how implementation of standards to allow “middle housing” in zones that allow single-family dwellings would affect capacity consideration, stating, “The density expectations may not project an increase in residential capacity above achieved density by more than three percent without quantifiable validation of such departures.”

The City sought clarification from DLCD on their interpretation of how to apply this new provision to an HNA. Their interpretation is provided below:

We have come to the conclusion that the 3% limit on assumptions for increased residential capacity above achieved density applies to a broad range of “efficiency measures,” including many of the measures listed in OAR 660-038-0190(5). ORS Section 197.296(5) describes how local governments are to determine housing capacity within residential areas, based on the number, density, and average mix of housing types that have been developed since completion of the prior buildable land inventory.

The presumption here is that efficiency measures would be enacted within the same residential zones, in order to establish baseline numbers for past housing production. For this reason, the 3% cap would not apply to the establishment of new zones or zone changes that would allow higher densities than were previously allowed in an area. The notable exception here is the adoption of middle housing allowances, per HB 2001, which would not change the zoning and would therefore be subject to the 3% limitation.

It should also be noted that Section 6(b) allows local governments to assume housing production above a 3% increase if “quantifiable validation” of such an increase can be demonstrated, as detailed in Section 6(b).

The analysis in the June 2019 draft HNA reflects the analysis required by ORS 197.296 as it existed prior to the HB 2001 amendments.

The baseline “density expectations” by zone, and the associated capacity of buildable lands, using those density expectations for the BLI were provided in Exhibit 94 (below) in the June 2019 Draft HNA. It shows the 661 buildable residential acres have capacity for 2,921 dwelling units. Three percent above that capacity is 3,008 dwellings, or 87 additional dwellings. After correcting for split-zoned lots in Section 1 above, as reflected in the updated Exhibit 94 below, this capacity is 2,822 dwelling units based on the historic achieved density. Three percent capacity over historic achieved density, the assumption required by the statute, is 2,906 dwelling units, or about 85 additional dwellings.

Original

Exhibit 94. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1 and 2) with Baseline Capacity, McMinnville UGB, 2018
 Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres (Water Zone 1 & 2)	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
R-1 Single Family Residential	145	3.1	449
R-2 Single Family Residential	131	4.3	561
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	21	6.1	127
O-R Office/Residential	0	6.3	3
C-3 General Commercial	61	21.9	-
County Zoning	358	4.9	1,753
TOTAL	721	4.1	2,921

Updated

Exhibit 94. Unconstrained Vacant and Partially Vacant Buildable Land (Water Zone 1 and 2) with Baseline Capacity, McMinnville UGB, 2018
 Source: Buildable Lands Inventory; Calculations by ECONorthwest. Note1: DU is dwelling unit. Note2: The density of county zoned land is the historic average density achieved (4.9 du/gross acre).

Zoning Districts	Total Unconstrained Buildable Acres (Water Zone 1 & 2)	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
R-1 Single Family Residential	138	3.1	428
R-2 Single Family Residential	132	4.3	569
R-3 Two Family Residential	6	4.8	28
R-4 Multiple-Family Residential	18	6.1	110
C-3 General Commercial	5	21.9	-
City Sub-Total	300	-	1,135
County Zoning	344	4.9	1,687
County Sub-Total	344	-	1,687
TOTAL	644	-	2,822

The June 2019 Draft HNA already included assumptions about the amount of new residential development to be accommodated through infill and redevelopment. Therefore, that needs to be revised to be consistent with ORS 197.296 as amended by HB 2001 as discussed above, and to avoid double-counting infill and redevelopment assumptions twice.

The approach and assumptions used in the 2019 Draft HNA borrowed from the provisions for the “simplified” UGB approach in OAR 660 Division 38, which provides a range of percentages that can be used to assume how many new dwelling units would be developed through infill and

redevelopment, thereby reducing demand on new vacant and partially vacant land for new housing. This approach is based on deducting a percentage of housing from the total housing need that won't require new vacant or partially vacant land.

That approach specifies assumptions which are based on a percentage of needed housing assumed to be achieved through infill and redevelopment rather than the capacity of buildable lands. That is then deducted from the housing need that is assumed to require new vacant or partially vacant buildable land. The assumptions used in the 2019 Draft HNA were within the range identified under the simplified approach, but the assumptions were not based on quantifiable validation that identified specific properties likely to experience infill and redevelopment, and further, they exceeded the historic achieved infill and redevelopment.

The 3% limits in HB 2001 are applied to capacity of buildable lands, not a percentage of needed housing. Therefore, the 3% limits in HB 2001 need to be added, and the assumptions used in the June 2019 Draft HNA need to be removed.

The June 2019 Draft HNA assumed 8% of needed new housing would be achieved through infill and redevelopment. The tables below show what that means in terms of number of dwelling units and the impact in terms of effective density of the current inventory of vacant and partially vacant residential land. In short, the 8% infill rate (422 units) would mean the effective capacity of existing buildable land would be significantly higher than an additional 3% in capacity over the historic "achieved" density. An infill and redevelopment rate of 1.65% of needed housing (87 dwellings) would result in an effective increase in capacity of buildable lands of 3% over the historic achieved density for the residential buildable lands, based on the original 2,921 dwelling unit capacity in the original Exhibit 94. *(Please note the table below has calculations based on the original Exhibit 94. The narrative below describes the adjustments based on the updated Exhibit 94).*

Residential Land Type	2018-21	2021-41	SUM
New Vacant Land	563	4,284	4,847
Infill/Redev (8%)	49	373	422
SUM	612	4,657	5,269

Current Capacity			
Capacity of 661 Res Buildable Acres (Ex 94)			2,921
Density (2,921/661)	4.41	du/ac	

Effective Capacity with Current Infill & Redevelopment Assumptions			
Effective Cap. of 661 Res Bld Ac w/ 422 I/R Dus (8%)			3,343
I/R rate: 8%			
Difference (2,921 + 422)			422
Effective Density (3,343 du/661 ac)	5.06	du/ac	

103% of Current Capacity, Effective Infill & Redevelopment Rate			
103% of Capacity of 661 Res Bld Acres (2,921*1.03)			3,008
Difference			87
Effective Density	4.55	du/ac	
Effective I/R Rate (87/5,269): 1.65%			

The calculations in the table above were performed prior to the corrections to Exhibit 94 described in Section 1 to correct for buildable acres and capacity associated with split-zoned lots. If this is applied to the updated Exhibit 94 which reflects the buildable acres and capacity of 2,822 DUs after adjusting for split-zoned tax lots, the difference is only about 2 dwelling units less than the calculation above, approximately 85 dwelling units.

This is broken down by zoning district in the table below. The number is approximately 7 dwelling units higher in the table below due to rounding differences. The table below is again based on the capacity of 2,921 DUs in the original Exhibit 94 before correctly for split-zoned lots, so the calculation based on updated Exhibit 94 would be about 2-3 dwellings less.

Zoning District	Total Unconstrained Buildable Acres (Water Zones 1 & 2)	Density Assumption (DU/gross ac)	Capacity (Dwelling Units)	3% Higher Density Assumption	Capacity (Dwelling Units)	Difference in Capacity (Dwelling Units)
R-1	145	3.1	449	3.193	463	14
R-2	131	4.3	561	4.429	580	19
R-3	6	4.8	28	4.944	30	2
R-4	21	6.1	127	6.283	132	5
O-R	0	6.3	3	6.489	3	0
C-3	61	21.9	-	22.557	-	-
County Zoning	358	4.9	1,753	5.047	1,807	54
Total	722	4.1	2,921		3,015	94

*661 buildable residential acres, excluding C-3 zoned land

**Rounding and calculations to two decimal places for the 3% higher density assumption results in capacity of 3,008 rather than 3,015.

Absent additional efficiency measures, an infill/redevelopment rate in excess of 1.65% of needed new housing or roughly 85 dwelling units would exceed the additional 3% capacity of buildable land above historic achieved density without quantifiable validation for buildable lands, and would be inconsistent with HB 2001.

4. Small Lot Status and Capacity

Most of the tax lots which do not have land use entitlements are highly parcelized in small, dispersed parcels. Based on analysis of historic partition and development on small lots, the capacity assumptions used in the June 2019 Draft HNA would overstate the capacity yield of smaller lots during the planning period. Background information is provided below. Based on the analysis of historic partition activity, the capacity of partially vacant lots smaller than 2 acres would be revised to reflect historic capacity achieved through residential partitions of lots smaller than 2 acres.

Background

State law requires that, for all land classified as “buildable” in the Buildable Land Inventory, it must be assumed that land will develop during the 20-year planning period to meet the housing need, unless there is a surplus which exceeds the need. In this respect, the applicable law doesn’t differentiate between one decision to develop a 50-lot subdivision on a larger property from 50 separate decisions that would each partition or add a home to a smaller property. The reality is much different in terms of decision-making and investments to develop new housing. The housing market doesn’t supply housing nearly as efficiently through the incremental small

lot development. This is borne out by McMinnville's partition and development history, as well as findings documented in the HB 2554 report.

The HB 26554 report includes the following findings:

- Across all zones, parcelization of lots (e.g., land divisions) less than 1 acre is very infrequent.
- Development and parcelization in all unincorporated areas inside UGBs has slowed tremendously since the implementation of the Statewide Planning Program but is still occurring in some jurisdictions. Continued development in incorporated areas, particularly on parcels less than 2 acres, will have long term implications for UGB expansion as parcels less than 2 acres are unlikely to subdivide inside UGBs.

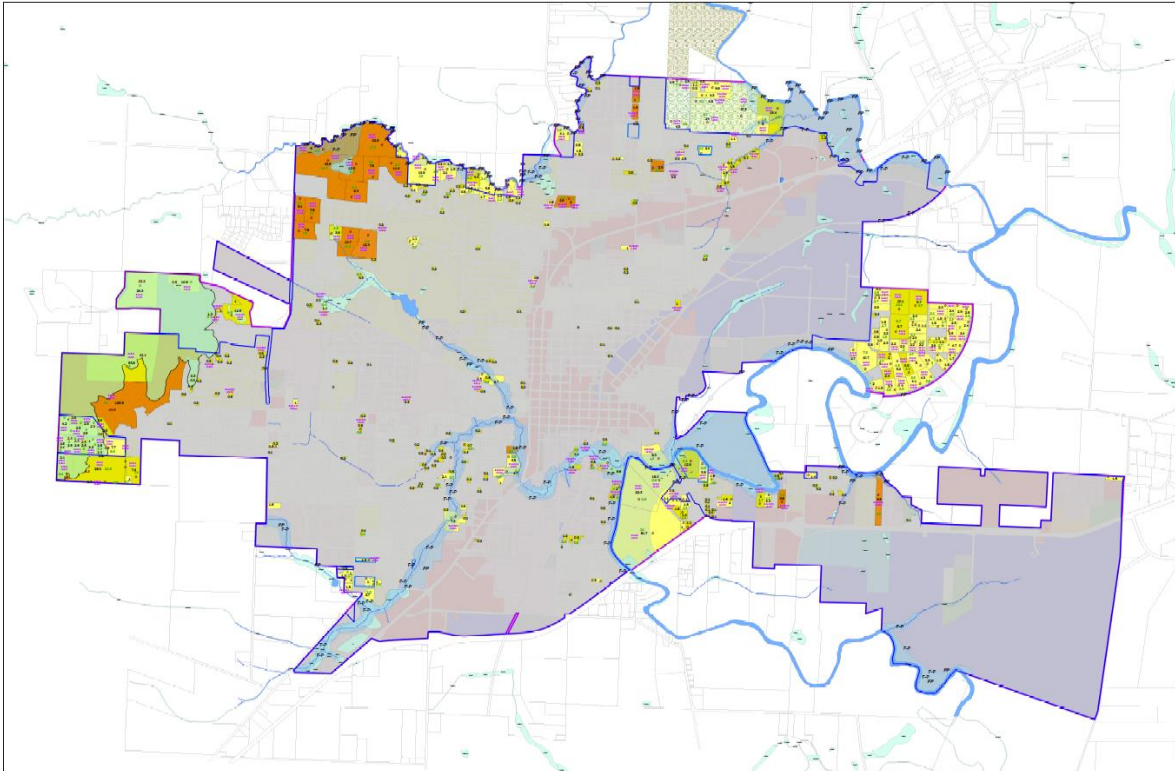
Intuitively, most people would think of further development on smaller lots with existing homes as infill or redevelopment. However, for purposes of the BLI, small properties under one-half acre with an existing home are classified as "developed," while small properties just over one-half acre and everything larger with a home are classified as "partially vacant." Developed properties aren't assumed to have further capacity other than an assumption and recognition that a percentage of those developed properties may have capacity for additional infill or redevelopment which may occur for a percentage of those lots during the 20-year planning period. However, if development occurs on a lot over one-half acre, that is technically considered "new development" rather than "infill or redevelopment" and treated the same per state law as larger greenfield development sites when considering capacity. That technical difference in terminology is significant, because every "partially vacant" property must be assumed to further develop during the 20-year planning period (unless surplus) in order to meet the identified housing need. This is important when considering the BLI, because any property owner decisions about whether those properties will actually develop additional dwellings during the 20-year planning period can't be considered. The result can be that "false capacity" may be assigned to those properties and tied up in those properties if they don't develop, rather than providing actual capacity through addition of lands that would be likely to actually develop over the 20-year period.

In addition, division of existing small parcels may be less likely to achieve needed density, because there is often fractional remnant acreage when an existing property further divides or develops that doesn't add additional capacity, whereas development of a larger property allows for establishment of efficient lots sizes and configurations that can more efficiently respond to and achieve the allowed density permitted by the zoning district.

These issues would be less of a concern if there were only a few small properties which are assigned capacity as "partially vacant" lots in the buildable land inventory. However, most of the land in the UGB has already developed, and most of the larger buildable properties in the UGB are already "entitled" for specific developments. Entitled properties are unlikely to have opportunity for increased capacity through enactment of efficiency measures. Much of the remaining buildable land in the UGB is within small properties. These make up a disproportionate share of the number of remaining properties classified as "buildable" within the UGB per state law.

BLI buildable acres in small lots and capacity assumptions

Most of the UGB is located within water pressure service Zone 1. Approximately 82% of the non-entitled tax lots classified as buildable land within Zone 1 are two acres or smaller, approximately 93% of these non-entitled tax lots are three acres or smaller, and approximately 97% of these non-entitled tax lots are 5 acres or smaller. Of these Zone 1 non-entitled tax lots with buildable acres of three acres or larger, only three properties are within City limits: one parcel between 3-4 acres, one parcel of about 7 acres, and one parcel of about 22 acres. The remainder are in the unincorporated UGB.



**Orange indicates entitled properties as of December 2019*

Non-Entitled

Approximate Zone 1 Buildable Acres, Residential

Total: ~348 Tax Lots

>20 ac: 2 properties (~43 ac)
22 ac (in city)
21 ac (out of city)

10-20 ac: 4 properties (~40 ac)
10 ac (out of city)
10 ac (out of city)
10 ac (out of city)
10 ac (out of city)

5-10 ac: 6 properties (~38 ac)
8 ac (out of city)
7 ac (in city)
7 ac (out of city)
6 ac (out of city)
5 ac (out of city)
5 ac (out of city)

2-5 ac: ~52 properties
4-5 ac: ~5 properties (~20 ac) (all 5 out of city)
3-4 ac: ~9 properties (~27 ac) (8 out of city, 1 in city)
2-3 ac: ~38 properties

0-2 ac: ~284 properties
1-2 ac: ~94 properties
0-1 ac: ~190 properties

Of the approximately 284 properties which have less than two unconstrained acres, ~41 properties are in exception areas, and the remaining ~243 in other areas, predominantly within city limits. Those ~243 were assigned full capacity in the June 2019 Draft BLI, unlike the reductions described in this addendum for parcels smaller than 2 acres in exception areas.

Further, fractional acres in tax lots become aggregated in the BLI and capacity analysis, where compounding is more of an issue with a disproportionate number of smaller parcels, where fractional acres can't actually be aggregated into buildable acres since the properties are dispersed and non-contiguous. This can overstate capacity. These are classified as buildable, although most have an existing home, and are classified as partially vacant. Per the HB 2554 report, these smaller parcels less than two acres (190 tax lots with 0-1 acres, 94 tax lots with 1-2 acres) most with home, are unlikely to achieve full capacity, if any. Lots less than one-half acre with a home are already excluded from this total as "developed".

The analysis identified buildable acres on each parcel then aggregated into total buildable acres then multiplied by the respective density factor, therefore counting those fractional acres. If capacity is assigned for each tax lot, tossing out the fractional acres first then aggregating the capacity for each lot, that is a more accurate analysis of capacity, and will necessarily be lower than aggregating fractional acres. Historic analysis shows most new units on smaller properties result from land divisions rather than adding more dwellings to existing lots. The vast majority of capacity in smaller parcels during the historic analysis period was through land divisions – not by adding an additional dwelling to an existing lot or by subdividing these small lots (4 or more lots), but by partitioning (3 or fewer lots). However, that method presents issues for the BLI where buildable acres must be identified when calculating for middle housing that may not be on separate lots.

Staff conducted a review of historic partition activity to determine whether there were any implications for capacity assigned to smaller lots in city limits. Many properties that are partitioned are remnants of land divided through the old metes and bounds descriptions of dividing and describing properties, often rural properties that were added to the city and UGB over time or much older city properties. Many of these weren't divided with regard to current minimum lot sizes or current zoning. More recent land divisions have divided with respect to the zoning, often seeking to maximize the density by dividing into as many lots or parcels as allowed by the minimum lot size of the zone. The larger remnant properties within the UGB aren't increasing in number except if/when larger rural properties are added to the UGB, therefore their supply is decreasing over time. Essentially, nearly all of these smaller lots that still remain likely would have been existing at the time of the previous BLI, and still haven't been divided since then or during the last historic analysis period. These properties haven't divided since the last BLI, even during a period in which there has been a constrained land supply as evidenced by the prior and current BLI. This suggests that while they are classified as "buildable" per state law, the reality is they haven't been available for development. This artificially ties up capacity, which means other buildable land likely to be available for development during the planning period can't be brought into the UGB.

While not applied to the analysis in this addendum, this suggests that based on the HB 2554 findings, that the threshold for what is considered "developed" vs. "partially vacant" should be increased, or similar capacity adjustment should be codified, to account for the limited capacity actualized on smaller parcels. This would be analogous to the OAR 660-024-0067(6) provisions for exception area parcels less than two acres.

Note: *Many of these small parcels are classified as "partially vacant". The HNA uses the "safe harbor" methodology available to smaller cities, although this isn't an actual safe harbor for McMinnville due to its size. Classifying these lots as partially vacant and buildable means the HNA assumes every one must further develop in order to meet the identified housing needs over the next 20 years.*

Ideally, in light of real-world data about the further development potential of smaller lots and parcels, smaller properties would be re-evaluated to determine whether some of these should not be classified as buildable, or whether assumptions should be adjusted to allow assumptions about infill and redevelopment of smaller "partially vacant" parcels that are different than greenfield development - either assuming reduced capacity, or assuming only a percentage would be expected to develop during the planning period.

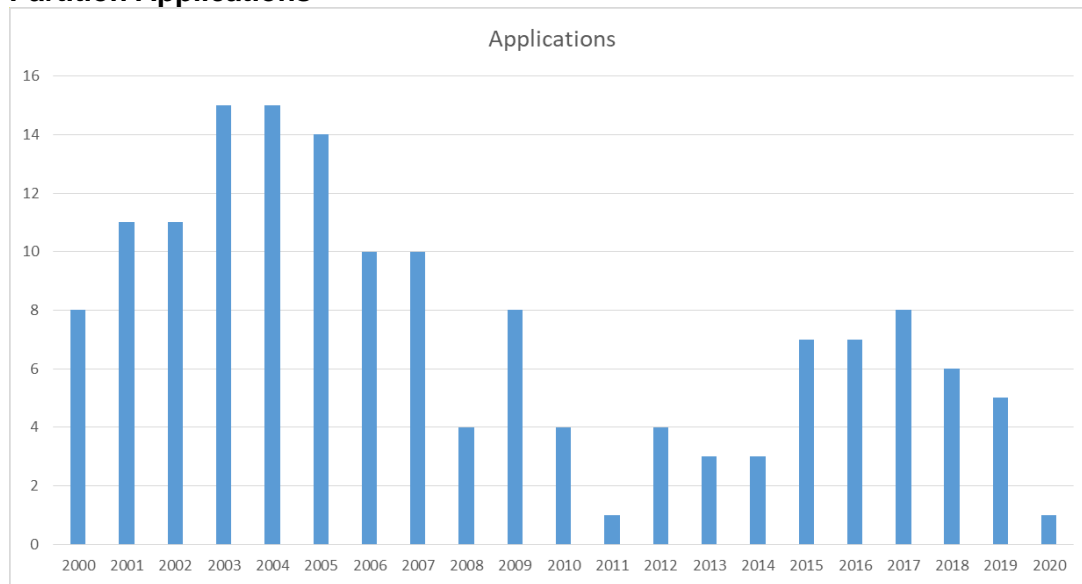
Historic Partition Activity

Additional development of partially vacant properties has typically occurred through partitioning, and development of the resulting new parcels. In general, the supply of parcels that would further partition into 2 or 3 parcels is diminishing over time, typically a remnant of areas where the city grew into unplatted areas. Properties which are large enough to subdivide into four or more lots generally reflect the density of the zoning. Except for where new exception area lands are added to the UGB, the partitionable properties are largely a subset of the same supply of small parcels that existed during last planning horizon and historic analysis period.

During a planning period for which there was a deficit of buildable residential land, there was still only a small number of new properties created through partitioning, and many of these were to separate a parcel with an existing dwelling from 1 or 2 additional parcels. Some were to split properties that already had development on each new parcel.

- Partition records indicate that from 2000-2018, there were approximately 135 partition applications that would have created a total of 177 new parcels, excluding withdrawn applications. Of these, 34 applications were for parent parcels of 0.5 acres or less, 26 were 0.5-1 acre, and 78 were greater than 1 acre. About 48 of these were commercial/ industrial/ institutional /large multi-family housing sites. Additional partitions included in these figures were applications that adjusted large properties in preparation for subdivision phasing. Therefore, many of these partitions didn't create new buildable residential parcels. Further, some partitions didn't create any additional buildable capacity – they were sites already developed with two or more homes that were divided so there was one home on each parcel.
- Further, the partition activity peaked in 2003-2004, so the information should be analyzed to determine if this is due to a diminishing supply of smaller sites which are eligible or feasible for further land divisions.
- This suggests the assumptions regarding residential infill and redevelopment of 8% used in the 2019 Draft HNA are high. This historic partitioning activity suggests infill and redevelopment consistent with the HB 2001 methodology is more appropriate.

Partition Applications



City of McMinnville Partition Applications 2000-2018
(Excludes Withdrawn Applications)

Total Partitions	Partitions by Parent Parcel Size					SUM
	<=0.5 ac	>0.5-1 ac	>1-2 ac	>2 ac	SUM -All	<=2 ac
Number of partition applications (excluding withdrawn)	34	25	15	61	135	74
Number of additional parcels from partitioning	41	35	21	76	173	97
Total partition applications per year	1.8	1.3	0.8	3.2	7.1	3.9
Total additional parcels per year	2.2	1.8	1.1	4.0	9.1	5.1
Residential Partitions						
Number of residential partitions (includes zero lot line lots)	32	23	11	9	75	66
Number of new residential parcels*	39	34	16	14	103	89
Residential partitions per year	1.7	1.2	0.6	0.5	3.9	3.5
Additional residential parcels per year	2.1	1.8	0.8	0.7	5.4	4.7
Other Partitions						
Number of non-residential partitions**	2	2	4	38	46	8
Number of subdivision phasing partitions***	0	0	0	14	14	0
SUM of non-residential and subdivision phasing partitions	2	2	4	52	60	8

*Some partitions added no capacity: the parent parcel had more than one dwelling, and the partition split the dwellings onto separate parcels

**Approximately 46 partitions from 2000-2018 were commercial, industrial, institutional, or large multi-family sites

***Approximately 14 partitions were to adjust large properties in preparation for subdivision phasing

Acreage by Parent Parcel Size	Parent Parcel Acreage by Parent Parcel Size					SUM
	<=0.5 ac	>0.5-1 ac	>1-2 ac	>2 ac	SUM	
All	13	49	23	993	1,078	84
Residential only*	12	48	18	151	228	77
New residential parcels per acre	3.28	0.71	0.91	0.09	0.45	1.15

The table above shows that for residential partitions, on average, there were 1.15 new parcels per parent parcel acre (89/77) for the 2000-2018 period.

Most buildable residential lots which are developed are new vacant lots created through residential subdivisions. A small number of new parcels are created through partitioning. Most of those add new development capacity, but some are simply to split ownership of a parcel that has more than one existing dwelling so that each of the existing dwellings is on a separate parcel.

Approximately 3,038 new dwellings were added from 2000 to mid-2018. During the same time period, about 75 partition applications added 103 additional residential parcels. By definition, a partition adds 1 or 2 new parcels in addition to the original parcel. The average was 1.37 new parcels per partition application. If each new parcel was developed with a dwelling, that would account for 3.4% of new dwellings, which would be an average of 179 new dwellings, about 9.4 new dwelling per year; however, partitioning accounted for an average of only 5.4 new dwellings per year.

Partitions of parent parcels of less than one-half acre were accounted for in infill and redevelopment assumptions. Not all of new parcels below developed with new dwellings.

Over the 2000-2018 period, there were:

- 32 new partitions of residential parent parcels smaller than one-half acre in size, creating 39 additional parcels, averaging 2.1 per year.
- 23 new partitions of residential parent parcels of one-half acre to one acre, creating 34 additional parcels, averaging 1.8 per year.
- 11 new partitions of residential parent parcels of one to two acres in size, creating 16 additional parcels, averaging 0.8 per year.

- 9 new partitions of residential parent parcels larger than two acres in size, creating 14 additional parcels, averaging 0.7 per year.

Non-Entitled Properties in the UGB

The following table summarize the non-entitled properties in the UGB by size class.

Size	Total		Entitled		Non-Entitled	
	TLs	Bld Ac	TLs	Bld Ac	TLs	Bld Ac
<=0.5 bld ac	193	84	3	1	190	83
>0.5-1 bld ac	66	47	1	1	65	46
>1-2 bld ac	50	75	3	6	47	69
>2 bld ac	63	438	16	198	47	241
SUM	372	644	23	205	349	439

The subtotal of properties 0-2 acres is approximately 309 tax lots classified as vacant or partially vacant (193 TLs <0.5 acres, 66 TLs 0.5-1 acres, and 50 TLs 1-2 acres, with buildable acres between 0-2 acres totaling about 206 buildable acres ac (84 buildable acres in 193 TLs with 0-0.5 buildable acres, 47 buildable acres in 66 TLs with 0.5-1 buildable acres, and 75 buildable acres in 50 TLs with 1-2 buildable acres). This already excludes developed parcels <1/2 acre with an existing dwelling.

This section only adjusts capacity for non-entitled small lots in non-exception areas, so a subset of tax lots in non-exception areas is identified.

The assumptions in the June 2019 Draft HNA assumed the following capacity on vacant and partially vacant non-exception area properties smaller than 2 acres by zone, yielding 366 dwelling units of capacity.

Zone	Vac/PV <=2 ac		Vacant <=2 ac		PV <=2 ac		DU/Gross Ac	Vac&PV	Vac	PV
	TLs	Bld. Ac.	TLs	Bld. Ac.	TLs	Bld. Ac.		Cap (Dus)	Cap (Dus)	Cap (Dus)
R-1	81	30	60	13	21	17	3.1	93	41	53
R-2	75	21	67	15	8	6	4.3	90	64	25
R-3	20	6	18	5	2	1	4.8	29	22	6
R-4	36	10	34	9	2	1	6.1	61	54	9
County	21	19	6	5	15	14	4.9	93	25	66
SUM	233	86	185	47	48	39		366	205	158

Based on the analysis of historic partitions and development of vacant and partially vacant tax lots smaller than 2 total acres within the UGB in non-exception areas, the following revised assumptions are used for the baseline capacity analysis instead of the assumptions used in the June 2019 Draft HNA:

- **Vacant** lots less than 2 acres will be assumed to develop at the historic density by zone. This is the same assumption as the original methodology for these lots, yielding 205 new dwellings.
- **Partially vacant** lots less than 2 acres will be assumed to further develop through partitioning and development, consistent with the analysis above for historic partition

activity: there are 39 buildable acres, and these will yield an average of 1.15 new parcels per parent parcel acre, and each new parcel will be assumed to yield a new dwelling. This assumption yields 45 new dwellings on these lots. These parcels were assumed to yield 158 dwellings using the original methodology.

- **Together**, this yields 251 dwellings (with rounding differences) for tax lots smaller than 2 acres in non-exception areas, which are calculated separately. This is 115 fewer dwellings on these properties (251 dwellings vs. 366 dwellings).

5. Capacity for Already-Platted Vacant Lots within Landslide Constraint Area

Some vacant lots that were already platted in a subdivision were assigned no capacity because they were within the landslide constraint area. These lots are able to develop subject to approved geotechnical analysis, so these lots are assigned capacity consistent with the subdivision approval. 19 lots were affected, so the capacity is increased from 0 dwellings to 19 dwellings for these lots (1 dwelling for each lot).

Any other constraints and hazards not addressed in the June 2019 HNA or herein would be analyzed and addressed separately, and are not addressed herein.

Summary of Results

With each of the revisions above reflected in the BLI and capacity analysis, the aggregate results are as follows:

- **Revised Capacity of UGB Lands:** 2,129 DUs
- **Total Housing Need:** 5,269 (unchanged)
- **Revised Demand on Vacant/Partially Vacant Land:** 5,182 DUs
- **Deficit:** $2,129 - 5,182 = -3,053$ DUs

2041 Deficit, Gross Buildable Acres:

@4.9 avg historic density: -623 ac

@5.3 needed density: -576 ac

This is summarized in the following table.

2018-2041 Residential Capacity Analysis Revisions

Component	Description	Capacity - Dwelling Units		
		Original	Revised	Difference
2018 Capacity				
Total Relative to June 2019 Draft HNA		2,921	2,129	(792)
Adjustments				
1. Revised Total After Split-Zoned Lot Adjust.	BLI Buildable Res. Acres Adjusted to Split-Zoned Ac.	2,921	2,822	(99)
2. Exception Areas <2 acres	OAR 660-024-0067(6)	342	18	(324)
3. Exception Areas >=2 acres	Revise Avg. Hist. Density to R-1 Hist. Density	687	434	(253)
4. Elevation >415' (Potential Zone 3)	Subtract 6.5 bld ac in except. area @ R-1 Hist. Density	68	48	(20)
5. Small City Lot Adjustments*	Non-Exception Area < 2ac	366	251	(115)
6. Add Capacity to Platted Vacant Lots w/LSC	19 Small Vac. Platted Subd. Lots with Landslide Constr.	-	19	19
2018-41 Demand (for Vac/PV)				
Total		5,269	5,269	-
Adjustments				
7a. Vacant/Partially Vacant	To Address HB 2001 Amendments to ORS 197.296	4,847	5,182	335
7b. Infill/Redevelopment	To Address HB 2001 Amendments to ORS 197.296	422	87	(335)
2041 Deficit (for Vac/PC)				
Deficit: DUs		(1,926)	(3,053)	(1,127)
*Adjustments for small lots in Exception Areas are calculated separately above per OAR 660-024-0067(6) provisions				
2041 Deficit (Acres)				
Deficit: Acres @ Hist. 4.9 du/ac		(393)	(623)	(230)
Deficit: Acres @ Needed 5.3 du/ac		(363)	(576)	(213)

The following table summarizes the residential capacity analysis revisions by zone.

Zone	Capacity													Subtotal with Cap Adjust								
	Orig Capacity by Zone	1			2			3			4			5			6			Before	After	Diff
		Before	After	Diff	Before	After	Diff	Before	After	Diff	Before	After	Diff	Before	After	Diff						
R-1	449	449	428	-21									93	61	-32	0	19	19	449	415	-34	
R-2	551	561	569	8									90	71	-19				561	550	-11	
R-3	28	28	28	0									29	23	-6				28	22	-6	
R-4	127	127	110	-17									61	55	-6				127	104	-23	
County	1753	1753	1687	-66	342	18	-324	687	434	-253	68	48	-20	93	41	-52			1753	1038	-715	
SUM	2916	2916	2822	-96	342	18	-324	687	434	-253	68	48	-20	366	251	-115	0	19	2916	2129	-787	
	(2921 in Table 94)	2921 in table	-99 in table																Orig	Rev	Diff	
																			2921 in table	-792 in table		

Additional Considerations

This Addendum provides the amended baseline capacity analysis. The City has estimated a target future “needed density” of 5.3 du/gross acre, which applies to “buildable land,” excluding development assumed to occur through infill and redevelopment on properties classified as developed. This is an 8% increase over the historic average density of 4.9 du/gross acre. Given limitations on buildable lands within the current UGB, since the majority of lands are developed, there will be challenges in “bending the curve” to achieve significant efficiencies and additional density on lands already within the UGB. Additional density will likely need to be achieved on land to be added to the UGB. Much of the buildable land already within the UGB includes limitations, including:

- **Entitlements.** A substantial portion of the remaining buildable land within the UGB is in properties which already have entitled land use decisions that already establish the development densities, where it unlikely that new efficiency measures would influence the capacity of those entitled approvals.
- **Exception Lands.** Consistent with the OAR analysis provided herein, the majority of exception lands that were brought into the UGB are substantially parcelized and already developed with homes, distributed in a pattern which limits the likelihood that extension

of urban services for the limited amount of incremental development that would occur, or that higher densities would be achieved. These properties have developed because they didn't require service extensions, using on-site private wells and septic systems instead and served by rural streets. The incremental amount of additional development capacity compared to what has already developed makes the prospect of sewer, water, storm water, and city standard street improvements challenging given that the costs would be needed within an area that is significantly developed, where cost can't now be easily captured from existing development that has already occurred.

- **Small Lots.** A substantial number of the buildable lots are small city lots with existing homes, classified as "partially vacant" buildable land which exceed the size threshold to be classified as "developed", but which are unlikely to all develop during the planning period or achieve "needed density," despite the assumptions required by state law that they must all be classified as buildable and assumed to develop during the 20-year planning period in order to meet the identified housing needs for that period.
- **Infrastructure Capacity Limitations.** The few larger properties within the UGB which are not already entitled would have the greatest likelihood for efficiency measures that would have a greater likelihood of achieving increased capacity. However, several of those have infrastructure capacity limitations that present limitations to density and capacity increases through efficiency measures. For example, sewer modeling is typically based on historic density achieved by zone rather than maximum density permitted by zone. In many cases, there is insufficient sewer capacity to build to the maximum density permitted by the zoning, let alone higher densities associated with potential upzoning.

Because the City completed the June 2019 Draft HNA prior to enactment of HB 2001, and with the above limitations, the Draft HNA doesn't include assumptions for increased capacity for residential buildable lands within the UGB in excess of historic density based on existing zoning. It provides a baseline capacity analysis. The baseline capacity analysis is based on the existing zoning of lands in the UGB.

The City is continuing to evaluate efficiency measures identified in the June 2019 Draft Housing Strategy. The greatest likelihood for achieving the identified "needed density" for the needed number of new housing units would result from inclusion of buildable lands in the UGB for which there are greater opportunities for efficiencies associated with new master planned development on larger properties.

Exhibits 94 and 96 provide the capacity of buildable lands within the UGB based on the historic density. Exhibit 96 also summarizes capacity of land within the UGB for historic density of 4.9 du/gross acre and for needed density of 5.3 du/gross acre.

City of McMinnville

Housing Strategy

June 2019

Prepared for:
City of McMinnville

FINAL REPORT

ECONorthwest
ECONOMICS • FINANCE • PLANNING

KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503.222.6060

This page intentionally blank

Acknowledgements

ECONorthwest prepared this report for the City of McMinnville. ECONorthwest and the City of McMinnville thank those who helped develop the McMinnville Housing Strategy. This project is funded by Oregon general fund dollars through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

Project Advisory Committee (PAC)

Citizen Advisory Committee (CAC)

- | | | |
|--------------------------|------------------|-------------------|
| Marilyn Worrix, Chair | Alan Ruden | Beth Caster |
| Kellie Menke, Vice Chair | Sid Friedman | Michael Jester |
| Roger Lizut | Mark Davis | Robert J. Banagay |
| Susan Dirks | Danielle Hoffman | Amanda Perron |
| Roger Hall | Andrew Burton | Matt Deppe |
| | | Patty O’Leary |

Technical Advisory Committee (TAC)

State of Oregon

- Angela Carnahan, Regional Representative – Oregon Department of Land Conservation and Development
- Kevin Young, Housing Specialist– Oregon Department of Land Conservation and Development

City of McMinnville

- Tom Schauer, Senior Planner – Lead
- Heather Richards, Planning Director
- Chuck Darnell, Senior Planner
- Jamie Fleckenstein, Associate Planner
- Mike Bisset, Community Development Director
- Susan Muir, Parks Director

Yamhill County

- Ken Friday, Planning Director
- Stephanie Armstrong, Associate Planner

Consulting Team (ECONorthwest)

Robert Parker, Senior Project Adviser
Beth Goodman, Project Director
Margaret Raimann, Technical Manager
Sadie DiNatale, Associate

City of McMinnville Contact:

Tom Schauer, Senior Planner
City of McMinnville
230 NE Second Street
McMinnville, Oregon 97128
503-474-5108
tom.schauer@mcminnvilleoregon.gov

ECONorthwest Contact:

Robert Parker, Project Director
ECONorthwest
222 SW Columbia, Suite 1600
Portland, OR 97201
503-222-6060
parker@econw.com

Table of Contents

Acknowledgements

1. Introduction

Housing Strategic Priorities

2. The McMinnville Housing Strategy

Strategies and Actions

Land Use Strategies

Strategy 1. Growth Planning

Strategy 2. Housing Development in Existing UGB

Strategy 3. Infrastructure & Public Facilities Planning

Strategy 4. Special Area Planning

Strategy 5. Land Use / Code Amendments

Other, Non-Land Use Strategies

Strategy 6. Programs for Affordable Housing (Non-Land Use)

Strategy 7. Leveraging Partnerships for Housing (Non-Land Use)

3. Appendices

1. Introduction

In 2018, the City of McMinnville received a Technical Assistance planning grant from the Department of Land Conservation and Development (DLCD) to develop a buildable land inventory (BLI), housing needs analysis (HNA), and housing strategy. The BLI and HNA determine whether the City has enough land to accommodate 20-years of population and housing growth. They also address needs for 5-, 10-, and 46-year periods. The BLI and HNA also provide the basis for an update to the City's Comprehensive Plan Housing Element, as well as the basis for developing a Housing Strategy to respond to the identified housing need. While the BLI and HNA predominantly provide the quantitative basis, the Housing Strategy addresses qualitative issues about how the City will plan for those needs, including policies to ensure the community achieves enduring value for future generations.

This work was undertaken with guidance by a Project Advisory Committee through a series of meetings, recommendations, and decision points. The project also included broader outreach with a focus group and public open house to seek input on housing needs and strategies to address identified needs.

Importantly, the housing strategy recognizes that the city does not build housing, but rather provides the regulatory framework in which housing is built. The first part of the strategy focuses on land use tools to ensure there is adequate land planned and zoned to meet the community's future housing needs, promoting opportunities for a variety of housing types, whether market rate or subsidized housing. This strategy further strives to provide opportunities for lower-cost market rate housing to the extent possible to achieve more housing affordability without reliance on subsidies if and when possible. However, it is recognized that housing for those with the lowest incomes is unlikely to be achieved at market rates, and will require some housing provided through affordable housing models that also include subsidized housing, choice vouchers, "sweat equity," etc. Unfortunately, in a community the size of McMinnville there are very few resources available to subsidize housing and without the requested changes in HB 2997 2019, allowing McMinnville to implement inclusionary zoning on housing developments for affordable housing, McMinnville has very few regulatory tools to mandate affordable housing. Like many smaller cities in Oregon, McMinnville will continue to face significant challenges providing subsidized housing for its residents with the lowest incomes.

The City is committed to working hard to ensure that every resident in McMinnville has a great neighborhood in which to live. Recently, the City adopted its Great Neighborhood Principles, thirteen principles of neighborhood development describing what makes a great neighborhood in McMinnville, with a goal of inclusivity and providing a great neighborhood for every resident to live in regardless of income. *See Exhibit 1.*

Exhibit 1. Summary of McMinnville’s Great Neighborhood Principles

McMinnville’s Great Neighborhood Principles will guide land use patterns, design, and development of the places where McMinnville citizens live, work, and play.



Great Neighborhoods are sensitive to the natural conditions and features of the land.



Great Neighborhoods preserve scenic views in areas that everyone can access.



Great Neighborhoods have open and recreational spaces to walk, play, gather, and commune as a neighborhood.



Great Neighborhoods are pedestrian friendly for people of all ages and abilities.



Great Neighborhoods are bike friendly for people of all ages and abilities.



Great Neighborhoods have interconnected streets that provide safe travel route options, increased connectivity between places and destinations, and easy pedestrian and bike use.



Great Neighborhoods are designed to be accessible and allow for ease of use for people of all ages and abilities.



Great Neighborhoods have buildings and spaces that are designed to be comfortable at a human scale and that foster human interaction within the built environment.



Great Neighborhoods provide easy and convenient access to many of the destinations, activities, and local services that residents use on a daily basis.



Great Neighborhoods complement adjacent rural areas and transition between urban and rural uses.



11 - Great Neighborhoods provide housing opportunities for people and families in all stages of life.
12 - Great Neighborhoods have a variety of building forms and architectural variety to avoid monoculture design.



Great Neighborhoods have unique features, designs, and focal points to create neighborhood character and identity.

McMinnville’s housing strategy strives to make transformational and fundamental changes to the Comprehensive Plan and Zoning Ordinance to ensure policies and regulations that provide neighborhoods with a variety of housing types, income levels and generations, rather than the homogeneous neighborhoods defined by Euclidean zoning.

Traditionally, when communities undertake their Housing Needs Analysis and Housing Strategy, they determine what the make-up of the future population is for the community and evaluate how they are going to meet the needs of that future population by identifying the types of housing they will encourage through their policies and housing strategy. Typically, the assumption is that the higher density housing is more affordable and therefore multi-family is the most affordable housing type to serve the population base on the lower end of the affordability spectrum (*see Exhibit 2*). However, that does not always bear true in reality and may be what had led to some of the affordable housing issues.

With this Housing Strategy, the City intends to dispel the notion that each of the major categories of needed housing types described in ORS 197.303(1)(a) (single family detached, single family attached and multi-family) is a proxy for a level of affordability (*see Exhibit 2*). Rather, it is recognized that there is a wide range of affordability within each of these major housing types, and communities should have housing strategies that promote housing choices in terms of housing types and in terms of ownership or rental, regardless of income. People are making their housing choices based upon two factors: 1) what they can afford; and 2) how they prefer to live (rental versus ownership, detached versus attached housing). Ideally a housing strategy would provide housing at all income levels that provide choices for all preferences (*see Exhibit 3*). There is not one “right” way to meet housing needs. **Exhibit 4** provides a conceptual illustration of how different communities might address housing needs in very different ways.

Exhibit 2. Relationships between affordability, housing type, and strategy in the traditional statutory model

Assumptions Inherent in Traditional Statutory Model			
	Less Affordable More Affordable		
	 1	 2	 3
A-Housing Type	Single-Family Detached	Single-Family Attached	Multi-Family
B-Density	Low Density	Medium Density	High Density
C-Affordability	High Cost	Medium Cost	Low Cost
Strategy	↓	↓	↓
Housing Mix Strategy	Reduce Share Compared to Historic	Increase Share Compared to Historic	Increase Share Compared to Historic
Housing Density Strategy	Increase Density of SFD	Increase Density of SFA	Increase Density of MFH
Leads To:	↓	↓	↓
Presumptive Outcome	<ul style="list-style-type: none"> • Lower % SFD in Mix • Increase Density of SFD • <u>Lower Cost:</u> • Less of the most expensive housing type • Make this housing type more affordable by increasing its density 	<ul style="list-style-type: none"> • Greater % SFA in Mix • Increase Density of SFA • <u>Lower Cost:</u> • More of a more afford. housing type • Make this housing type more affordable by increasing its density 	<ul style="list-style-type: none"> • Greater % of MFH in Mix • Increase Density of MFH • <u>Lower Cost:</u> • More of the most afford. housing type • Make this housing type more affordable by increasing its density
Action:	“Lock In” a mix and density, and determine how to achieve those with the strategy		

Exhibit 3. Affordable housing types by income level

	Extremely Low Income (≤30% of MHI) 509 HH in 20 Year Forecast 11% of total units	Very Low Income (30 – 50% of MHI) 507 HH in 20 Year Forecast 11% of total units	Low Income (50-80% of MHI) 719 HH in 20 Year Forecast 15% of total units	Middle Income (80 - 120% of MHI) 992 HH in 20 Year Forecast 21% of total units	High Income (≥120% of MHI) 1,930 HH in 20 Year Forecast 41% of total units
Single Family Detached	Tiny Home Villages Mobile Homes	Tiny Home Villages Mobile Homes Manufactured Homes Single Family Detached – Habitat and CHB, Section 8	Tiny Home Villages Mobile Homes Manufactured Homes Cottage Clusters Small Lot Subdivisions Single Family Detached – Habitat and CHB, Section 8	Single Family Detached Cottage Clusters Small Lot Subdivisions	Single Family Detached Cottage Clusters Small Lot Subdivisions
Single Family Attached		Common Wall Duplexes – Section 8 Townhomes – Section 8	Common Wall Duplexes – Section 8 Townhomes – Section 8	Common Wall Duplexes Townhomes	Common Wall Duplexes Townhomes
Multi-Family	Duplexes – Section 8 Triplexes – Section 8 Quadplexes – Section 8 Apartments – Section 8 Apartments - Subsidized	Duplexes – Section 8 Triplexes – Section 8 Quadplexes – Section 8 Apartments – Section 8 Apartments - Subsidized	Duplexes – Section 8 Triplexes – Section 8 Quadplexes – Section 8 Apartments – Section 8 Apartments - Subsidized	Duplexes Triplexes Quadplexes Apartments Condos	High End Duplexes High End Triplexes High End Quadplexes Apartments Condos

Exhibit 4. Spatial models of housing density



Provision of housing is accomplished by a wide variety of organizations including the City, builders, housing providers, and other organizations. Municipalities must fulfill certain requirements under state law and can choose to undertake additional roles to help achieve development of needed housing.

- **The City of McMinnville’s Primary Role: Land Use Planning & Growth Management.** The City has a responsibility under state law to manage land use and development, including land and backbone infrastructure for housing. The City does this through its Comprehensive Plan and land use regulations. The City must adopt and amend plans to ensure an adequate supply of land zoned to accommodate needed housing, together with supporting infrastructure. Plans must be compliant with state and federal law, while reflecting local values and vision for a livable community.

- **The City of McMinnville’s Potential Roles.** The City does not build housing. In addition to its primary role in managing growth, the City may employ additional strategies to help builders and housing providers deliver market-rate and subsidized housing. Evaluation of these strategies, including evaluation of implementation options, are typically the basis for the work plans various City committees carry out with the appropriate charge. City committees generally include representatives of organizational partners.

Housing Strategic Priorities

Through the technical analysis of the Housing Needs Analysis and input from the Project Advisory Committee, the City identified four strategic priorities (SP). In light of Council’s adoption of the Great Neighborhood Principals, the Housing Strategy includes a fifth priority to address urban form. The strategic priorities are listed below.

- **Land Availability (SP1):** This strategic priority focuses on strategies that ensure an adequate land supply—not just a 20-year supply as Goal 10 requires, but also a pipeline of serviced land that is available for immediate development. Strategies include tools such as boundary amendments to expand the urban area, map amendments to increase density or amount of residentially zoned, and policy and code amendments to address development standards related to uses, density, and lot sizes. This Strategic Priority focuses on land supply, capacity, and availability.
- **Wider Variety of Housing Types (SP2):** This strategic priority intends to allow and encourage a wider array of housing types. This includes all needed housing types identified in ORS 197.303 and include tools to achieve a wider variety of housing types. The city has already adopted some of these tools such as allowing corner duplexes and accessory dwelling units. Other tools include expanding the types of housing allowed in low density zones, and allowing housing types such as cottage housing, tiny homes, and co-housing.
- **Housing Affordability (SP3):** This strategic priority focuses on McMinnville’s housing affordability issues. Much of that work is already underway with the council-appointed Affordable Housing Task Force.¹ This housing strategy is coordinated with that effort but does not intend to duplicate past or future efforts of the Task Force. As such, this housing strategy focuses on a narrow range of strategies which may complement or supplement Task Force efforts.
- **Infrastructure & Public Facilities (SP4):** This strategic priority focuses on ensuring that adequate and cost-effective infrastructure and public facilities are available to support new housing. It includes provision of services by the City and other services providers, including transportation, water, wastewater, stormwater, and parks functional plans. There are two predominant aspects to this strategic priority. First, as the City evaluates opportunities to meet needs within the current UGB, it is necessary to identify and

¹ <https://www.mcminnvilleoregon.gov/mahtf/page/mcminnville-affordable-housing-task-force-27>

evaluate existing infrastructure & public facilities planning assumptions, capacity, and potential constraints which may need to be resolved to facilitate housing at authorized densities, opportunities for infill and redevelopment, up-zoning, and/or special area planning that may incorporate housing or mixed-use development. Second, it will be necessary to evaluate infrastructure & public facilities needs associated with future expansion areas, including potential Urban Reserve and UGB expansion areas. Some of these issues may overlap, as there could be some cases where “downstream” capacity considerations might affect additional growth whether within the current UGB or in future expansion areas.

- **Urban Form (SP5):** This strategic priority focuses on preserving McMinnville’s character. The adoption of the Great Neighborhood Principles provides the foundation. This strategic priority includes strategies that preserve the character of existing neighborhoods while allowing new housing, and strategies that ensure that the Great Neighborhood principles are reflected in new development, in the unincorporated areas of the UGB, and in future expansion areas. *See Exhibit 4.*

Each of the strategies and actions aligns with one or more strategic priorities.

2. The McMinnville Housing Strategy

This Housing Strategy is an action plan. Accordingly, herein, the individual strategies and tools have been re-organized into **Strategies** and **Actions**. Each strategy includes individual actions grouped together as a series of tasks. When necessary these have been organized into a series of sequential tasks when there are task dependencies that drive the order of the work. There may also be certain efficiencies where there are similar tasks for more than one strategy that could be carried out at the same time to address similar issues for multiple strategies.

Organizing strategies into these groups also provides a specific context for individual strategies. The same strategy might be implemented differently depending on the specific context and objective to be achieved. For example, planning for a “diverse housing type” zone might be accomplished the same way throughout the UGB, or it might be tailored and accomplished one way for infill and redevelopment and a different way for new lands brought into the UGB. Grouping of strategies is also intended to help develop interdepartmental work plans, schedule work, assign resources, and identify budget needs.

In addition to the 20-year Housing Needs Analysis required by state law for UGB planning, the City also conducted the BLI and HNA to include analysis of land supply and housing needs for 5-, 10-, and 46- year periods to facilitate development of short-, medium-, and long-term strategies which are responsive to different needs, issues, and constraints associated with each of these time periods.

The McMinnville Housing Strategy was developed over the course of several meetings with the Project Advisory Committee. The committee reviewed key issues and prioritized more than 80 potential land-use and non-land-use actions. The following supporting materials from the PAC meeting are included as appendices to this document:

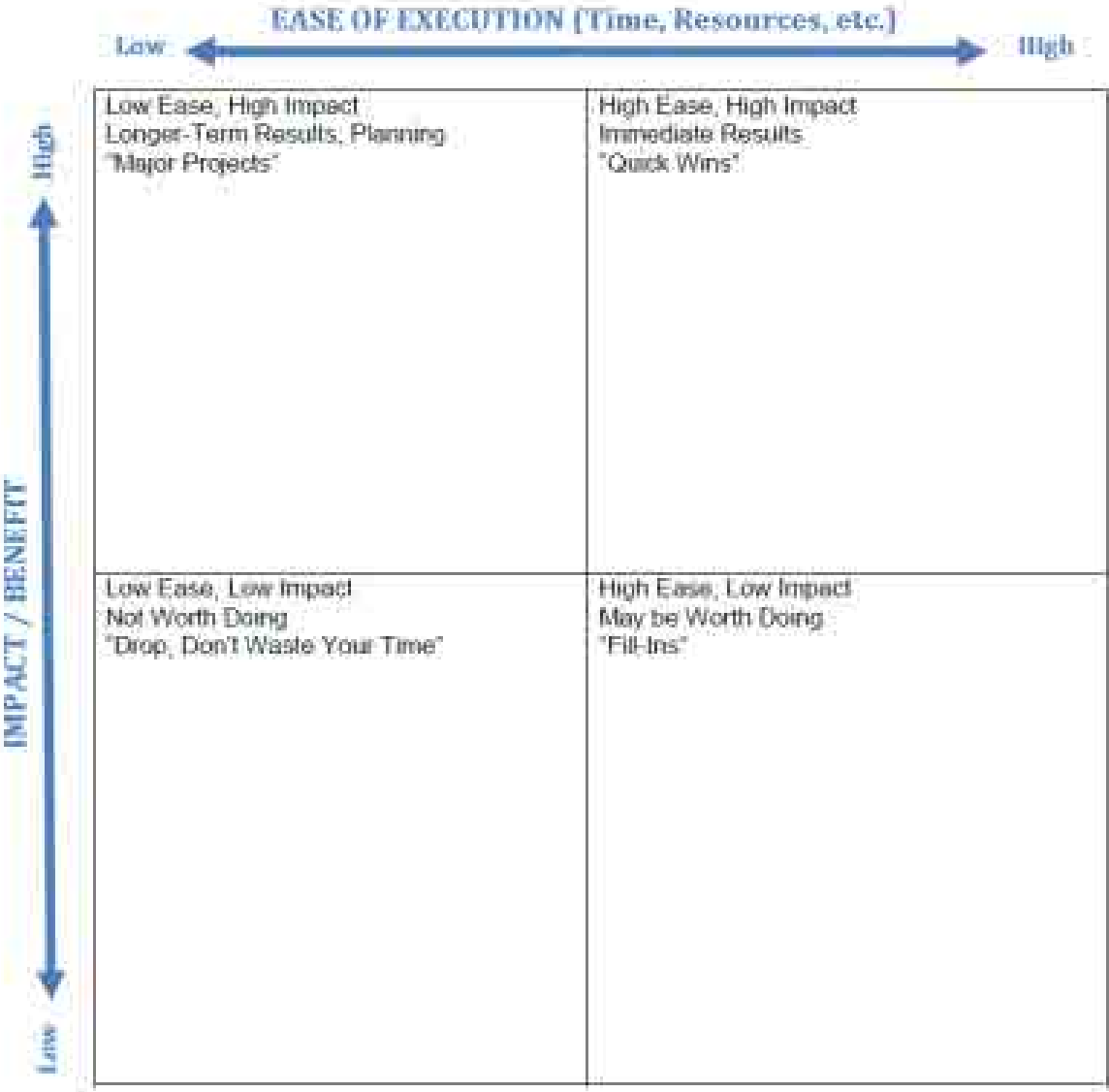
- **Appendix A.** Table 1. Issues Associated with Strategic Priorities. This table identifies issues from the BLI and HNA and also evaluates current conditions; existing plans, policies, and regulations; and new state law that might be addressed as part of the housing strategy.
- **Appendix B.** Table 2. McMinnville Housing Strategy – Potential Strategies and Actions. This table lists each strategy and cross references it with strategic priorities, applicability to affordability groups, applicability to short/medium/long term needs and issues, and other factors.
- **Appendix C.** Table 3. Description of Potential Strategies and Actions. This table provides more detailed descriptions of the potential housing strategies and actions listed in Table 2. In addition, the table provides further information about the potential scale of impact of the strategy.

The Strategies and Actions described below cross-reference with the tables in the appendices (where appropriate) and are identified by their numerical reference (for example A1). In some

instances, additional implementation actions or tasks which are necessary as part of a strategy were identified. Any additional actions do not have a cross-reference.

Further, committee members were presented with an “ease/impact” matrix to assist with prioritizing the most impactful strategies and were also asked to consider how long it would take to complete work and realize benefits of a strategy once initiated until completion, which might require early initiation. This is discussed at a high level under the headings for the strategies below.

Exhibit 5. Ease/Impact Prioritization Matrix



Strategies and Actions

The following strategies and actions have been identified to respond to McMinnville’s future housing need and will be further evaluated by the appropriate City committees, with public

processes, research, and an opportunities and constraints analysis. The strategies and actions were discussed and prioritized by the PAC. Implementation may also identify other key strategies and actions that need to be undertaken as part of a group of strategies undertaken together. Note that some individual actions may be part of more than one strategy.

Based on the City's roles in addressing housing needs described above, the strategies in each exhibit are grouped into two broad categories:

- **Land Use Strategies. (Shown in green headings).** These are related to the City's primary role of land use planning and management.
- **Other, Non-Land Use Strategies. (Shown in orange headings).** These are other strategies the City may employ to help builders and housing providers deliver needed housing. These strategies must still all occur within the parameters of the land use framework. Some of these strategies are also used by other organizations and partners involved in provision of housing.

Land Use Strategies

Strategy 1. Growth Planning

Summary: This strategy focuses on increasing the supply of buildable lands and conducting all of the associated planning and implementation tasks which are required.

This strategy will predominantly address Strategic Priority 1: Land Availability. It will also address issues of Infrastructure & Public Facilities. It is also a prerequisite to being able to address many of the strategic priorities and address a wide variety of affordability objectives. This Strategy is low ease / high impact. This work needs to be started/continued in the short-term because it will take years before the results / benefits are realized. Many of the following actions include additional planning and implementation actions.

Potential Actions or Projects:

- 1.1 **Develop an Urban Reserve Area (URA) (E36).** Cities may establish Urban Reserve Areas (URAs) for a period of up to 30 years beyond the Urban Growth Boundary (UGB) planning period of 20 years, for a combined period of up to 50 years. These become the highest priority lands for future UGB expansions. Urban Reserve Areas provide an opportunity for efficient infrastructure planning and future urbanization.
- 1.2 **Establish a Framework Plan for the URA (E37).** A framework plan identifies the major land uses, transportation backbone, infrastructure needs, and sequencing for the long-term growth within the URA. As these lands come into the UGB, area plans will be developed to ensure land uses and housing are provided consistent with the long-term framework plan.

- 1.3 **Identify an Expanded UGB per the URA (E38).** Urban Reserve Planning helps guide where to establish an Urban Growth Boundary to meet needs for the 20-year planning period. In addition to other applicable law, this action could also potentially establish local criteria for housing affordability as part of the UGB expansion process.
- 1.4 **Develop Area Plans for UGB Lands Identifying Housing Opportunities (E39).** Area plans for the UGB refine the framework plan into a more detailed land use plan for areas within the UGB. Development proposals would require master plans consistent with the area plans.
- 1.5 **Conduct Infrastructure Planning for URA and UGB Areas (Update infrastructure plans for growth lands) (D29).** Infrastructure plans are generally sized with capacity for build-out of the Urban Growth Boundary. Expansion of the UGB will necessitate updates to the public facility plans to provide capacity to serve new areas. Infrastructure planning can also be sized to accommodate future growth within designated Urban Reserve Areas, providing for more cost-efficient provision of services.
- 1.6 **Update Goal 5 Natural Resource Planning & Policies, incl. Wetlands and Riparian Areas (F41).** The City has not adopted certain local “Goal 5” resource policies, which will be required, including a Local Wetland Inventory (LWI) and standards for riparian corridors. These will further affect or inform the capacity of lands within the UGB and future growth areas.
- 1.7. **Update Goal 7 Hazards Planning & Policies, incl. Landslide Susceptibility (F42).** The City has not adopted certain local “Goal 7” policies for hazards, including areas mapped by DOGAMI (The Oregon Department of Geology and Mineral Industries) as high landslide susceptibility. DOGAMI is in the process of refining their mapping which will further inform this work, which could affect or inform the capacity of lands within the UGB and future growth areas.
- 1.8. **Review and Update City/County Urban Growth Management Agreement (UGMA) if needed.** The UGMA defines planning authorities and procedures between the city and Yamhill County for the unincorporated areas of the UGB.
- 1.9. **Implement Great Neighborhood Principles (C26).** In April 2019, the City adopted Great Neighborhood Principles (GNP) and associated policies as part of the Comprehensive Plan. Some of these policies address mixed income and mixed housing neighborhoods. These policies will need to be implemented with code amendments, which can include other strategies, such as Strategy A2 to achieve a Diverse Housing Zone.
- 1.10. **Create a Diverse Housing Zone (A2).** Explore residential zoning with targeted/ minimum density and multiple allowed housing types. This zone would authorize a variety of housing types and sub-types including single-family detached and attached and multi-family housing types (such as duplexes, triplexes and quad-plexes, and cottage clusters). In contrast to traditional zoning, this strategy would be used to implement Great Neighborhood Principles (GNP), including the framework and area

planning for growth areas, to specify a housing mix and associated average density that would need to be achieved in an area.

- 1.11. **Develop a High-Density Residential Zone (A3).** This strategy would be used in conjunction with and to complement the Great Neighborhood Principles and diverse housing zone (A2) to provide for higher density housing types in specific areas, such as more dense core areas, centers, nodes, etc. which would be higher density than the densities for housing types which would be incorporated on smaller lots within the diverse housing zone, such as duplexes, cottages, townhomes, row houses, and tri- and quad-plexes.
- 1.12. **Develop Annexation Process to Mandate Housing Types Upon Annexation per Area Plans (E40).** Lands brought into the UGB are placed in an urban holding zone, allowing for annexation phasing plans. Annexation would require master plan approval addressing required housing mix and average density, site design, and development standards.

Exhibit 6. Summary of Potential Actions or Projects

Reference	Tasks or Projects	Time Period		
		Near-term	Mid-term	Long-term
1.1	E36. Plan for Urban Reserve Area (URA)	X		
1.2	E37. Develop Framework Plan for URA	X		
1.3	E38. Plan for UGB within Urban Reserve	X		
1.4	E39. Develop Area Plans for UGB		X	X
1.5	D29. Conduct Infrastructure Planning for URA and UGB Areas.	X		
1.6/1.7	F41 & F42. Update Goal 5 and Goal 7 planning for URA and UGB areas.		X	
1.8	Review and Update City/County IGA if needed		X	
1.9	B26. Establish Guidance on Implementation of Great Neighborhood Principles That Will Inform Land Use for Urban Reserves and UGB.	X		
1.10/1.11	A2 & A3. Establish Provisions in the Zoning Ordinance for a New “Diverse Housing” Zone and a New “High Density” Zone	X		
1.12	E40. Establish Requirements for Master Planning Prior to Annexation to Ensure Areas Will Be Consistent with Framework and Area Plans, Great Neighborhood Principles, and Affordability Targets.		X	

Strategy 2. Housing Development in Existing UGB

Summary: This strategy focuses on increasing the capacity of lands already inside the UGB for residential development. Some of the actions may also have capacity benefits for future lands not already in the UGB.

This strategy addresses Strategic Priorities 1 (Land Availability) and 5 (Urban Form). This strategy seeks to achieve more efficient use of land within the current UGB through more efficient land use – which is also required by Goal 14 and ORS 197.296. It helps address short-term needs, and it addresses urban form through decisions implementing policies for Great Neighborhood Principles within the current UGB.

This strategy is low and high ease / high impact. This work needs to be started/continued in the short-term and may see both immediate as well as long-term results.

Potential Actions or Projects:

- 2.1 **Create a Diverse Housing Zone (A2).** Explore residential zoning with targeted/ minimum density and multiple allowed housing both within existing zones and in a new zone as applicable. This zone would authorize a variety of housing types and sub-types including single-family detached and attached and multi-family housing types, such as duplexes, cottages, townhomes, row houses, and tri- and quad-plexes. In contrast to traditional zoning, this strategy would be used to implement Great Neighborhood Principles (GNP).
- 2.2 **Develop a High-Density Residential Zone (A3).** This strategy would be used in conjunction with and to complement the Great Neighborhood Principles and diverse housing zone (A2) to provide for higher density housing types in specific areas, such as more dense core areas, centers, nodes, etc. which would be higher density than the densities for housing types such as duplexes, cottages, townhomes, row houses, and tri- and quad-plexes which would be incorporated on smaller lots within the diverse housing zone.
- 2.3 **Provide Density Bonuses to Developers (A15).** The local government allows developers to build housing at densities higher than are usually allowed by the underlying zoning. Density bonuses are commonly used as a tool to encourage greater housing density in desired areas, provided certain requirements are met. This strategy is generally implemented through provisions of the local zoning code and is allowed in appropriate residential zones. Bonus densities can also be used to encourage development of low-income or workforce affordable housing. An affordable housing bonus, if the proposed project provides a certain amount affordable units, would allow more housing units to be built than what would be allowed by zoning.

- 2.4 **Promote Infill Development, Allowing Flexibility in Existing Zones with Appropriate Design and Development Standards (A13).** This policy seeks to maximize the use of lands that are fully developed or underdeveloped and makes use of existing infrastructure by identifying and implementing policies that (1) improve market opportunities and (2) reduce impediments to development in areas suitable for infill or redevelopment.
- 2.5 **Update Infrastructure Plans for Infill Development (D28).** In some developed areas, infrastructure plans including waste water collection and transportation may have assumed no additional development and were not planned for infill and redevelopment to higher intensity. Further, in undeveloped areas, these plans may have assumed growth would occur at historic densities, which may be less than the maximum density permitted by zoning, limiting density of new development where there may be a desire to encourage infill and redevelopment.
- 2.6 **Implement Great Neighborhood Principles (C26).** In April 2019, the City adopted Great Neighborhood Principles (GNP) and associated policies as part of the Comprehensive Plan. Some of these policies address mixed income and mixed housing neighborhoods. These policies will need to be implemented with code amendments, which can include other strategies, such as Strategy A2 to achieve a Diverse Housing Zone and A13 to promote infill development with appropriate design and development standards.
- 2.7 **Re-designate or Rezone Land for Housing (A1).** The types of land rezoned for housing are vacant or partially vacant low-density residential and employment land rezoned to multifamily or mixed use. In rezoning land, it is important to choose land in a compatible location. When rezoning employment land, it is best to select land with limited employment capacity (e.g., smaller parcels) in areas where multifamily housing would be compatible (e.g., along transit corridors or in employment centers that would benefit from new housing). This policy change increases opportunity for comparatively affordable multifamily housing and provides opportunities for mixing residential and other compatible uses.

Exhibit 7. Summary of Potential Actions or Projects

Reference	Tasks or Projects	Time Period		
		Near-term	Mid-term	Long-term
2.1	A2. Create a Diverse Housing Zone	X		
2.2	A3. Develop a High-Density Residential Zone	X		
2.3	A15. Provide Density Bonuses to Developers	X		
2.4	A13. Promote Infill Development, Allowing Flexibility in Existing Zones with Appropriate Design and Development Standards	X		
2.5	D28. Update Infrastructure Plans for Infill Development		X	
2.6	B26. Establish Guidance on Implementation of Great Neighborhood Principles That Will Inform Land Use for Urban Reserves and UGB.		X	
2.7	A1. Re-designate or Rezone Land for Housing		X	

Strategy 3. Infrastructure & Public Facilities Planning

Summary: This strategy would provide data to help inform decision-making about where there might already be infrastructure capacity that could accommodate additional growth or make adjustments to capital projects already identified in infrastructure plans that haven't yet been built, to achieve efficiencies and add capacity.

As special area planning has been undertaken, and as higher density development applications have been submitted, there has been additional ad-hoc infrastructure analysis that indicates there may be limitations to capacity to serve new development consistent with zoned densities, through infill and redevelopment, within special area planning areas, or through up-zoning. Sufficiency of infrastructure capacity and public facilities will also be a factor in evaluating future growth areas.

This strategy should be undertaken early as a prerequisite to other projects. It will provide information needed to help inform other work. This strategy has the potential to help meet short-term needs as well as address longer-term infrastructure and public facility needs.

This strategy is low and high ease / high impact. This work needs to be started/continued in the short-term and may see both immediate as well as long term results.

Potential Actions or Projects:

- 3.1 **Assess Infrastructure Capacity to Support Infill (D28, Supports D30, D35).** This is a variation on option D28 & D30. It will provide data to help support other efforts that could Use a “value engineering” approach to determine available capacity or potential infrastructure projects to add capacity and identify areas that could be used for infill/redevelopment, up-zoning, more efficient use, etc., possible reallocation of density etc. The intent is to identify where capacity exists and consider land use options that might capitalize on that capacity. It could also help identify areas with known limited capacity, where plans already include projects for maintenance or some new capacity, and whether those improvements could upsize the same planned improvement to achieve more capacity if there are areas that could be up-zoned, etc.
- 3.2 **Repeal Outdated Policies Related to Old Sewer Treatment Capacity Limits (C27).** Previously, the City’s sewer treatment plant (water reclamation facility) had limitations on treatment capacity, and the City established policies that limited density in certain areas commensurate with the treatment capacity limitations. The treatment capacity of the plant has increased, and those limitations are no longer necessary, and should be repealed.
- 3.3 **Identify Issues and Plan for Water Zone 2 Infrastructure Improvements (D34).** The western portion of the UGB is at a higher elevation which requires separate infrastructure for water service within Water Service Pressure Zone 2, which will require a new water storage tank. Buildable lands within the UGB which area in Zone 2 will be unavailable for development until they can be served with water. The investment in the Zone 2 water infrastructure won’t occur without sufficient area and timely development to help fund the necessary water infrastructure.
- 3.4 **Develop Infrastructure Allocation Policies (D30).** If there are current infrastructure capacity limits, developing policies to allocate the capacity can provide greater certainty about capacity and allowable density of development phasing in the short term, in support of development, redevelopment, and infill priorities.
- 3.5 **Identify Areas with Underutilized Infrastructure Capacity (D35).** Areas with underutilized infrastructure capacity may be evaluated as candidates for additional development intensity of vacant lands or infill and redevelopment opportunities in developed areas.
- 3.6 **Encourage “To and Through” Infrastructure Policies (D33).** These policies ensure infrastructure extensions are sized to serve development as well as to extend beyond the development in the future to serve outlying properties.

Exhibit 8. Summary of Potential Actions or Projects

Reference	Tasks or Projects	Time Period		
		Near-term	Mid-term	Long-term
3.1	D28. Assess Infrastructure Capacity to Support Infill	X		
3.2	C27. Repeal Outdated Comprehensive Plan Policies Related to Old Sewer Treatment Capacity Limits	X		
3.3	D34. Identify Issues and Plan for Water Zone 2 Infrastructure Improvements	X		
3.4	D30. Develop Infrastructure Allocation Policy	X		
3.5	D35. Identify Areas with Underutilized Infrastructure Capacity	X		
3.6	D33. Encourage To and Thru Infrastructure Policies		X	

Strategy 4. Special Area Planning

Summary: This strategy includes planning for defined geographic areas or special districts to adjust existing land use plans and evaluate opportunities to include housing or mixed-use development and determine whether and how that could occur.

Strategy 4 relates to Strategy 2 (Housing Development in Existing UGB). This strategy recognizes studies that are currently underway and that are in the Planning Department's future work plan that assess the potential for housing in McMinnville's core and on Three Mile Lane.

Because two of these projects are already underway, this planning phase is high ease / high impact. Work on two of the special area plans will be completed in the short-term and may see both immediate as well as long term results.

Potential Actions or Projects:

- 4.1 **City Center Housing Strategy (underway, B23).** The strategy will evaluate a defined area within the City Center for opportunities to increase context-sensitive housing within that area. This work has the potential to implement other strategies. The study area is partially within the designated Urban Renewal District area where eligible for TIF (K62), and could include strategies such as such as infill (A13), redevelopment, rezoning for residential use (A1), up-zoning (A3), identification of possible opportunity sites (H48), and determination of associated infrastructure needs (D28).

- 4.2 **Evaluate Three Mile Lane for Residential Development (underway, B24).** The Three Mile Lane Area Plan includes evaluation of land use alternatives that could include opportunities to increase housing within the defined study area. This work has the potential to implement other strategies, which could include rezoning to residential or mixed-use (A1), up-zoning (A3), and determination of associated infrastructure needs (D28, D30).
- 4.3 **Undertake a Highway 99W Corridor Study – Explore Opportunities for Higher Density Mixed-Use Development (B25).** This work could include opportunities for higher density mixed-use development in anticipation of changing commercial patterns.

Exhibit 9. Summary of Potential Actions or Projects

Reference	Tasks or Projects	Time Period		
		Near-term	Mid-term	Long-term
4.1	B23. City Center Housing Strategy (underway)	X		
4.2	B24. Evaluate Three Mile Lane for Residential Development (underway).	X		
4.3	B25. Undertake a Highway 99W Corridor Study – Explore Opportunities for Higher Density Mixed-Use Development		X	

Strategy 5. Land Use / Code Amendments

Summary: This strategy includes different policy options that could be incorporated into the land use policies and development standards to help meet housing needs consistent with McMinnville’s Great Neighborhood Principles. Many of these could be undertaken independently of one another but might be reviewed more efficiently if evaluated together at the same time through a single review process.

These code amendments generally do not need to be undertaken in a specific sequence. They may individually vary in ease and impact. Some may be required for statutory compliance.

Potential Actions or Projects:

- 5.1 **Allow Duplexes, Cottages, Townhomes, Row Houses, and Tri- and Quad-Plexes in Single-Family Zones with Appropriate Design & Development Standards (A9).** Allowing these housing types can increase overall density of residential development and may encourage a higher percentage of multifamily housing types. This approach would be implemented through the zoning ordinance and would list these housing

types as outright allowable uses in appropriate residential zones. These housing types provide additional affordable housing options and allow more residential units than would be achieved by detached homes alone.

5.2 Implement Other Code Amendments Prioritized by the PAC. These include the following:

- Allow More Housing Types (A9)
- Develop a High-Density Residential Zone (A3)
- Permit ADUs in SF Zones (A11)
- Allow Small Residential Lots (A4)
- Mandate Minimum Residential Densities (A6)
- Increase Allowable Residential Densities (A7)
- Promote Infill Development, Allowing Flexibility in Existing Zones with Appropriate Design and Development Standards (Underway) (A13)
- Allow Small or “Tiny” Homes and Identify Opportunities for Tiny Home Developments. (A12)
- Allow Clustered Residential Development (A8)
- Allow Cohousing and “Group Quarters” (SROs, etc.) (A10)
- Evaluate Transfer of Density for Protection of Natural Features (A 18)

5.3 Streamline Zoning Code and Other Ordinances (G44). Complexity of zoning, subdivision, and other ordinances can make development more difficult, time consuming, and costly. Streamlining development regulations can result in increased development. As part of the streamlining process, McMinnville should evaluate potential barriers to affordable workforce housing and multifamily housing. Potential barriers may include height limitations, complexity of planned unit development regulations, etc.

5.4 Implement the Great Neighborhood Principles (C26). In April 2019, the City adopted Great Neighborhood Principles (GNP) and associated policies as part of the Comprehensive Plan. Some of these policies address mixed income and mixed housing neighborhoods. These policies will need to be implemented with code amendments, which can include other strategies, such as Strategy A2 to achieve a Diverse Housing Zone.

5.5 Repeal Outdated Policies Related to Old Sewer Treatment Capacity Limits (C27). Previously, the City’s sewer treatment plant (water reclamation facility) had limitations on treatment capacity, and the City established policies that limited density in certain areas commensurate with the treatment capacity limitations. The treatment capacity of the plant has increased, and those limitations are no longer necessary, and should be repealed.

- 5.6 **Evaluate Code for Fair Housing Act Best Practices (A22).** Historically, many communities have regulated residential use through definitions of “dwelling,” “family,” and “household” that described the maximum number of related and/or unrelated people living as a household within a dwelling unit. These regulations typically predated the Fair Housing Act, and new best practices which further the Fair Housing Act take a different approach to defining these terms and regulating residential use. Resulting regulations are more inclusive in permitting residential use.
- 5.7 **Advocate for Inclusionary Zoning Enablement – State Legislation and Annexation Processes (A14).** Inclusionary zoning policies tie development approval to, or provide regulatory incentives for, the provision of low- and moderate-income housing as part of a proposed development. Mandatory inclusionary zoning requires developers to provide a certain percentage of low-income housing. Incentive-based inclusionary zoning-provides density or other types of incentives. Price of low-income housing passed on to purchasers of market-rate housing; inclusionary zoning impedes the “filtering” process where residents purchase new housing, freeing existing housing for lower-income residents. Some cities have long had quasi-inclusionary housing provisions in their codes that are implemented at the point of annexation. SB 1533 2016 and HB 2997 2019 related to this issue but failed to provide inclusionary zoning reform that meets McMinnville’s needs.

Exhibit 10. Summary of Potential Actions or Projects

Reference	Tasks or Projects	Time Period		
		Near-term	Mid-term	Long-term
5.1	A9. Allow Duplexes, Cottages, Townhomes, Row Houses, and Tri- and Quad-Plexes in single-family zones with appropriate design & development standards	X		
5.2	Other code amendments prioritized by the PAC. <ul style="list-style-type: none"> • A9. Allow more housing types • A3. Develop a high-density residential zone • A11. Permit ADU in SF Zones • A4. Allow Small Residential Lots • A6. Mandate Minimum Residential Densities • A7. Increase Allowable Residential Densities • A13. Promote Infill Development, Allowing Flexibility in Existing Zones with Appropriate Design and Development Standards (Underway) • A12. Allow small or “tiny” homes and identify opportunities for tiny home developments. • A8. Allow Clustered Residential Development • A10. Allow Cohousing and “Group Quarters” (SROs, etc.) • A19. Evaluate Parking Code as a Barrier to Housing • A18. Evaluate Transfer of Density for Protection of Natural Features 	X	X	X
5.3	G44. Streamline Zoning Code and Other Ordinances	X	X	X
5.4	C26. Implement the Great Neighborhood Principles	X		
5.5	C27. Repeal Outdated Policies Related to Old Sewer Treatment Capacity Limits	X		
5.6	A22. Evaluate Code for Fair Housing Act Best Practices	X		
5.7	A14. Advocate for Inclusionary Zoning Enablement – State Legislation and Annexation Processes	X		

Other, Non-Land Use Strategies

Strategy 6. Programs for Affordable Housing (Non-Land Use)

Summary: This strategy includes different policy options that could be evaluated independently of one another. These are not land use actions, and don't go through the land use process. These don't become part of the Comprehensive Plan and land use regulations.

This strategy includes a prioritized list of actions to be evaluated by the Affordable Housing Task Force and/or other City committee. These are listed in priority identified by the PAC. This list can generally be undertaken for individual evaluation rather than as part of a larger sequenced project.

These actions range from low to high ease and low to high impact and are listed per priority for discussion and evaluation.

Potential Actions or Projects:

- 6.1 **Pursue Funds for Affordable Housing (City Influence).** This strategy recognizes that there are funding mechanisms that the City can institute that could be used for affordable housing.
- **Transient Lodging Tax Funds for Affordable Housing (K68).** The City receives 30% of the transient lodging taxes collected to offset impacts of tourism on city services. Some cities have dedicated some or all of these funds towards affordable housing under the premise that short term rentals are displacing affordable housing supply and that the tourism industry creates more demand for affordable housing.
 - **Urban Renewal Funds or Tax Increment Financing (K63).** The City can direct urban renewal funds to incentivize workforce housing in the city center.
 - **Construction Excise Tax (K64).** Recent state legislation allows cities to collect a construction excise tax dedicated specifically for affordable housing.
 - **Community Development Block Grant Funds (K69).** The City can apply to the State of Oregon for Community Development Block Grant Funds as part of the state's entitlement program. And the City can pursue a Principal City CDBG Entitlement status.
- 6.2 **Financial Incentives Supporting Inclusionary Zoning (I52).** In addition to regulatory mandates and incentives for inclusionary zoning, there can be financial incentives to help achieve inclusionary zoning, or to help increase the level of affordability or percentage of affordable units. If a City adopts both inclusionary zoning and a Construction Excise Tax, a city must offer certain incentives for developments subject to inclusionary zoning.

- 6.3 **Reduced or Waived Planning Fees, Permit Fees, SDCs for Affordable Housing (I55).** Planning fees, permit fees, and SDCs can be reduced or waived for qualifying affordable housing developments. McMinnville has already enacted planning, permit, and certain SDC waivers for qualifying affordable housing developments.
- 6.4 **Vertical Housing Tax Abatement (Locally Enabled and Managed) (I51).** Subsidizes "mixed-use" projects to encourage dense development or redevelopment by providing a partial property tax exemption on increased property value for qualified developments. The exemption varies in accordance with the number of residential floors on a mixed-use project with a maximum property tax exemption of 80% over 10 years. An additional property tax exemption on the land may be given if some or all of the residential housing is for low-income persons (80% of area is median income or below). The proposed zone must meet at least one of the following criteria: Completely within the core area of an urban center; Entirely within half-mile radius of existing/planned light rail station; Entirely within one-quarter mile of fixed-route transit service (including a bus line); Contains property for which land-use comprehensive plan and implementing ordinances effectively allow "mixed-use" with residential.
- 6.5 **SDC Financing and Credits (I53).** Enables developers to spread their SDC payment over time, thereby reducing upfront costs. Alternately, credits allow developers to make necessary improvements to the site in lieu of paying SDCs. Note that the City can control its own SDCs, but often small cities manage them on behalf of other jurisdictions including the County and special districts. Funding can come from an SDC fund or general fund. In some cases, there may be no financial impact. Can come in the form of student, low-income, or workforce housing.
- 6.6 **Parcel assembly (H45).** Parcel assembly involves the city's ability to purchase lands for the purpose of land aggregation or site assembly. It can directly address the issues related to limited multifamily lands being available in appropriate locations (e.g., near arterials and commercial services). Typical goals of parcel assembly programs are: (1) to provide sites for rental apartments in appropriate locations close to services and (2) to reduce the cost of developing multifamily rental units. Parcel assembly can lower the cost of multifamily development because the City is able to purchase land in strategic locations over time. Parcel assembly is more often associated with development of government-subsidized affordable housing, where the City partners with nonprofit affordable housing developers.
- 6.7 **Multiple-Unit Limited Tax Exemption Program (Locally Enabled and Managed) (I49).** Multi-unit projects receive a ten-year property tax exemption on structural improvements to the property as long as program requirements are met. There is no ground floor active use requirement for this tool. The City of Portland's program, for example, limits the number of exemptions approved annually, requires developers to apply through a competitive process, and encourages projects to provide greater public benefits to the community. This program is enabled by the state, but managed by the local jurisdiction.

- 6.8 **Sole Source SDCs (I54).** Retains SDCs paid by developers within a limited geographic area that directly benefits from new development, rather than being available for use city-wide. This enables SDC eligible improvements within the area that generates those funds to keep them for these improvements. Improvements within smaller areas can enhance the catalytic and redevelopment value of the area. This tool can also be blended with other resources such as LIDs and TIF. Funding can come from an SDC fund or general fund. In some cases, there may be no financial impact. The housing can come in the form of student, low income, or workforce housing.
- 6.9 **Grants or Loans (I56).** Through the annual budget process, the City can allocate funds to assist affordable housing developments as part of an Affordable Housing Fund. Assistance can also be provided through no- or low-interest loans. That typically occurs in conjunction with a revolving loan fund that allows the fund to grow over time as loans are repaid.
- 6.10 **Vacant Property Tax.** This strategy would assess additional taxes on vacant residential properties. The intent is to disincentivize land holding and speculation and to encourage housing development.
- 6.11 **Fee for Demolition of Affordable Home for Expensive Home.** This action would assess additional fees for certain demolitions. It would be modeled after a policy in Lake Oswego. The intent is to preserve affordable housing stock.

Exhibit 11. Summary of Potential Actions or Projects

Reference	Tasks or Projects	Time Period		
		Near-term	Mid-term	Long-term
6.1	Pursue Funds for Affordable Housing (City Influence) <ul style="list-style-type: none"> • K68. Transient Lodging Tax Funds for Affordable Housing. • K63. Urban Renewal Funds or Tax Increment Financing. • K64. Construction Excise Tax. • K69. Community Development Block Grant Funds. 	X	X	X
6.2	I52. Financial Incentives Supporting Inclusionary Zoning		X	
6.3	I55. Reduced or Waived Planning Fees, Permit Fees, SDCs for Affordable Housing	X		
6.4	I51. Vertical Housing Tax Abatement (Locally Enabled and Managed)		X	
6.5	I53. SDC Financing and Credits	X		
6.6	H45. Parcel Assembly	X	X	X
6.7	I49. Multiple-Unit Limited Tax Exemption Program (Locally Enabled and Managed)		X	
6.8	I54. Sole Source SDCs		X	
6.9	Vacant Property Tax	X		
6.10	I56. Grants or Loans		X	X
6.11	Fee for Demolition of Affordable Home for Expensive Home	X		

Strategy 7. Leveraging Partnerships for Housing (Non-Land Use)

Summary: This strategy includes different policy options that could be evaluated independently of one another. These may require a partner organization to take on a new or expanded role or may require formation or identification of a new organizational partner.

Several of the high priority actions identified by the PAC require partnerships with external organizations.

Potential Actions or Projects:

7.1 Support Partners Pursuit of Affordable Housing Funds for:

- **Low Income Housing Tax Credit (P78).** The Low-Income Housing Tax Credit Program (LIHTC) is an incentive to encourage the construction and rehabilitation of rental housing for lower-income households. The program offers credits on federal tax liabilities for 10 years. Individuals, corporations, partnerships and other legal entities may benefit from tax credits, subject to applicable restrictions. Annually, the U.S. Department of Treasury allocates tax credits to each state. Oregon Housing and Community Services (OHCS) administers the tax credit program for the state of Oregon. Tax credits offer direct federal income tax savings to owners of rental housing developments who with a developer are willing to set-aside a minimum portion of the development's units for households earning 60 percent or less of gross area median income. Developers of tax credit developments typically sell the credits to investors who are willing to provide capital in return for the economic benefits (including tax credits) generated by the development.
- **Homeownership Programs (I57).** Cities (and other partners) use a variety of programs to assist with homeownership
 - **Homebuyer Assistance Programs.** These Down Payment Assistance loans help low- or moderate-income households cover down payment and closing costs to purchase homes on the open market. These programs either give loans or grants, most frequently to first time homebuyers.
 - **Inclusionary Housing Program.** Some cities have an Inclusionary Housing Ordinance (IH) requires that new residential development contribute at least 20% of the total units as permanently affordable housing. Options for meeting this requirement can be allow the affordable units to be located on or off site. Cities that use inclusionary housing generally have programs to ensure that housing continues to be affordable over the long-term.
 - **Partnerships.** Cities often work with partnerships with nonprofit agencies that provide homeownership assistance.
- **Oregon Affordable Housing Tax Credit (P77).** The 1989 Oregon Legislature created the Oregon Affordable Housing Tax Credit Program (OAHTC). Under the OAHTC Program, the Department has the authority to certify tax credits for projects. Through the use of tax credits, lending institutions are able to lower the

cost of financing by as much as four percent for housing projects or community rehabilitation programs serving low-income households. The savings generated by the reduced interest rate must be passed directly to the tenant in the form of reduced rents.

- **Housing Rehabilitation Programs (I59)** Cities (and other partners) often offer home rehabilitation programs, which provide loans to low- and moderate-income households for rehabilitation projects such as making energy efficiency, code, and safety repairs. Some programs provide funding to demolish and completely reconstruct substandard housing.
- **State Affordable Housing Funding (M73).** 2019 proposed legislation, HB 3349 that would change the tax income code to eliminate certain deductions, and the resulting revenues would fund state affordable housing programs.

7.2 Community Land Trust (CLT) (H47). A Community Land Trust (CLT) creates permanent affordability by severing the value of the land and the improvements (i.e., the house). The land is held in trust by a nonprofit or other entity then leased to the homeowner. The homeowner enjoys most of the rights of homeownership, but restrictions are placed on use (e.g., owner occupancy requirement), and price restrictions on resale ensure that the home remains affordable. CLTs may be used in conjunction with land banking programs, where the city or a nonprofit housing corporation purchases a future site for affordable housing or other housing that meets community goals. A variation to the community land trust is to have the City own the property rather than the land trust, and lease property to income-qualifying households (such as low-income or moderate-income households) to build housing. The City would continue to own the land over the long-term, but the homeowner would be able to sell the house. Restrictions on resale ensure that the home remains affordable.

7.3 Affordable Housing Property Tax Abatement (I50). There are several statutory authorizations for different types of affordable housing property tax abatements which could apply to affordable housing developments that aren't already tax exempt. Some of these can be designated for a limited duration.

7.4 Land Banking (H46). Land banks are public or community-owned entities created to acquire, manage, maintain, and repurpose vacant, abandoned, and foreclosed properties for conversion into productive use. Land banks can play a variety of roles. They can play a very limited role, such as simply acquiring property on behalf of a local municipality, or a broader role of property developer. It is important to note that land banks are not financial institutions: financing comes from developers, banks, and local governments. Land banks may be granted special powers via state enabling legislation. These powers can include the ability to remove legal and financial barriers, such as delinquent property taxes, that often render vacant and abandoned properties inaccessible or unattractive to the private market. Land banks acquire

properties through different means, but the most common pipeline is the property tax foreclosure system.

Exhibit 12. Summary of Potential Actions or Projects

Reference	Tasks or Projects	Time Period		
		Near-term	Mid-term	Long-term
7.1	Support Partners Pursuit of Affordable Housing Funds for: <ul style="list-style-type: none"> • P78. Low Income Housing Tax Credit • I57. Home Ownership Programs • P77. Oregon Affordable Housing Tax Credit • I59. Housing Rehabilitation Programs • M73. State Affordable Housing Funding 	X	X	X
7.2	H47. Community Land Trust (CLT)	X	X	X
7.3	H50. Affordable Housing Property Tax Abatement		X	X
7.4	H46. Land Banking	X	X	

3. Appendices

The McMinnville Housing Strategy builds upon various materials provided to the Project Advisory Committee (PAC) throughout the project. Materials from the May 21st PAC meeting are attached as appendices:

- **Appendix A.** Table 1. Issues Associated with Strategic Priorities. This table identifies issues from the BLI and HNA and also evaluates current conditions; existing plans, policies, and regulations; and new state law that might be addressed as part of the housing strategy.
- **Appendix B.** Table 2. McMinnville Housing Strategy – Potential Strategies and Actions. This table lists each strategy and cross references it with strategic priorities, affordability groups, and other factors.
- **Appendix C.** Table 3. Description of Potential Actions. This table provides more detailed descriptions of the potential housing strategies and actions listed in Table 2. In addition, the table provides further information about the potential scale of impact of the strategy.
- **Appendix D.** Prioritization Results from May 21, 2019 PAC Meeting.

Links to full size copies of these materials and additional supporting materials are provided below. Due to the length and format of documents, these materials are incorporated by reference through links to files on the City website.

Materials from May 21st PAC Meeting (includes above tables)

https://www.mcminnvilleoregon.gov/sites/default/files/fileattachments/planning/page/1675/0-5-housing_strategy_memo_and_tables_5-14-2019.pdf

Materials from the March 7th PAC Meeting: Thinking About McMinnville’s Future Housing Needs – A Guide

https://www.mcminnvilleoregon.gov/sites/default/files/fileattachments/planning/page/1675/city_memo_-_housing_strategy_guidance1.pdf

January 22nd Focus Group Notes (see Exhibit 2)

https://www.mcminnvilleoregon.gov/sites/default/files/fileattachments/planning/page/1675/housing_pac_meeting_5_materials_3-7-2019_print.pdf

February 5th Public Open House Notes (see Exhibit 3)

https://www.mcminnvilleoregon.gov/sites/default/files/fileattachments/planning/page/1675/housing_pac_meeting_5_materials_3-7-2019_print.pdf

Issues Associated with Strategic Priorities
(Barriers, Opportunities, New Requirements, Additional Considerations)

This table identifies issues from the BLI and HNA and also evaluates current conditions; existing plans, policies, and regulations; and new state law that might be addressed as part of the housing strategy.

Table 1. Issues Associated with Strategic Priorities

1. Land Supply, Capacity, & Availability	2. Wider Variety of Housing Types	3. Affordability	4. Infrastructure	5. Great Neighborhood Principles & Urban Form
Land Use Issues & Considerations				
Barriers:				
<p>Lack of available, buildable land in the UGB to meet short-term needs.</p> <p>Some “Buildable Lands” in the UGB aren’t truly “available” for development, despite presumptions stated in state statutes or administrative rules. Land may be unavailable due to unwilling property owners, including the unincorporated UGB, etc.</p> <p>There are additional plan updates required and lag time after land is added to the UGB before it can be rezoned and ready for urban development.</p> <p>There is uncertainty in the Buildable Land Inventory regarding additional “Goal 5” natural resource impacts. The City will need to conduct planning for a local wetland inventory and riparian corridors to determine impacts on buildable land supply.</p> <p>There is uncertainty in the Buildable Land Inventory regarding additional “Goal 7” hazards impacts. The state will be refining landslide hazards mapping; in addition, there is no statute or administrative rule interpreting the state’s landslide hazard susceptibility classifications.</p> <p>See additional barriers under “Infrastructure” related to serviceability of buildable lands in the UGB and unknowns about current downstream capacity that could affect service of expansion areas.</p>	<p>No “middle housing” zone. There isn’t a zoning district between the R-3 and R-4 zones in the Zoning Ordinance, which could cover a density range of 11-20 units/acre typical of 2-story “middle housing” types. This means zoning options are lower density or higher density.</p> <p>-The R-3 zone allows for density in the range of approximately 7 to 11 du/acre; it doesn’t allow for attached housing or multi-family housing over 2 units.</p> <p>-The R-4 zone allows for density in the range of approximately 9 to 30 du/acre; it is the only residential zone that allows for attached housing and multi-family housing with 3 or more units.</p> <p>-This can exacerbate infrastructure planning for <u>somewhat</u> higher densities, since a rezone from R-3 to R-4 would allow a significant increase from 11 to 30 units per acre, rather than a more modest increase from 11 to 20 units per acre.</p> <p>No existing residential zone allows density greater than 30 du/acre (R-4), except when higher density is authorized as a conditional use in the defined core area. The R-4 standards also apply in commercial zones that allow residential uses.</p> <p>The highest density residential zone (R-4) also allows single-family development as a stand-alone permitted use with a minimum lot size</p>	<p>Current Inclusionary Zoning (IZ) Enabling Legislation Limits Cities. Current state law provisions governing local “inclusionary zoning” have largely been inapplicable in McMinnville since it is currently authorized only for multi-family structures with 20 or more units, which isn’t the type of multi-family housing typically built in McMinnville. Further, inclusionary zoning isn’t current authorized for single-family housing.</p> <p>In addition, the definition of affordability in the IZ legislation doesn’t authorize cities to establish affordability requirements below 80% median income.</p>	<p>Until infrastructure planning is completed, it is unknown whether “downstream” infrastructure in the UGB will be able to serve future expansion areas without first being upsized to allow for extensions.</p> <p>Buildable lands within the UGB in Water Service Zone 2 are unserviceable in the short-term until a Zone 2 reservoir is built (estimated 10 years).</p> <p>Sewer Capacity Constraints. The sewer (wastewater) collection plan was based on development of vacant lands at historic development densities by zone, rather than maximum density permitted by existing zoning. In addition, this planning didn’t assume developed properties would experience infill and redevelopment at higher density permitted by existing zoning. This presents constraints:</p> <ul style="list-style-type: none"> - Constraints to Code Amendments. This may limit code amendments that would authorize additional, “middle housing” types within existing zoning districts. - Constraints to Permitted Development and Densities. This doesn’t always allow development of vacant lands consistent with maximum density permitted by existing zoning. - Constraints to Infill & Redevelopment. This doesn’t always allow infill and redevelopment of developed properties consistent with higher or maximum density permitted by existing zoning. 	<p>Current Euclidean Zoning System Limits Mix of Housing and Density. However, most development occurs through the Planned Development process which achieves housing mix to some extent (up to 25% of area) based on density averaging of the underlying zone. However, this requires reducing density of other housing to achieve the same average, or requires rezoning.</p> <p>Form-Based Codes. Some “form-based codes” can allow development that is compatible within a neighborhood by regulating the size and physical characteristics of a building, while providing flexibility regarding the density within the building envelope. The same exterior building form/envelope can contain fewer large units or a greater number of smaller units. Some density-based codes can prevent this flexibility. This should be considered when implementing Great Neighborhood Principles, Diverse Housing Types zoning and public facilities planning. It is unclear how this could be implemented in a way that satisfies statutory requirements which require a density-based zoning.</p>

1. Land Supply, Capacity, & Availability	2. Wider Variety of Housing Types	3. Affordability	4. Infrastructure	5. Great Neighborhood Principles & Urban Form
	<p>of 5,000 square feet. This could be a barrier to achieving other needed housing.</p> <p>Finer-Grained Zoning. There is a need for a finer gradation of residential uses based on “scale”. Anything over a duplex or semi-detached housing (two attached units) is only permitted in the R-4 zone. Further, for 3 or more units, there is no differentiation of multi-family housing development that has the same number of units, whether all in one building or in multiple smaller buildings. More smaller-scale structures can be permitted and compatible within different neighborhood contexts.</p> <p>Some uses may already be permitted, but not in all zones, so there may be a need to increase opportunities for where certain uses are permitted. Finer gradation will help this.</p> <p>Fair Housing Act. Code provisions should be reviewed in the context of Fair Housing Act best practices to ensure residential living models aren’t inadvertently prohibited by the zoning ordinance due to outdated definitions and regulations.</p> <p>Other Co-Living Land Uses. Places where people live are classified by the Census Bureau as either residential use or group quarters. Some codes inadvertently prohibit some residential living situations and housing types that don’t technically meet the definition of residential use, but would typically fall under the Census Bureau’s classification of group quarters. Some of this may be addressed through code provisions consistent with Fair Housing Act best practices.</p>		<p>- Constraints to Upzoning. This doesn’t always permit upzoning of vacant lands already in the UGB.</p> <p>Short-Term Housing Strategies May be Impacted by Capacity Constraints. More efficient use of land within the current UGB would be a strategy to help meet short-term needs until additional land is available through a UGB amendment, associated public facility plan updates, and extension/ availability of services to those lands. <i>However, this strategy may be impacted by infrastructure capacity issues.</i></p> <p>Transportation Plan Modeling. Transportation Planning assumed no further development in certain developed areas, posing similar potential issues as described above for sewer, possibly affecting infill & redevelopment, upzoning, etc.</p> <p>Existing Policies Restricting Density. Due to previous sewer <u>treatment</u> capacity limitations which are no longer applicable, the City adopted density restrictions for part of the UGB which are no longer needed and should be formally repealed.</p>	
Opportunities:				
		<p>SB 2997 Enabling Legislation for Broader Use of Inclusionary Zoning. If enacted, SB 2997 will allow McMinnville greater discretion in use of “inclusionary zoning” to specify a % of housing in new developments as part of land use approval.</p>		

1. Land Supply, Capacity, & Availability	2. Wider Variety of Housing Types	3. Affordability	4. Infrastructure	5. Great Neighborhood Principles & Urban Form
New Requirements:				
	<p>HB 2001 “Middle Housing” Mandates. If enacted, HB 2001 will mandate that cities to plan for and permit small “middle housing” multi-family types in more zones.</p> <p>HB 2001 ADU Mandates. If enacted, HB 2001 will require change to McMinnville’s current ADU implementation (to eliminate off-street parking requirements for ADUs).</p>			<p>HB 2001. If HB2001 is enacted, implementation of GNP will need to be consistent with HB 2001 mandates.</p>
Additional Considerations:				
	<p>Transition from Current Zoning Structure. The transition from the current zoning structure to regulations that implement Great Neighborhood Principles will mean some traditional land use tools more applicable to Euclidean zoning with more separated housing types and densities won’t be applicable. There may be some more traditional tools that would be used in the interim as implementation of the Great Neighborhood Principles is phased in (map amendments that upzone property, code amendments that authorize more efficient use in existing zones, etc.).</p> <p>Inclusivity of Diverse Housing Types. In addition to providing opportunities for a wider variety of housing types, it will be key that this is closely coordinated with the implementation of Great Neighborhood Principles to address inclusion of these diverse housing types within neighborhoods, together with appropriate requirements for mix and average density, design standards, and other considerations.</p> <p>Context-Based Design Standards. Some design standards are based on use and don’t account for different locational contexts, such as different urban vs. suburban forms and design standards for multi-family development depending on location and context.</p>		<p>It would be useful to map current capacity, currently planned capacity, and capacity that would result from public facility plan updates.</p> <p>If there are areas unlikely to experience new development, it may be possible to transfer allowed density to other areas where sewer capacity could be utilized for new development or infill.</p>	<p>Great Neighborhood Principles Adopted. The City has adopted Great Neighborhood principles which will need to be implemented.</p> <p>Great Neighborhood Principles – Implementation. The City will be implementing the recently adopted Great Neighborhood Principles, which will be a transformative step in how the City regulates residential land use in a manner than provides for neighborhoods with a mix of housing types and housing for different incomes.</p> <p>Phase-in of Great Neighborhood Principles will need a strategy. Some existing developed areas may have different requirements as the implementation is phased in.</p> <p>Special Area Planning Projects Underway. Several district planning efforts are underway that may identify nodal areas suitable for higher-density housing than would be achieved within the context of smaller neighborhood settings.</p> <p>Larger development sites should be subject to framework planning that sets performance requirements for future neighborhood developments.</p> <p><i>(Some housing related aspects of planning for urban form will be incorporated into a broader urbanization strategy which will include planning for all uses).</i></p>

1. Land Supply, Capacity, & Availability	2. Wider Variety of Housing Types	3. Affordability	4. Infrastructure	5. Great Neighborhood Principles & Urban Form
Other Issues and Considerations Related to Delivery of Housing (Non Land Use)				
Barriers				
		<p>Lack of Housing Supply Prevents Partner Resources from Being Fully Utilized. Many Section 8 Housing Choice Vouchers available through the Housing Authority can't be used to help subsidize housing costs due to lack of housing or housing within the price point that would allow vouchers to be used. Reducing the cost of market-rate housing could also present an opportunity to more fully utilize these vouchers to provide a subsidy for more affordable market-rate housing.</p> <p>Lack of available sites could preclude partners such as the Housing Authority from developing affordable housing using Low Income Housing Tax Credits, which means lost opportunity for use of outside funds which would be highly competitive if sites were available.</p> <p>Administrative Cost Could Impact Ability to Manage a Housing Program that Requires Monitoring of Deed Restricted Affordable Housing. Deed-restricted affordable housing can help ensure affordable housing supply is maintained, but can require a housing program and staff to administer a program over the long term. <i>(There could be exploration of potential partnership opportunities to administer a program).</i></p>		
Opportunities				
		<p>(Time Sensitive). Opportunity Zone. McMinnville has a significant area within a designated Opportunity Zone which can be an incentive to affordable housing.</p> <p>New Opportunity: SB595 Enabling Legislation for Affordable Housing Funds. If enacted, SB 595 will allow cities to decide whether to dedicate a portion of local transient lodging tax to affordable housing.</p>		

1. Land Supply, Capacity, & Availability	2. Wider Variety of Housing Types	3. Affordability	4. Infrastructure	5. Great Neighborhood Principles & Urban Form
New Requirements				
Additional Considerations				
	<p>Education & Awareness. It is important to keep homebuilders up to date on regulatory changes and opportunities for new housing types authorized by code amendments.</p> <p>In addition, some uses may already be permitted in some zones by a less familiar name.</p> <p>It is also important to evaluate what is a permitted use vs. what is actually built. The community may assume certain uses aren't permitted because they haven't been built, when that might not be the reason.</p> <p>There may be reasons why trending ideas aren't being built in the housing market that need to be further explored. (financial, regulatory, etc.)</p> <p>Transitional Housing. There is a need for both permanent housing and transitional housing.</p>	<p>There is a need to increase more affordable owner-occupied housing opportunities as well as rental opportunities. Further, such housing equity can help households maintain housing options as housing prices escalate. (Supported by land use tools to authorize a wider variety of housing types in more areas).</p>		

TABLE 2. MCMINNVILLE HOUSING STRATEGY – POTENTIAL STRATEGIES AND ACTIONS - DRAFT MATRIX

Strategic Option	Housing Benefits				Program Impact, (Low, Medium, High)	Nexus with Affordable Housing Action Plan	Strategic Timeframe			Strategic Priority					Housing Need Met					Status		Priority
	Market Rate		Subsidized				Near-Term, 2021-2026 (5 year)	Mid-Term, 2021-2031 (10 year)	Long-Term 2021-2041 (20 year)	1 – Land Supply, Capacity, Availability	2 – Wider Variety of Housing Types	3 – Housing Affordability	4 – Infrastructure	5 – Great Neighborhood Principles and Urban Form	Extremely Low Income (< 30% of MHI)	Very Low Income (30-50% of MHI)	Low Income (50-80% of MHI)	Middle Income (80 - 120% of MHI)	High Income (> 120% of MHI)	Budgeted? Plan Started? Plan Adopted? Implemented? Ongoing?	Additional Implementation or Implementation Refinement? (Opp. or Req.)	High
	Ownership	Rental	Ownership	Rental																		509 HH in 20 Year Forecast
LAND USE STRATEGIES (City)																						
A	Evaluate Zoning Code and Other Ordinances to Advance Strategic Priorities (efficiencies, regulatory incentives, and regulatory mandates)																					
1	Re-designate or rezone land for housing	Y	Y	Y	Y	L-H	Y	Y	Y	Y-S	Y	Y			Y	Y	Y	Y	Y	Y-O	Y	
2	Explore residential zoning with a targeted/minimum density standard and multiple allowed housing types.	Y	Y	Y	Y	M-H		Y	Y	Y	Y-C	Y	Y					Y	Y	-		
3	Develop a High Density Residential Zone	Y	Y	Y	Y	M-H	Y	Y	Y	Y	Y-C	Y	Y		Y	Y	Y	Y	Y	-		
4	Allow Small Residential Lots	Y		Y		L-M	Y	Y	Y	Y	Y-C	Y	Y					Y	Y	-		
5	Mandate Maximum Lot Sizes					L-M					Y-C									-		
6	Mandate Minimum Residential Densities	Y	Y	Y	Y	L-M	Y	Y	Y	Y	Y-C	Y	Y					Y	Y	-		
7	Increase Allowable Residential Densities	Y	Y	Y	Y	L-M	Y	Y	Y	Y	Y-C		Y		Y	Y	Y	Y	Y	-		
8	Allow Clustered Residential Development	Y	Y	Y	Y	Med	Y	Y	Y	Y	Y-C	Y	Y			Y	Y	Y	Y	-		
9	Allow Duplexes, Cottages, Townhomes, Row Houses, and Tri- and Quad-Plexes in single-family zones with appropriate design and development standards	Y	Y	Y	Y	L-M	Y	Y	Y	Y	Y-C	Y	Y			Y	Y			-	Y (R)	(R) HB2001
10	Allow Co-housing and “Group Quarters” (SROs, etc.)	Y	Y	Y	Y	L-M	Y	Y	Y	Y		Y	Y		Y	Y	Y	Y	Y	-		
11	Permit Accessory Dwelling Units (ADUs) in single-family zones (Further Revisions to Current Implementation)	Y	Y	Y	Y	Low		Y	Y	Y	Y-C	Y	Y		Y	Y	Y	Y		Y-I	Y (R)	(R) HB2001
12	Allow small or “tiny” homes & identify opportunities for tiny home developments	Y	Y	Y	Y	L-M	Y	Y	Y	Y	Y-C	Y	Y		Y	Y	Y			Y	Y (O)	
13	Promote Infill Development by allowing for flexibility in existing zones with appropriate design and development standards	Y	Y	Y	Y	L-M		Y	Y	Y	Y-C	Y	Y		Y	Y	Y	Y	Y	Y-S	Y	
14	Evaluate Incentive-Based Zoning for Affordable Housing (Inclusionary Zoning - Regulatory Mandates Paired with Incentives, Eligibility for Financial Incentives)			Y	Y	L-M	Y	Y	Y	Y		Y			Y	Y	Y			-	(O)	
15	Provide Density Bonuses to Developers	Y	Y	Y	Y	Low	Y	Y	Y	Y	Y-C		Y		Y	Y	Y			-		
16	Allow Transfer or Purchase of Development Rights	Y	Y	Y	Y	L-M		Y	Y	Y	Y-C			Y	Y	Y	Y	Y	Y	-		
17	Transfer of Density	Y	Y	Y	Y	L-M		Y	Y	Y	Y-C			Y		Y	Y			-		

Strategic Option	Housing Benefits				Program Impact, (Low, Medium, High)	Nexus with Affordable Housing Action Plan	Strategic Timeframe			Strategic Priority					Housing Need Met					Status		Priority
	Market Rate		Subsidized				Near-Term, 2021-2026 (5 year)	Mid-Term, 2021-2031 (10 year)	Long-Term 2021-2041 (20 year)	1 – Land Supply, Capacity, Availability	2 – Wider Variety of Housing Types	3 – Housing Affordability	4 – Infrastructure	5 – Great Neighborhood Principles and Urban Form	Extremely Low Income (< 30% of MHI)	Very Low Income (30-50% of MHI)	Low Income (50-80% of MHI)	Middle Income (80 - 120% of MHI)	High Income (> 120% of MHI)	Budgeted? Plan Started? Plan Implemented? Ongoing?	Additional Implementation or Refinement? (Opp. or Req.)	High
	Ownership	Rental	Ownership	Rental																		483 HH in 20 Year Forecast
18	Evaluate transfer of density for protection of natural features – develop policies				L-M		Y	Y	Y	Y-C												
19	Evaluate reduced parking standards for different housing types				Low		Y	Y	Y	Y-C		Y			Y	Y	Y	Y				
20	Reduce Street Width Standards (Further Revisions)				Low					Y-C		Y							Y-I	N		
21	Regulations to Preserve Existing Housing Supply				Low	Y	Y	Y	Y			Y			Y	Y	Y					
22	Fair Housing Act Best Practices				L-M		Y	Y	Y		Y	Y		Y	Y	Y	Y	Y				
B	Conduct Special Area Planning which Includes Housing Opportunities																					
23	City Center Housing Strategy				L-M	Y	Y	Y	Y	Y-C	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y-S	
24	Evaluate Three Mile Lane for Residential Development				L-M		Y	Y		Y-C		Y			Y	Y	Y	Y	Y		Y-S	
25	99 W Corridor Study – Promote Higher Density Mixed-Use Development in anticipation of changing commercial patterns.				L-M		Y	Y	Y	Y-S	Y	Y		Y	Y	Y	Y				?	
B	Ensure Comprehensive Plan Policies Support Strategic Priorities																					
26	Great Neighborhood Principles				Low	Y	Y	Y	Y	Y-C	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y-A	Y
27	Repeal outdated Comprehensive Plan policies previously needed to limit density based on previously limited sewer treatment capacity				L-M		Y	Y	Y	Y-C			Y		Y	Y	Y	Y	Y			-
D	Develop Infrastructure Plans to Support Strategic Priorities																					
28	Update Infrastructure Plans for Vacant/Infill Develop.				L-M		Y	Y	Y	Y-C		Y	Y	Y	Y	Y	Y	Y	Y			-
29	Update Infrastructure Plans for Growth Lands				M-H			Y	Y	Y-S			Y		Y	Y	Y	Y	Y			-
30	Develop Infrastructure Allocation Policies and Methodologies to Manage Systems and Accommodate Need				Low		Y			Y-C			Y		Y	Y	Y	Y	Y			-
31	Develop Alternative Mobility Network that is Convenient and Attractive to Offset Pressure on Vehicular Network.				Low				Y	Y-C			Y	Y	Y	Y	Y	Y	Y			-
32	Develop Plan Documents that Allow for Emerging Technology Responsiveness and Flexibility				?	Y	Y	Y	Y		Y	Y		Y	Y	Y	Y	Y	Y			-
33	Encourage “To and Through” Infrastructure Development				M-H		Y	Y	Y	Y-C			Y		Y	Y	Y	Y	Y			-

Strategic Option	Housing Benefits				Program Impact, (Low, Medium, High)	Nexus with Affordable Housing Action Plan	Strategic Timeframe			Strategic Priority					Housing Need Met					Status		Priority
	Market Rate		Subsidized				Near-Term, 2021-2026 (5 year)	Mid-Term, 2021-2031 (10 year)	Long-Term 2021-2041 (20 year)	1 – Land Supply, Capacity, Availability	2 – Wider Variety of Housing Types	3 – Housing Affordability	4 – Infrastructure	5 – Great Neighborhood Principles and Urban Form	Extremely Low Income (< 30% of MHI)	Very Low Income (30-50% of MHI)	Low Income (50-80% of MHI)	Middle Income (80 - 120% of MHI)	High Income (> 120% of MHI)	Budgeted? Plan Started? Plan Implemented? Ongoing?	Additional Implementation or Implementation Refinement? (Opp. or Req.)	High
	Ownership	Rental	Ownership	Rental																		483 HH in 20 Year Forecast
34	Identify issues with Water Zone 2 and Plan for strategic plan for implementing infrastructure improvements.	Y	Y			Low		Y	Y	Y-S			Y				Y	Y	-			
35	Identify areas with underutilized infrastructure capacity.	Y	Y	Y	Y	L-M	Y	Y		Y-C			Y	Y	Y	Y	Y	Y	-			
E	Increase Buildable Lands Inventory – Developing a 5, 10, 20 and 50 Year Inventory & Phase-In																					
36	Develop an Urban Reserve Area (URA)	Y	Y	Y	Y	L-H			Y	Y-S			Y	Y	Y	Y	Y	Y	-			
37	Develop a Framework Plan for URA	Y	Y	Y	Y	L-H			Y	Y-S	Y	Y	Y	Y	Y	Y	Y	Y	-			
38	Identify Expanded Urban Growth Boundary per URA	Y	Y	Y	Y	High		Y	Y	Y-S			Y	Y	Y	Y	Y	Y	-			
39	Develop Area Plans for UGB lands identifying housing opportunities	Y	Y	Y	Y	High		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-			
40	Develop annexation process to mandate housing types upon annexation per area plans.	Y	Y	Y	Y	High		Y	Y	Y-S	Y	Y		Y	Y	Y	Y	Y	-			
F	Complete “Functional” Planning that Further Affects or Informs Buildable Land Inventory																					
41	Goal 5 Planning and Policies – Natural Resources, Including Local Wetland Inventory. Evaluate policies for wetland mitigation within the city limits as it pertains to housing development.	Y	Y	Y	Y	Low	Y	Y	Y	Y-S				Y	Y	Y	Y	Y	-			
42	Goal 7 Planning and Policies – Hazards, Including Landslides. Update soils analysis for identified constrained buildable land (high landslide susceptibility)	Y	Y	Y	Y	Low	Y	Y	Y	Y-S							Y	Y	Y-S	Y(O)		
G	Evaluate Administrative and Procedural Reforms																					
43	Expedited / Fast-tracked building permits for affordable housing			Y	Y	Low	Y	Y	Y			Y		Y	Y	Y			-			
44	Expedite land use procedures for affordable housing and other land use decisions	Y	Y	Y	Y	L-M	Y	Y	Y			Y		Y	Y	Y			-			

Strategic Option	Housing Benefits				Program Impact, (Low, Medium, High)	Nexus with Affordable Housing Action Plan	Strategic Timeframe			Strategic Priority					Housing Need Met					Status		Priority
	Market Rate		Subsidized				Near-Term, 2021-2026 (5 year)	Mid-Term, 2021-2031 (10 year)	Long-Term 2021-2041 (20 year)	1 – Land Supply, Capacity, Availability	2 – Wider Variety of Housing Types	3 – Housing Affordability	4 – Infrastructure	5 – Great Neighborhood Principles and Urban Form	Extremely Low Income (< 30% of MHI)	Very Low Income (30-50% of MHI)	Low Income (50-80% of MHI)	Middle Income (80 - 120% of MHI)	High Income (> 120% of MHI)	Budgeted? Plan Started? Plan Implemented? Ongoing?	Additional Implementation or Refinement? (Opp. or Req.)	High
	Ownership	Rental	Ownership	Rental																		483 HH in 20 Year Forecast
OTHER STRATEGIES (City)																						
H	Land Interventions to Reduce Costs and Facilitate Housing Development																					
45	Parcel Assembly				L-M	Y	Y	Y	Y	Y-A	Y		Y	Y	Y				-			
46	Land Banking				L-M	Y	Y	Y	Y	Y-A	Y		Y	Y	Y				-			
47	Land Trusts				L-M	Y	Y	Y	Y	Y-A	Y		Y	Y	Y				-			
48	Public Land Disposition				High	Y	Y	Y	Y	Y-A	Y		Y	Y	Y				Y-O	Y		
I	Evaluate Financial Incentives and Affordable Housing Subsidy & Assistance Programs to Retain Housing Stock, Add Supply, and Help People Afford Housing																					
49	Multiple-Unit Limited Tax Exemption Program (Locally Enabled and Managed)				L-M	Y	Y	Y	Y		Y		Y	Y	Y				-			
50	Affordable Housing Property Tax Abatement				L-M	Y	Y	Y	Y		Y		Y	Y	Y				-			
51	Vertical Housing Tax Abatement (Locally Enabled and Managed)				L-M		Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	-			
52	Financial Incentives for Inclusionary Zoning				L-M	Y	Y	Y	Y		Y		Y	Y	Y				-			
53	SDC Financing and Credits				Low	Y	Y	Y	Y		Y		Y	Y	Y	Y	Y	Y	-			
54	Sole Source SDCs				L-M		Y	Y	Y		Y	Y				Y	Y		-			
55	Reduced / Waived Building Permit fee, Planning fees, and/or SDCs for Affordable Housing				Low	Y	Y	Y	Y		Y		Y	Y	Y				Y-I	N		
56	General Fund Grants or Loans				?	Y	Y	Y	Y		Y		Y	Y	Y				-			
57	Home ownership programs (direct assistance)				Low	Y	Y	Y	Y		Y		Y	Y	Y	Y			-			
58	Rental assistance programs (direct assistance)				Low	Y	Y	Y	Y		Y		Y	Y	Y				-			
59	Housing Rehabilitation Programs				Low	Y	Y	Y	Y		Y		Y	Y	Y				-			
60	Programs to Preserve Existing Housing Supply				Low	Y	Y	Y	Y		Y		Y	Y	Y				-			
J	Evaluate Tools to Help Fund Infrastructure or Facilitate Equitable & Timely Infrastructure Extension																					
61	Local Improvement District (LID)				L-M		Y	Y	Y			Y		Y	Y	Y	Y	Y	Y-O	**		
62	Reimbursement District				L-M		Y	Y	Y			Y		Y	Y	Y	Y	Y	Y-O	**		

Strategic Option	Housing Benefits				Program Impact, (Low, Medium, High)	Nexus with Affordable Housing Action Plan	Strategic Timeframe			Strategic Priority					Housing Need Met					Status		Priority
	Market Rate		Subsidized				Near-Term, 2021-2026 (5 year)	Mid-Term, 2021-2031 (10 year)	Long-Term 2021-2041 (20 year)	1 – Land Supply, Capacity, Availability	2 – Wider Variety of Housing Types	3 – Housing Affordability	4 – Infrastructure	5 – Great Neighborhood Principles and Urban Form	Extremely Low Income	Very Low Income	Low Income	Middle Income	High Income	Budgeted? Plan Started? Plan Adopted? Implementation Draft? Implemented? Ongoing?	Additional Implementation or Implementation Refinement? (Opp. or Req.)	High
	Ownership	Rental	Ownership	Rental											(≤ 30% of MHI)	(30-50% of MHI)	(50-80% of MHI)	(80 - 120% of MHI)	(> 120% of MHI)			(Req'd)
K	Consider Programs and Revenue Sources to Generate Revenue to Fund Subsidy Programs and Incentives																					
63	Urban Renewal / Tax Increment Finance (TIF)	Y	Y	Y	Y	Med	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N?	
64	Construction Excise Tax (CET)			Y	Y	L-M	Y	Y	Y			Y			Y	Y	Y					
65	Linkage Fees	Y	Y	Y	Y	L-M	Y	Y	Y			Y			Y	Y	Y	Y				
66	General Fund			Y	Y	?	Y	Y	Y			Y			Y	Y	Y					
67	General Obligation (GO) Bonds			Y	Y	M-H	Y	Y	Y			Y			Y	Y	Y					
68	SB 595 - Transient Lodging Tax (TLT) - up to 30% for Affordable Housing			Y?	Y	L-M	Y	Y	Y			Y			Y	Y	Y			?	(O)	
69	Community Development Block Grant (CDBG)+Sec. 108			Y	Y	?	Y	Y	Y			Y	Y		Y	Y	Y					
70	Housing Trust Funds			Y	Y	?	Y	Y	Y	Y		Y			Y	Y	Y					
71	Fees or Other Dedicated Revenue			Y	Y	?		Y	Y	Y			Y		Y	Y	Y					
L	Education and Outreach																					
72	Ensure builders and housing providers are aware of current opportunities and recent regulatory reforms	Y	Y	Y	Y	Low	Y	Y	Y		Y	Y			Y	Y	Y	Y	Y	Y	Y	Y
M	Advocate for State/Federal Legislative Actions That Increase State Agency Program Funding Available to Fund Affordable Housing																					
73	State Affordable Housing Funding - HB 3349			Y	Y	?	Y	Y	Y			Y			Y	Y	Y					
N	Apply for and Utilize State, Federal, and Foundation Resources																					
74	Use grants, programs, and technical assistance when available and cost-effective*			Y	Y	?	Y	Y	Y			Y			Y	Y	Y			Y-O	Y	
O	Partnerships																					
75	Misc. Partnerships - (Placeholder to Capture Ideas)					-																
P	Strategies and Tools Employed by Orgs. Other Than City																					
76	Misc. Other - (Placeholder to Capture Ideas)					-																
77	Oregon Affordable Housing Tax Credit (OAHTC)*			Y		L-M	Y	Y	Y			Y			Y	Y	Y					
78	Low Income Housing Tax Credits (LIHTC)*			Y		Med	Y	Y	Y			Y			Y	Y	Y					

*Some state and federal programs apply directly between the state and a housing developer or lender, without City involvement; however, the state may look for local support and/or matches when making competitive award decisions, such as with Low Income Housing Tax Credits.

**Authorized by the City, but not frequently used

Note 1: While the City has a traditional Euclidean zoning program, a Planned Development (PD) process is almost exclusively employed for most new subdivision developments, which provides flexibility and has achieved a mix of housing types and densities not otherwise permitted in the underlying zoning. In addition, implementation of Great Neighborhood Principles (GNP) and transition into the new program may mean some strategies applicable to current zoning will no longer apply when GNPs are implemented.

Note 2: Market rate housing benefits may apply across the board, or may be targeted to market rate at the more affordable end of the spectrum that can be achieved at market rates without subsidies – typically in the “workforce housing” range of 80-120% of median income.

Table 3. This table provides more detailed descriptions of the potential housing strategies and actions listed in Table 3. In addition, the table provides further information about the potential scale of impact of the strategy.

Strategy Name	Description	Scale of Impact
I. LAND USE STRATEGIES (City)		
A. Regulatory Changes. Changes to the Zoning Code and Other Ordinances to Advance Strategic Priorities (through increasing residential land and capacity, flexibility, efficiencies, regulatory incentives, regulatory mandates, etc.)		
A1. Redesignate or rezone land for housing	<p>The types of land rezoned for housing are vacant or partially vacant low-density residential and employment land rezoned to multifamily or mixed use. In rezoning land, it is important to choose land in a compatible location, such as land that can be a buffer between an established neighborhood and other denser uses or land adjacent to existing commercial uses. When rezoning employment land, it is best to select land with limited employment capacity (e.g., smaller parcels) in areas where multifamily housing would be compatible (e.g., along transit corridors or in employment centers that would benefit from new housing).</p> <p>This policy change increases opportunity for comparatively affordable multifamily housing and provides opportunities for mixing residential and other compatible uses.</p>	<p>Scale of Impact - Low to high: Scale of impact depends on the amount and location of land rezoned and the densities allowed on the rezoned land.</p>
A2. Diverse Housing Zone. Explore residential zoning with targeted/ minimum density and multiple allowed housing types	<p>This zone would authorize a variety of housing types and sub-types including single-family detached and “middle housing” attached and multi-family housing types.</p> <p>In contrast to traditional zoning, this strategy would be used to implement Great Neighborhood Principles (GNP), including the framework and area planning for growth areas, to specify a housing mix and associated average density that would need to be achieved in an area.</p>	<p>Scale of impact – Medium to high: This strategy allows a broader range of housing types; the impact will depend on market response.</p>
A3. Develop a high density residential zone	<p>This strategy would be used in conjunction with and to complement the Great Neighborhood Principles and diverse housing zone (A2) to provide for higher density housing types in specific areas, such as more dense core areas, centers, nodes, etc.</p>	<p>Scale of Impact – Medium to high: The key impacts of this strategy will be (1) ensuring land is available for higher density housing types, and (2) achieving</p>

Strategy Name	Description	Scale of Impact
(cont.)	which would be higher density than the densities for “middle housing” types which would be incorporated on smaller lots within the diverse housing zone.	greater land use efficiencies that the city currently achieves in the R-4 zone.
A4. Allow Small Residential Lots	<p>Small residential lots are generally less than 5,000 sq. ft. This policy allows individual small lots within a subdivision or short plat. Small lots can be allowed outright in the minimum lot size and dimensions of a zone, or they could be implemented through the subdivision or planned unit development ordinances.</p> <p>This policy is intended to increase density and lower housing costs. Small lots limit sprawl, contribute to the more efficient use of land, and promote densities that can support transit. Small lots also provide expanded housing ownership opportunities to broader income ranges and provide additional variety to available housing types.</p>	<p>Scale of Impact – Low to medium.</p> <p>Cities have adopted minimum lot sizes as small as 3,000 sq. ft. However, it is uncommon to see entire subdivisions of lots this small. Small lots typically get mixed in with other lot sizes.</p>
A5. Mandate Maximum Lot Sizes	<p>This policy places an upper bound on lot size and a lower bound on density in single family zones. For example, a residential zone with a 6,000 sq. ft. minimum lot size might have an 8,000 sq. ft. maximum lot size yielding an effective net density range between 5.4 and 7.3 dwelling units per net acre.</p> <p>This approach ensures minimum densities in residential zones by limiting lot size. It places bounds on building at less than maximum allowable density. Maximum lot sizes can promote appropriate urban densities, efficiently use limited land resources, and reduce sprawl development.</p>	<p>Scale of Impact – Low to medium.</p> <p>Mandating maximum lot size may be most appropriate in areas where the market is building at substantially lower densities than are allowed or in cities that do not have minimum densities.</p>
A6. Mandate Minimum Residential Densities	<p>This policy is typically applied in single-family residential zones and places a lower bound on density. Minimum residential densities in single-family zones are typically implemented through maximum lot sizes. In multiple-family zones they are usually expressed as a minimum number of dwelling units per net acre. Such standards are typically implemented through zoning code provisions in applicable residential zones.</p> <p>This policy increases land-holding capacity. Minimum densities promote developments consistent with local comprehensive plans and growth assumptions. They reduce sprawl development, eliminate underbuilding in residential areas, and make provision of services more cost effective.</p>	<p>Scale of Impact - Low to medium.</p> <p>Increasing minimum densities and ensuring clear urban conversion plans may have a small to moderate impact depending on the observed amount of underbuild and the minimum density standard.</p>

Strategy Name	Description	Scale of Impact
A7. Increase Allowable Residential Densities	<p>This approach seeks to increase holding capacity by increasing allowable density in residential zones. It gives developers the option of building to higher densities. This approach would be implemented through the local zoning or development code. This strategy is most commonly applied to multifamily residential zones.</p> <p>Higher densities increase residential landholding capacity. Higher densities, where appropriate, provide more housing, a greater variety of housing options, and a more efficient use of scarce land resources. Higher densities also reduce sprawl development and make the provision of services more cost effective.</p>	<p>Scale of Impact – Low to medium. This tool can be most effective in increasing densities where very low density is currently allowed or in areas where a city wants to encourage higher density development.</p>
A8. Allow Clustered Residential Development	<p>Clustering allows developers to increase density on portions of a site, while preserving other areas of the site. Clustering is a tool most commonly used to preserve natural areas or avoid natural hazards during development. It uses characteristics of the site as a primary consideration in determining building footprints, access, etc. Clustering is typically processed during the site review phase of development review.</p>	<p>Scale of Impact – Medium. Clustering can increase density, however, if other areas of the site that could otherwise be developed are not developed, the scale of impact can be reduced.</p>
A9. Allow Duplexes, Cottages Townhomes, Row Houses, and Tri- and Quad-Plexes in single-family zones with appropriate design & development standards	<p>Allowing these housing types can increase overall density of residential development and may encourage a higher percentage of multifamily housing types. This approach would be implemented through the local zoning or development code and would list these housing types as outright allowable uses in appropriate residential zones. These housing types provide additional affordable housing options and allow more residential units than would be achieved by detached homes alone.</p>	<p>Scale of Impact – Low to Medium. Allowing these types of housing in more zoning districts may provide a relatively small number of new, relatively affordable, housing opportunities.</p>
A10. Allow Cohousing and “Group Quarters” (SROs, etc.)	<p>Co-housing is a type of intentional community that provides individual dwelling units, both attached and detached, along with shared community facilities. Members of a co-housing community agree to participate in group activities and members are typically involved in the planning and design of the co-housing project. Private homes contain all the features of conventional homes, but residents also have access to extensive common facilities, such as open space, courtyards, a playground, and a common house.</p>	<p>Scale of Impact – Low to Medium. While cohousing may be able to achieve multifamily housing densities, it is unlikely that this housing type would make up a large portion of new housing stock, thereby diminishing its impact.</p>

Strategy Name	Description	Scale of Impact
(cont.)	<p>This approach would be implemented through the local zoning or development code and would list these housing types as outright allowable uses in appropriate residential zones.</p> <p>NOTE: “Co-housing” is often a permitted use as one of the permitted housing types (single-family, attached housing, or multi-family) that has private social arrangements which are not publicly regulated through the zoning ordinance).</p> <p>“Group Quarters” is a useful category used by the Census Bureau to describe living situations that aren’t classified as dwellings. This includes a variety of different living situations where occupants have some private living spaces, but each private living space doesn’t comprise a full dwelling unit, and there are certain shared common areas. For example, they may have one or more of the following: shared kitchen and dining facilities, living rooms, and/or bathrooms, etc. Examples include SROs (Single Room Occupancy housing, etc.). Similar to differentiation of “middle housing” multi-family housing types, these could be regulated and differentiated by zoning based on size categories.</p>	<p>“Group quarters” uses may reduce construction costs and address a potentially unmet need.</p>
A11. Permit Accessory Dwelling Units (ADUs) in single-family zones	<p>Communities use a variety of terms to refer to the concept of accessory dwellings: secondary residences; “granny” flats; and single-family conversions, among others. Regardless of the title, all of these terms refer to an independent dwelling unit that share, at least, a tax lot in a single-family zone. Some accessory dwelling units share parking and entrances. Some may be incorporated into the primary structure; others may be in accessory structures. Accessory dwellings can be distinguished from “shared” housing in that the unit has separate kitchen and bathroom facilities. ADUs are typically regulated as a conditional uses. Some ordinances only allow ADUs where the primary dwelling is owner-occupied.</p> <p>NOTE: McMinnville has already adopted and simplified ADU provisions. HB 2001 may require a modification that would eliminate additional off-street parking requirements for ADUs.</p>	<p>Scale of Impact - Low. Oregon law recently changed to require cities to allow ADUs. McMinnville has received few permit applications for ADUs in recent years.</p>

Strategy Name	Description	Scale of Impact
<p>A12. Allow small or “tiny” homes and identify opportunities for tiny home developments.</p>	<p>“Tiny” homes are typically dwellings that are 500 square feet or smaller. Some tiny houses are as small as 100 to 150 square feet. They include stand-alone units or very small multifamily units.</p> <p>Tiny homes can be sited in a variety of ways: locating them in RV parks (they are similar in many respects to Park Model RVs), tiny home subdivisions, or allowing them as accessory dwelling units.</p> <p>Smaller homes allow for smaller lots, increasing land use efficiency. They provide opportunities for affordable housing, especially for homeowners.</p>	<p>Scale of Impact – Low to medium: Scale of impact depends on regulation of tiny homes, where they are allowed, and market demand for tiny homes.</p>
<p>A13. Promote Infill Development, Allowing Flexibility in Existing Zones with Appropriate Design and Development Standards</p>	<p>This policy seeks to maximize the use of lands that are fully developed or underdeveloped. Make use of existing infrastructure by identifying and implementing policies that (1) improve market opportunities, and (2) reduce impediments to development in areas suitable for infill or redevelopment.</p> <p>Regulatory approaches to promote infill development include:</p> <ul style="list-style-type: none"> • Administrative streamlining • Allowing accessory dwelling units (ADUs) • Allowing small lots • Density bonuses 	<p>Scale of Impact – Low to medium. In general, infill development, especially small-scale infill, is more expensive than other types of residential development. Some types of infill development, such as ADUs, may provide opportunities for relatively affordable housing.</p>
<p>A14. Incentive-Based Zoning and Inclusionary Zoning</p>	<p>Inclusionary zoning policies tie development approval to, or provide regulatory incentives for, the provision of low- and moderate-income housing as part of a proposed development. Mandatory inclusionary zoning-requires developers to provide a certain percentage of low-income housing. Incentive-based inclusionary zoning-provides density or other types of incentives.</p> <p>Price of low-income housing passed on to purchasers of market-rate housing; inclusionary zoning impedes the "filtering" process where residents purchase new housing, freeing existing housing for lower-income residents.</p> <p>Some cities have long had quasi-inclusionary housing provisions in their codes that are implemented at the point of annexation.</p> <p><i>Legislative Authorizations: SB 1533 (2016), HB 2997 (2019, pending)</i></p>	<p>Scale of Impact – Low to medium. Inclusionary zoning has recently been made legal in Oregon. The scale of impact would depend on the inclusionary zoning policies adopted by the city.</p>

Strategy Name	Description	Scale of Impact
A15. Provide Density Bonuses to Developers	<p>The local government allows developers to build housing at densities higher than are usually allowed by the underlying zoning. Density bonuses are commonly used as a tool to encourage greater housing density in desired areas, provided certain requirements are met. This strategy is generally implemented through provisions of the local zoning code and is allowed in appropriate residential zones.</p> <p>Bonus densities can also be used to encourage development of low-income or workforce affordable housing. An affordable housing bonus would allow for more housing units to be built than allowed by zoning if the proposed project provides a certain amount affordable units.</p>	Scale of Impact - Low.
A16. Allow Transfer or Purchase of Development Rights (TDR/PDR)	<p>This policy is intended to move development from sensitive areas to more appropriate areas. Development rights are transferred to “receiving zones” and can be traded. This policy can increase overall densities. This policy is usually implemented through a subsection of the zoning code and identifies both sending zones (zones where decreased densities are desirable) and receiving zones (zones where increased densities are allowed).</p>	Scale of Impact – Low to medium. Actual impact will depend on the extent to which the policy is used. TDRs may have little impact on overall densities since overall density is not changed; rather it is moved around. TDRs can be used to encourage higher densities in selected areas.
A17. Transfer of Density	<p>Transfer of density can be similar to TDR/PDR (A16), but could potentially be implemented in a more simplified manner that doesn’t require the same administrative tracking of sending and receiving zones. For example, a Planned Development may allow a mix of housing types and densities which have the same overall density as allowed in the underlying zone that would achieved through development with uniform minimum lot sizes.</p>	Scale of Impact – Low to medium. Actual impact will depend on the extent to which the policy is used. Density transfers may have little impact on overall densities since overall density is not changed; rather it is moved around.
A18. Evaluate transfer of density for protection of natural features	<p>This policy could be implemented in a number of different ways, but with the specific intent of encouraging preservation of natural features by transferring allowed density elsewhere. This could be outside of the development or elsewhere within a development if applicable, similar to A16 or A17. The policy could also be achieved by permitting smaller lot sizes for lots abutting natural features so the natural feature can be better preserved in a distinct tract of land without reducing the development capacity of the site.</p>	Scale of Impact – Low to medium. Actual impact will depend on the extent to which the policy is used. Density transfers for natural resource protection may have some impact on overall densities since it is allowing density to be captured on lands that would otherwise be unbuildable.

Strategy Name	Description	Scale of Impact
A19. Reduced Parking Requirements for Different Housing Types	<p>Allows development of housing units to with discretionary reduction of parking requirements if an applicant can demonstrate that no more parking is needed. Reduced parking requirements are generally used in conjunction of development of subsidized affordable housing but cities like Portland have reduced or eliminated parking requirements for market-based multifamily housing in specific circumstances.</p>	<p>Scale of Impact - Low. The City could require the developer to prove the need and public benefit or reducing parking requirements to increase housing affordability.</p>
A20. Reduce Street Width Standards	<p>This policy is intended to reduce land used for streets and slow down traffic. Street standards are typically described in development and/or subdivision ordinances. Reduced street width standards are most commonly applied on local streets in residential zones.</p> <p>Narrower streets make more land available to housing and economic-based development. Narrower streets can also reduce long-term street maintenance costs.</p> <p>NOTE: McMinnville has already adopted “skinny street” provisions, so any additional revisions would likely be minimal.</p>	<p>Scale of Impact - Low. This policy is most effective in cities that require relatively wide streets.</p>
A21. Regulations to Preserve Existing Housing Supply	<p>Housing preservation ordinances typically condition the demolition or replacement of certain housing types on the replacement of such housing elsewhere, fees in lieu of replacement, or payment for relocation expenses of existing tenants. Preservation of existing housing may focus on preservation of smaller, more affordable housing. Approaches include:</p> <ul style="list-style-type: none"> • Housing preservation ordinances • Housing replacement ordinances • Single-room-occupancy ordinances • Regulating demolitions 	<p>Scale of Impact - Low. Preserving small existing housing can make a difference in the availability of affordable housing in a city but it is limited by the existing stock housing, especially smaller, more affordable housing.</p>
A22. Fair Housing Act Best Practices	<p>Amendments to Definitions and Regulations, Using Best Practices to Further the Fair Housing Act. Historically, many communities have regulated residential use through definitions of “dwelling,” “family,” and “household” that described the maximum number of related and/or unrelated people living as a household within a dwelling unit. These regulations typically predated the Fair Housing Act, and new best practices which further the Fair Housing Act take a different approach to defining these terms and regulating residential use. Resulting regulations are more inclusive in permitting residential use.</p>	<p>Scale of Impact – Low to medium. This strategy would potentially help low income households obtain affordable housing by allowing more unrelated people to reside in a single dwelling.</p>

Strategy Name	Description	Scale of Impact
B. Special Area Planning which Includes Housing Opportunities		
B23. City Center Housing Strategy	The strategy will evaluate a defined area within the City Center for opportunities to increase context-sensitive housing within that area. This work has the potential to implement other strategies. The study area is partially within the designated Urban Renewal District area where eligible for TIF (K62), and could include strategies such as such as infill (A13), redevelopment, rezoning for residential use (A1), upzoning (A3), identification of possible opportunity sites (H48), and determination of associated infrastructure needs (D28).	Scale of Impact – Low to medium. This work is ongoing; it provides an opportunity to identify potential extent of residential component. Impact will also depend on market conditions.
B24. Evaluate Three Mile Land for Residential Development	The Three Mile Lane Area Plan includes evaluation of land use alternatives that could include opportunities to increase housing within the defined study area. This work has the potential to implement other strategies, which could include rezoning to residential use (A1), upzoning (A3), and determination of associated infrastructure needs (D28, D30)	Scale of Impact – Low to medium. This work is ongoing; it provides an opportunity to identify potential extent of residential component. Impact will also depend on market conditions.
B25. Hwy 99W Corridor Study – Opportunity for Higher-Density Mixed use Development	This work could include opportunities for higher density mixed-use development in anticipation of changing commercial patterns.	Scale of Impact – Low to medium. Impact will depend on market conditions.
C. Ensure Comprehensive Plan Policies Support Strategic Priorities		
C26. Great Neighborhood Principles	In April 2019, the City adopted Great Neighborhood Principles (GNP) and associated policies as part of the Comprehensive Plan. Some of these policies address mixed income and mixed housing neighborhoods. These policies will need to be implemented with code amendments, which can include other strategies, such as Strategy A2 to achieve a Diverse Housing Zone.	Scale of Impact – Low. The GNPs are primarily focused on urban form.
C27. Repeal outdated policies related to old sewer treatment capacity limits	Previously, the City’s sewer treatment plant (water reclamation facility) had limitations on treatment capacity, and the City established policies that limited density in certain areas commensurate with the treatment capacity limitations. The treatment capacity of the plant has increased, and those limitations are no longer necessary, and should be repealed. (Comprehensive Plan Housing Policies – 71.10)	Scale of Impact – Low to medium.

Strategy Name	Description	Scale of Impact
D. Develop Infrastructure Plans to Support Strategic Priorities		
D28. Update infrastructure plans for vacant/infill development	In some developed areas, infrastructure plans including waste water collection and transportation may have assumed no additional development and were not planned for infill and redevelopment to higher intensity. Further, in undeveloped areas, these plans may have assumed growth would occur at historic densities, which may be less than the maximum density permitted by zoning, limiting density of new development where there may be a desire to encourage infill and redevelopment.	Scale of Impact – Low to medium. It is difficult to determine impact until the assessment is completed; impact will depend on market response.
D29. Update infrastructure plans for growth lands	Infrastructure plans are generally sized with capacity for build-out of the Urban Growth Boundary. Expansion of the UGB will necessitate updates to the public facility plans to provide capacity to serve new areas. Infrastructure planning can also be sized to accommodate future growth within designated Urban Reserve Areas, providing for more cost-efficient provision of services.	Scale of Impact – Medium to high. The HNA concludes a significant deficit of residential lands; ensuring services is essential to transitioning land to a developable state.
D30. Develop infrastructure allocation policies	If there are current infrastructure capacity limits, developing policies to allocate the capacity can provide greater certainty about capacity and allowable density of development phasing in the short term, in support of development, redevelopment, and infill priorities.	Scale of Impact – Low. This strategy is primarily about efficient use of infrastructure and timing and will have little impact on land capacity.
D31. Develop alternative mobility network	Planning and developing an alternative mobility network can shift some trips to alternative transportation modes, providing transportation choice and reducing congestion. This can support infill and redevelopment that supports alternative modes in congested areas.	Scale of Impact – Low. This will have little impact on housing cost or type, but will ensure livable neighborhoods.
D32. Develop plans that allow for emerging technology	As new technologies emerge, there may be opportunities to reduce demand on certain infrastructure and transportation systems, potentially increasing capacity by reducing travel demand for some trips. Plans should be designed to allow for this technology and be flexible in adapting plans to reduced demand and congestion on systems that may enable additional infill and redevelopment	Scale of Impact – Unknown. Not enough is known about the impact of emerging technologies such as autonomous vehicles to predict their impact.
D33. Encourage “to and through” infrastructure policies	These policies ensure infrastructure extensions are sized to serve development as well as to extend beyond the development in the future to serve outlying properties.	Scale of Impact – Medium to high. This strategy will have little impact on housing type or affordability, but will ensure adequate capacity to serve lands in a timely and economical manner.

Strategy Name	Description	Scale of Impact
D34. Identify issues and plan for Water Zone 2 infrastructure improvements	The western portion of the UGB is at a higher elevation which requires separate infrastructure for water service within Water Service Pressure Zone 2, which will require a new water storage tank. Buildable lands within the UGB which area in Zone 2 will be unavailable for development until they can be served with water. The investment in the Zone 2 water infrastructure won't occur without sufficient area and timely development to help fund the necessary water infrastructure.	Scale of Impact – Low. This strategy will allow development of land included in the BLI.
D35. Identify areas with underutilized infrastructure capacity	Areas with underutilized infrastructure capacity may be evaluated as candidates for additional development intensity of vacant lands or infill and redevelopment opportunities in developed areas.	Scale of Impact – Low to medium. This strategy would potentially allow higher density development; impact will depend on market response.
E. Increase Buildable Land Inventory – Developing a 5, 10, 20, and 50 Year Inventory & Phase-In		
E36. Establish an Urban Reserve Area (URA)	Cities may establish Urban Reserve Areas (URAs) for a period of up to 30 years beyond the Urban Growth Boundary (UGB) planning period of 20 years, for a combined period of up to 50 years . These become the highest priority lands for future UGB expansions. Urban Reserve Areas provide an opportunity for efficient infrastructure planning and future urbanization.	Scale of Impact – Low to high. URAs are a long-term land supply strategy. The short term impact will be none; the impact 10-20+ years out could be significant in allowing better infrastructure and land supply.
E37. Establish a framework plan for the URA	A framework plan identifies the major land uses, transportation backbone, infrastructure needs, and sequencing for the long-term growth within the URA. As these lands come into the UGB, area plans will be developed to ensure land uses and housing are provided consistent with the long-term framework plan.	Scale of Impact – Low to high. URAs are a long-term land supply strategy. The short term impact will be none; the impact 10-20+ years out could be significant in allowing better infrastructure and land supply.
E38. Identify an expanded UGB per the URA	Urban Reserve Planning helps guide where to establish an Urban Growth Boundary to meet needs for the 20-year planning period.	Scale of Impact – High. Land supply is one of McMinnville's biggest short-term constraining factors.

Strategy Name	Description	Scale of Impact
E39. Develop area plans for UGB lands identifying housing opportunities	Area plans for the UGB refine the framework plan into a more detailed land use plan for areas within the UGB. Development proposals would require master plans consistent with the area plans.	Scale of Impact – High. Land supply is one of McMinnville’s biggest short-term constraining factors. This strategy will ensure efficient development of expansion areas.
E40. Develop annexation process to mandate housing types upon annexation per area plans.	Lands brought into the UGB are placed in an urban holding zone, allowing for annexation phasing plans. Annexation would require master plan approval addressing required housing mix and average density, site design, and development standards.	Scale of Impact – High. Land supply is one of McMinnville’s biggest short-term constraining factors. This strategy will ensure efficient development of expansion areas.
F. Complete “Functional” Planning that Further Affects or Informs the Buildable Land Inventory		
F41. Goal 5 Natural Resource Planning & Policies, incl. wetlands and riparian areas	The City has not adopted certain local “Goal 5” resource policies, which will be required, including a Local Wetland Inventory (LWI) and standards for riparian corridors. These will further affect or inform the capacity of lands within the UGB and future growth areas.	Scale of Impact – Low. This strategy may take certain lands off the buildable inventory.
F42. Goal 7 Hazards Planning & Policies, incl. landslide susceptibility	The City has not adopted certain local “Goal 7” policies for hazards, including areas mapped by DOGAMI (The Oregon Department of Geology and Mineral Industries) as high landslide susceptibility. DOGAMI is in the process of refining their mapping which will further inform this work, which could affect or inform the capacity of lands within the UGB and future growth areas.	Scale of Impact – Low. This strategy may take certain lands off the buildable inventory.

Strategy Name	Description	Scale of Impact
G. Evaluate Administrative and Procedural Reforms		
G43. Administrative and Procedural Reforms	<p>Regulatory delay can be a major cost-inducing factor in development. Oregon has specific requirements for review of development applications; however, complicated projects frequently require additional analysis such as traffic impact studies, etc.</p> <p>A key consideration in these types of reforms is how to streamline the review process and still achieve the intended objectives of local development policies.</p>	<p>Scale of Impact - Low. The level of impact on production of housing and housing affordability will be small and will depend on the changes made to the city's procedures.</p>
G44. Streamline Zoning Code and other Ordinances	<p>Complexity of zoning, subdivision, and other ordinances can make development more difficult, time consuming, and costly. Streamlining development regulations can result in increased development.</p> <p>As part of the streamlining process, cities may evaluate potential barriers to affordable workforce housing and multifamily housing. Potential barriers may include: height limitations, complexity of planned unit development regulations,</p>	<p>Scale of Impact - Low to medium. The level of impact on production of housing and housing affordability will depend on the changes made to the zoning code and other ordinances.</p>

Strategy Name	Description	Scale of Impact
II. OTHER STRATEGIES – NON LAND USE (City)		
H. Land Interventions to Reduce Costs and Facilitate Housing Development		
H45. Parcel assembly	<p>Parcel assembly involves the city’s ability to purchase lands for the purpose of land aggregation or site assembly. It can directly address the issues related to limited multifamily lands being available in appropriate locations (e.g., near arterials and commercial services). Typical goals of parcel assembly programs are: (1) to provide sites for rental apartments in appropriate locations close to services and (2) to reduce the cost of developing multifamily rental units</p> <p>Parcel assembly can lower the cost of multifamily development because the City is able to purchase land in strategic locations over time. Parcel assembly is more often associated with development of government-subsidized affordable housing, where the City partners with nonprofit affordable housing developers.</p>	<p>Scale of Impact - Low to medium: Parcel assembly is most likely to have an effect on a localized area, providing a few opportunities for new multifamily housing development over time.</p>
H46. Land Banking	<p>Land banks are public or community-owned entities created to acquire, manage, maintain, and repurpose vacant, abandoned, and foreclosed properties for conversion into productive use. Land banks can play a variety of roles. They can play a very limited role, such as simply acquiring property on behalf of a local municipality, to a broader role of property developer. It is important to note that land banks are not financial institutions: financing comes from developers, banks, and local governments.</p> <p>Land banks may be granted special powers via state enabling legislation. These powers can include the ability to remove legal and financial barriers, such as delinquent property taxes, that often render vacant and abandoned properties inaccessible or unattractive to the private market. Land banks acquire properties through different means, but the most common pipeline is the property tax foreclosure system.</p>	<p>Scale of Impact - Low to medium: Land banking would have the biggest impact on production of low- and moderate-income affordable housing. Considering how difficult it can be to build this type of affordable housing, and the level of need for affordable housing, land banking could encourage development of more affordable housing types.</p>

Strategy Name	Description	Scale of Impact
H47. Community Land Trust (CLT)	<p>A Community Land Trust (CLT) creates permanent affordability by severing the value of the land and the improvements (i.e., the house). The land is held in trust by a nonprofit or other entity then leased to the homeowner. The homeowner enjoys most of the rights of homeownership, but restrictions are placed on use (e.g., owner occupancy requirement) and price restrictions on resale ensure that the home remains affordable.</p> <p>CLTs may be used in conjunction with land banking programs, where the city or a nonprofit housing corporation purchases a future site for affordable housing or other housing that meets community goals.</p> <p>A variation to the community land trust is to have the City own the property rather than the land trust, and lease property to income-qualifying households (such as low-income or moderate-income households) to build housing. The City would continue to own the land over the long-term but the homeowner would be able to sell the house. Restrictions on resale ensure that the home remains affordable.</p>	<p>Scale of Impact - Low to medium: A land trust will have the biggest impact on production of low- and moderate-income affordable housing. Considering how difficult it is to build this type of affordable housing and the level of need for affordable housing, a land trust could increase nonprofits' capacity to build affordable housing.</p>
H48. Public Land Disposition	<p>The public sector sometimes controls land that has been acquired with resources that enable it to dispose of that land for private and/or nonprofit redevelopment. Land acquired with funding sources such as tax increment, EB5, or through federal resources such as CDBG or HUD Section 108 can be sold or leased at below market rates for various projects to help achieve redevelopment objectives. This increases development feasibility by reducing development costs and gives the public sector leverage to achieve its goals via a development agreement process with the developer. Funding can come from Tax Increment, CDBG/HUD 108, EB-5.</p>	<p>Scale of Impact - Low to medium: Using public land would have the biggest impact on production of low- and moderate-income affordable housing. Impact varies considering how difficult it is to build this type of affordable housing and the level of need for affordable housing.</p>
<p>I. Financial Incentives and Affordable Housing Subsidy & Assistance Programs to Retain Housing Stock, Add Supply, and Help People Afford Housing (Tax abatement programs that decrease operational costs by decreasing property taxes, Programs to lower the cost of development)</p>		
I49. Multiple-Unit Limited Tax Exemption Program (Locally Enabled and Managed)	<p>Multi-unit projects receive a ten-year property tax exemption on structural improvements to the property as long as program requirements are met. There is no ground floor active use requirement for this tool. The City of Portland's program, for example, limits the number of exemptions approved annually, requires developers to apply through a competitive process, and encourages projects to provide greater public benefits to the community. This program is enabled by the state, but managed by the local jurisdiction.</p>	<p>Scale of Impact – Low to medium. The design of the tax abatement program will impact whether and how many developers use the tax abatement, which will affect the scale of the impact.</p>

Strategy Name	Description	Scale of Impact
I50. Affordable Housing Property Tax Abatement	There are several statutory authorizations for different types of affordable housing property tax abatements which could apply to affordable housing developments that aren't already tax exempt. Some of these can be designated for a limited duration. Some of these are authorized by statute and require local enabling legislation or approvals.	Scale of Impact – Low to medium. The design of the tax abatement program will impact whether and how many developers use the tax abatement, which will affect the scale of the impact.
I51. Vertical Housing Tax Abatement (Locally Enabled and Managed)	Subsidizes "mixed-use" projects to encourage dense development or redevelopment by providing a partial property tax exemption on increased property value for qualified developments. The exemption varies in accordance with the number of residential floors on a mixed-use project with a maximum property tax exemption of 80% over 10 years. An additional property tax exemption on the land may be given if some or all of the residential housing is for low-income persons (80% of area is median income or below). The proposed zone must meet at least one of the following criteria: <ul style="list-style-type: none"> • Completely within the core area of an urban center. • Entirely within half-mile radius of existing/planned light rail station. • Entirely within one-quarter mile of fixed-route transit service (including a bus line). • Contains property for which land-use comprehensive plan and implementing ordinances effectively allow "mixed-use" with residential. 	Scale of Impact – Low to medium. The design of the tax abatement program will impact whether and how many developers use the tax abatement, which will affect the scale of the impact.
I52. Financial incentives supporting inclusionary zoning	In addition to regulatory mandates and incentives for inclusionary zoning, there can be financial incentives to help achieve inclusionary zoning, or to help increase the level of affordability or percentage of affordable units. If a City adopts both inclusionary zoning and a Construction Excise Tax, a city must offer certain incentives for developments subject to inclusionary zoning.	Scale of Impact – Low to medium. The design of the program will impact whether and how many developers use the incentives which will affect the scale of the impact.

Strategy Name	Description	Scale of Impact
I53. SDC Financing and Credits	<p>Enables developers to spread their SDC payment over time, thereby reducing upfront costs. Alternately, credits allow developers to make necessary improvements to the site in lieu of paying SDCs. Note that the City can control its own SDCs, but often small cities manage them on behalf of other jurisdictions including the County and special districts. Funding can come from an SDC fund or general fund. In some cases there may be no financial impact. Can come in the form of student, low-income, or workforce housing.</p> <p>An additional variation is deferral of SDC payment from time of building permit issuance to when the building is occupied, which can reduce up-front costs, but can potentially present create administrative issues.</p>	<p>Scale of Impact – Low. The City may consider changes in SDCs to allow financing, but the City would want to ensure that the impact should be spread-out and non-negatively impact one entity.</p>
I54. Sole Source SDCs	<p>Retains SDCs paid by developers within a limited geographic area that directly benefits from new development, rather than being available for use city-wide. This enables SDC eligible improvements within the area that generates those funds to keep them for these improvements. Improvements within smaller areas can enhance the catalytic and redevelopment value of the area. This tool can also be blended with other resources such as LIDs and TIF. Funding can come from an SDC fund or general fund. In some cases there may be no financial impact. The housing can come in the form of student, low income, or workforce housing. However, in some cases, this could limit the ability to aggregate SDC resources regardless of geographic area for larger infrastructure projects.</p>	<p>Scale of Impact – Low to medium. Depends on extent to which SDCs can be aggregated to complete larger projects.</p>
I55. Reduced or waived planning fees, permit fees, SDCs for affordable housing	<p>Planning fees, permit fees, and SDCs can be reduced or waived for qualifying affordable housing developments.</p> <p>McMinnville has already enacted planning, permit, and certain SDC waivers for qualifying affordable housing developments.</p>	<p>Scale of Impact – Low. McMinnville has already enacted planning, permit, and certain SDC waivers for qualifying affordable housing developments.</p>
I56. General Fund Grants or Loans	<p>Through the annual budget process, the City can allocate funds to assist affordable housing developments. Assistance can also be provided through no- or low-interest loans. That typically occurs in conjunction with a revolving loan fund that allows the fund to grow over time as loans are repaid.</p>	<p>Scale of Impact – Unknown. Impact is dependent on obtaining grants.</p>

Strategy Name	Description	Scale of Impact
157. Home ownership programs	<p>Cities (and other partners) use a variety of programs to assist with homeownership</p> <ul style="list-style-type: none"> • Homebuyer Assistance Programs. These Down Payment Assistance loans help low- or moderate-income households cover down payment and closing costs to purchase homes on the open market. These programs either give loans or grants, most frequently to first time homebuyers. • Inclusionary Housing Program. Some cities have an Inclusionary Housing Ordinance (IH) requires that new residential development contribute at least 20% of the total units as permanently affordable housing. Options for meeting this requirement can be allow the affordable units to be located on or off site. Cities that use inclusionary housing generally have programs to ensure that housing continues to be affordable over the long-term. • Partnerships. Cities often work with partnerships with nonprofit agencies that provide homeownership assistance. 	<p>Scale of Impact - Low. While homeownership programs are important, limited funds mean that the number of households that benefit from homeownership programs is relatively small.</p>
158. Rental assistance programs	<p>Cities (and other partners) use a variety of programs to provide rental assistances</p> <ul style="list-style-type: none"> • Section 8 Voucher: This assistance subsidizes the difference between 30 to 40 percent of a household's income and the area's Fair Market Rent (FMR). • Rental assistance programs. These programs offer a range of services, such as assistance with security deposits. • Rent Control. Rent control regulations control the level and increases in rent, over time resulting in rents that are at or below market rates. • Partnerships. Cities often work with partnerships with nonprofit agencies that provide rental assistance. 	<p>Scale of Impact - Low. Renter assistance programs are important. However, limited city funds mean that the number of households that benefit from rental assistance resulting from city funding is relatively small.</p>
159. Housing Rehabilitation Programs	<p>Cities (and other partners) often offer home rehabilitation programs, which provide loans to low- and moderate-income households for rehabilitation projects such as making energy efficiency, code, and safety repairs. Some programs provide funding to demolish and completely reconstruct substandard housing.</p>	<p>Scale of Impact - Low. Limited fund availability means that relatively few households will be able to access housing rehabilitation funds.</p>
160. Non-regulatory programs and incentives to	<p>While rehabilitation programs can help preserve housing supply there are other strategies that can help preserve housing supply, or affordable housing supply. For example, if a long-term deed restriction requiring affordable rents for a specified period is</p>	<p>Scale of Impact - Low. Impact would be limited by the availability of funding.</p>

Strategy Name	Description	Scale of Impact
preserve existing housing supply	set to expire, an affordable housing agency may acquire a property to retain the housing as affordable units.	
J. Tools to Help Fund Infrastructure or Facilitate Equitable & Timely Extension of Infrastructure		
J61. Local Improvement District (LID)	This tool is a special assessment district where property owners are assessed a fee to pay for capital improvements, such as streetscape enhancements, underground utilities, or shared open space. LIDs must be supported by a majority of affected property owners and setting up fair LID payments for various property owners, who are located different distances from the improvement can be challenging. However, if successful it succeeds in organizing property owners around a common goal. It also allows property owners to make payments over time to bring about improvements quickly that benefit them individually. LIDs can also be bundled with other resources, such as TIFs.	Scale of Impact – Low to medium. This tool can only be used when certain majority requirements are met for properties to be assessed.
J62. Reimbursement District	<p>A reimbursement district is a tool that provides equity if the City or a developer must extend public facilities along other properties in order to enable development of a property. If intervening properties connect to the infrastructure extended at the expense of the developer or City, a reimbursement district allows the City or developer who paid for the extension to recoup costs that would have been incurred by the intervening properties if they had to extend it on their own at the time of their development.</p> <p>Unless or until the intervening property develops in a manner that would have required the infrastructure extension, there is no assessment. Therefore, there is no assurance that the City or developer that installed the infrastructure will recoup the costs.</p> <p>This tool can overcome a situation where a developer may be hesitant to extend services if the intervening property can connect for free at developer’s expense.</p>	Scale of Impact – Low to medium. This tool doesn’t provide a new funding source, but may sometimes impact decisions to extend infrastructure to serve new development.

Strategy Name	Description	Scale of Impact
K. Programs and Revenue Sources to Generate Revenue to Fund Subsidy Programs and Incentives (Sources of funding to pay for infrastructure to support development)		
K63. Urban Renewal / Tax Increment Finance (TIF)	<p>Tax increment finance revenues are generated by the increase in total assessed value in an urban renewal district from the time the district is first established. As property values increase in the district, the increase in total property taxes (i.e., City, County, school portions) is used to pay off the bonds. When the bonds are paid off, the entire valuation is returned to the general property tax rolls. TIFs defer property tax accumulation by the City and County until the urban renewal district expires or pays off bonds. Over the long term (most districts are established for a period of 20 or more years), the district could produce significant revenues for capital projects. Urban renewal funds can be invested in the form of low-interest loans and/or grants for a variety of capital investments:</p> <ul style="list-style-type: none"> • Redevelopment projects, such as mixed-use or infill housing developments • Economic development strategies, such as capital improvement loans for small or start up businesses which can be linked to family-wage jobs • Streetscape improvements, including new lighting, trees, and sidewalks • Land assembly for public as well as private re-use • Transportation enhancements, including intersection improvements • Historic preservation projects • Parks and open spaces 	<p>Scale of Impact – Medium. Urban Renewal funding is a flexible tool that allows cities to develop essential infrastructure or provides funding for programs that lower the costs of housing development (such as SDC reductions or low interest loan programs). Portland used Urban Renewal to catalyze redevelopment across the City, including the Pearl District and South Waterfront.</p>
K64. Affordable Housing Construction Excise Tax (CET)	<p>An affordable housing construction excise tax (CET) is a tax on the value of new construction that is used to fund affordable housing. CETs are governed by state law but provide local control over some aspects of the tax structure, rates, etc.</p> <p>A CET can be established using a flat rate or a tiered/marginal rate, which can help further affordable housing objectives.</p> <p><i>(Legislative Authorization: SB 1533, 2016)</i></p>	<p>Scale of Impact – Low to medium. Impacts would depend on (1) the amount of the tax, (2) the amount of revenue generated, and (3) how the funds are invested.</p>

Strategy Name	Description	Scale of Impact
K65. Linkage Fees for Non-Residential Development	Linkage fees are a type of impact fee based on the source of the impact. In this case, the fee is based on the impact of commercial and industrial development creating additional housing demand. New nonresidential development generates jobs, which triggers housing needs for their workers. Commercial and/or industrial developers are charged fees, usually assessed per square foot, which then are used to build new housing units. A communitywide analysis is usually performed to estimate the type and amount of jobs and wages that are expected to be generated by new development.	Scale of Impact – Low to medium. Impact is dependent on the design of the program which will determine how many projects are required to pay fees.
K66 & 67. General Fund and General Obligation (GO) Bonds	The city can use general fund monies on hand or can issue bonds backed by the full faith and credit of the city to pay for desired public improvements. GO Bonds require a public vote which can be time-consuming and costly. GO Bonds also raise property owner taxes.	Scale of Impact – Medium to high. GO Bonds can be used to develop essential infrastructure or provides funding for programs that lower the costs of housing development (such as SDC reductions or low interest loan programs).
K68. Transient Lodging Tax (TLT) – Up to 30% for Affordable Housing (SB595)	This legislation would enable cities with a local transient lodging tax to use a portion for affordable housing. Currently 70% of local funds must go to tourism, and 30% can be allocated to general fund. SB595 would authorize a maximum of 30% be dedicated for affordable housing, authorized to be deducted from the 70% for tourism. <i>(Legislative Authorization: SB595, 2019, pending)</i>	Scale of Impact – Low to moderate Would require Council action to appropriate funds for housing and the amount of funding. Would provide a stable annual funding source dedicated to affordable housing.

Strategy Name	Description	Scale of Impact
<p>K69. Community Development Block Grants (CDBG)</p> <p>(Federal Program, Locally Administered)</p>	<p>Community Development Block Grants (CDBG) provide communities with resources to address a range of community development needs, including infrastructure improvements, housing and commercial rehab loans and grants, as well as other benefits targeted to low- and moderate-income persons. Funds can be applied relatively flexibly. This program has been run since 1974, and is seen as being fairly reliable, but securing loans/grants for individual projects can be competitive.</p> <p>Some drawbacks to CDBG funds include:</p> <ul style="list-style-type: none"> • Administration and projects must meet federal guidelines such as Davis Bacon construction requirements. • Amount of federal funding for CDBG has been diminishing over the past few years. • CDBG program is not in the control of the City. 	<p>Scale of Impact – Unknown. Impact is dependent on qualifying as an entitlement community with an annual appropriation or obtaining grants competitively through the state/small cities program</p>
<p>p/o K69. CDBG – Section 108 (Federal Program, Locally Administered)</p>	<p>HUD Section 108 increases the capacity of block grants to assist with economic development projects by enabling a community to borrow up to five times its annual CDBG allocation. These funds can be fairly flexible in their application. The program has been in operation since 1974 and has gained reliability. It enables a larger amount of very low interest-rate-subordinate funding for eligible projects. As with CDBGs, the process of securing the loan can be competitive.</p>	<p>Scale of Impact - Low. Section 108 funds could be used to help finance development of some affordable housing but would only cover a portion of the affordable housing development.</p>
<p>K70. Housing Trust Funds</p>	<p>Housing trust funds are designed locally so they take advantage of unique opportunities and address specific needs that exist within a community. Housing trust funds support virtually any housing activity that serves the targeted beneficiaries and would typically fund new construction and rehabilitation, as well as community land trusts and first time homeowners.</p> <p>This tool is often used in cities with inclusionary zoning ordinances, which generates fees to fund development of the housing trust fund. Successfully implementing this tool requires a dedicated funding source.</p>	<p>Scale of Impact – Unknown. Impact is dependent on program design.</p>

Strategy Name	Description	Scale of Impact
K71. Fees or Other Dedicated Revenue	Directs user fees into an enterprise fund that provides dedicated revenue to fund specific projects. Examples of those types of funds can include parking revenue funds, stormwater/ sewer funds, street funds, etc. The City could also use this program to raise private sector funds for a district parking garage wherein the City could facilitate a program allowing developers to pay fees-in-lieu or “parking credits” that developers would purchase from the City for access “entitlement” into the shared supply. The shared supply could meet initial parking need when the development comes online while also maintaining the flexibility to adjust to parking need over time as elasticity in the demand patterns develop in the district and influences like alternative modes are accounted for. Funding can come from residents, businesses, and developers. Also these fees or revenues allow for new revenue streams into the City.	Scale of Impact – Unknown. Impact is dependent on program design.
L. Education and Outreach		
L72. Education and Outreach	Ensure housing developers are aware of regulatory changes that authorize additional housing options or flexibility. Provide information that explains housing options that are already available under existing zoning and building codes, but may use different terminology than is commonly recognized.	Scale of Impact – Low.
M. Advocacy for State/Federal Legislative Actions that Increase State Agency Program Funding Available to Fund Affordable Housing		
M73. State Affordable Housing Funding	This legislation would change the tax income code to eliminate certain deductions, and the resulting revenues would fund state affordable housing programs. <i>(Legislation: HB 3349, 2019, pending)</i>	Scale of Impact – Unknown.
N. Apply for and Utilize State, Federal, and Foundation Resources		
N74. Use grants, programs, and technical resources when available and cost-effective	Continue to utilize grant funds and other resources when available to fund housing related planning and housing-related programs.	Scale of Impact – Unknown. Impact is dependent on obtaining grants.

Strategy Name	Description	Scale of Impact
O. Partnerships		
O75. Misc. Partnerships	Placeholder Only – To Capture Ideas / Discussion	
P. Strategies and Tools Employed by Organizations Other Than the City		
P76. Misc. Strategies	Placeholder Only – To Capture Ideas / Discussion	
P77. Oregon Affordable Housing Tax Credit (OAHTC)	<p>The City is directly not involved in this program.</p> <p>The 1989 Oregon Legislature created the Oregon Affordable Housing Tax Credit Program (OAHTC). Under the OAHTC Program, the Department has the authority to certify tax credits for projects. Through the use of tax credits, lending institutions are able to lower the cost of financing by as much as four percent for housing projects or community rehabilitation programs serving low-income households. The savings generated by the reduced interest rate must be passed directly to the tenant in the form of reduced rents.</p>	<p>Scale of Impact – Low to medium. The city is not directly involved in this program.</p>
P78. Low Income Housing Tax Credits (LIHTC)	<p>The Low Income Housing Tax Credit Program (LIHTC) is an incentive to encourage the construction and rehabilitation of rental housing for lower-income households. The program offers credits on federal tax liabilities for 10 years. Individuals, corporations, partnerships and other legal entities may benefit from tax credits, subject to applicable restrictions.</p> <p>Annually, the U.S. Department of Treasury allocates tax credits to each state. Oregon Housing and Community Services (OHCS) administers the tax credit program for the state of Oregon. Tax credits offer direct federal income tax savings to owners of rental housing developments who with a developer are willing to set-aside a minimum portion of the development's units for households earning 60 percent or less of gross area median income. Developers of tax credit developments typically sell the credits to investors who are willing to provide capital in return for the economic benefits (including tax credits) generated by the development.</p>	<p>Scale f Impact – Moderate to high. The city is not directly involved in this program.</p>

Land Use Action	Aggregate Results (2 groups)
A9. Allow more housing types	81
A2. Diverse Housing Zone. Explore residential zoning with targeted/ minimum density and multiple allowed housing types	73
A3. Develop a high density residential zone	73
D28. Update infrastructure plans for infill development	67
A13. Promote Infill Development, Allowing Flexibility in Existing Zones with Appropriate Design and Development Standards	60
A4. Allow Small Residential Lots	58
A8. Allow Clustered Residential Development	57
E36. Establish an Urban Reserve Area (URA)	57
D29. Update infrastructure plans for growth lands	53
E38. Identify an expanded UGB per the URA	48
B23. City Center Housing Strategy	47
E40. Develop annexation process to mandate housing types upon annexation per area plans.	47
G44. Streamline Zoning Code and other Ordinances	45
A11. Permit ADU in SF Zones	43
A12. Allow small or “tiny” homes and identify opportunities for tiny home developments.	43
A14. Incentive-Based Zoning and Inclusionary Zoning	42
C26. Great Neighborhood Principles	42
A10. Allow Cohousing and “Group Quarters” (SROs, etc.)	39
E39. Develop area plans for UGB lands identifying housing opportunities	39
E37. Establish a framework plan for the URA	37
B24. Evaluate Three Mile Land for Residential Development	36
A6. Mandate Mimimum Residential Densities	35
A7. Increase Allowable Residential Densities	35
A1. Redesignate or rezone land for housing	32
F41. Goal 5 Natural Resource Planning & Policies, incl. wetlands and riparian areas	29
A22. Fair Housing Act BMP	28
C27. Repeal outdated policies related to old sewer treatment capacity limits	28
D34. Identify issues and plan for Water Zone 2 infrastructure improvements	27
A18. Evaluate transfer of density for protection of natural features	26
A19. Reduced Parking	26
G43. Administrative and Procedural Reforms	26

B25. Hwy 99W Corridor Study – Opportunity for Higher-Density Mixed use Development	24
D30. Develop infrastructure allocation policies	23
D33. Encourage “to and through” infrastructure policies	22
A5. Mandate Maximum Lot Sizes	21
A16. Allow TDR/PDR	20
Other: Look for opportunities to rezone existing single-family to R-3 and R-4 to address short-term deficit identified in HNA	20
A15. Provide Density Bonuses	15
A21. Regulations to Preserve Existing Housing	14
F42. Goal 7 Hazards Planning & Policies, incl. landslide susceptibility	14
D32. Develop plans that allow for emerging technology	12
A20. Reduce Street Width Standards	11
A17. Transfer of Density	10
D35. Identify areas with underutilized infrastructure capacity	10
D31. Develop alternative mobility network	6

Non-Land Use Action	Aggregate Results (2 groups)
p78 lihtc	77
I57. Home ownership programs	74
P77. Oregon Affordable Housing Tax Credit	60
K68. Transient Lodging Tax (TLT) – Up to 30% for Affordable Housing (SB595)	55
I59. Housing Rehab	54
H47. Community Land Trust (CLT)	50
I52. Financial incentives supporting inclusionary zoning	48
I58. Rental assistance programs	47
I55. Reduced or waived planning fees, permit fees, SDCs for affordable housing	45
K69. Community CDBG	44
I50. Affordable Housing Property Tax Abatement	43
M73. State Affordable Housing Funding	43
H46. Land Banking	40
K63. Urban Renewal TIF	39
I53. SDC Finance/Credits	38
I51. Vertical HTA	35
J61. LID	33
K70. Housing Trust Funds	32
I60. Non-regulatory programs and incentives to preserve existing housing supply	29
H45. Parcel assembly	28
I49. Multiple-Unit Limited Tax	25
K64. Affordable Housing Construction Excise Tax (CET)	25
J62. Reimbursement District	24
p/o K69. CDBG 108	24
N74. Use grants, programs, and technical resources when available and cost-effective	24
H48. Public Land Disposition	22
I54. Sole Source SDC	21
other: Vacant Property tax	20
K66 & 67. General Fund and General Obligation	17
I56. General Fund Grants or Loans	14
K71. Fees or Other	14
L72. Education and Outreach	14
Other: Fee for demo of affordable home for expensive home	14
K65. Linkage Fees for Non-Residential	12
O75. Misc. Partnerships	6
P76. Misc. Strategies	2

City of McMinnville Economic Opportunities Analysis

June 2020

Prepared for:
City of McMinnville

FINAL REPORT

ECONorthwest
ECONOMICS • FINANCE • PLANNING

KOIN Center
222 SW Columbia Street
Suite 1600
Portland, OR 97201
503.222.6060

DRAFT

This page intentionally blank

Acknowledgments

ECONorthwest prepared this report for the City of McMinnville. ECONorthwest and the City thank the many people who helped to develop the McMinnville Economic Opportunities Analysis.

<p>Project Advisory Committee Kellie Menke Roger Lizut Susan Dirks Sid Friedman Mark Davis Paul Davis Andrew Burton Beth Caster Michael Jester Robert J. Banagay Amanda Perron Matt Deppe</p>	<p>Patty O’Leary Doug Hurl Scott Cooper Alan Amerson Kelly McDonald Mike Morris Jeff Knapp Gioia Goodrum Ed Gormley Kyle Faulk Jody Christensen</p>
<p>Public/Institutional Lands Work Group <i>PAC Members:</i> Paul Davis, Chemeketa Susan Muir, Parks Mike Bisset, City Infrastructure John Dietz, MWL Other Interested PAC Members</p>	<p><i>Additional Representatives:</i> Mary Ann Rodriguez, Linfield Matt Johnson, Churches Laura Syring, SD, Parks Peter Keenan, SD Ryan McIrvin, SD/Athletics Steve Ganzer, Parks Justin Hogue, County</p>
<p>Technical Advisory Committee (TAC): Tom Schauer - Lead Heather Richards Chuck Darnell Jamie Fleckenstein</p>	<p>Mike Bisset Susan Muir (Parks Director) Angela Carnahan (DLCD) Stephanie Armstrong (Yamhill County)</p>
<p>ECONorthwest Consulting Staff Bob Parker, Project Director</p>	<p>Margaret Raimann, Technical Manager</p>

For over 40 years ECONorthwest has helped its clients make sound decisions based on rigorous economic, planning, and financial analysis. For more information about ECONorthwest: www.econw.com. For more information about this report, please contact:

Tom Schauer
 Senior Planner
 230 NE Second Street
 McMinnville, OR 97128
 503-4745108
tom.schauer@mcminnvilleoregon.gov

Bob Parker
 ECONorthwest
 222 SW Columbia, Suite 1600
 Portland, OR 97201
 503-222-6060
parker@econw.com

Table of Contents

EXECUTIVE SUMMARY	IV
1. INTRODUCTION	1
CONTENTS, FORMAT, AND GUIDING REQUIREMENTS	1
BACKGROUND	2
STATEWIDE PLANNING GUIDANCE	7
PUBLIC PROCESS	8
ORGANIZATION OF THIS REPORT	9
2. THE MCMINNVILLE ECONOMY	10
3. NATIONAL, STATE, AND REGIONAL OUTLOOK	19
NATIONAL TRENDS	19
STATE TRENDS	26
REGIONAL AND LOCAL TRENDS	31
4. ECONOMIC DEVELOPMENT POTENTIAL	44
FACTORS AFFECTING COMMUNITY ECONOMIC DEVELOPMENT POTENTIAL	45
TARGET INDUSTRIES	59
5. FORECAST EMPLOYMENT AND LAND NEEDS	67
EOA UPDATE PROCESS	67
BUILDABLE LANDS INVENTORY	67
FORECAST OF EMPLOYMENT GROWTH AND COMMERCIAL AND INDUSTRIAL LAND DEMAND	75
ESTIMATE OF DEMAND FOR COMMERCIAL AND INDUSTRIAL LAND	82
SUMMARY OF LAND SUFFICIENCY FOR EMPLOYMENT LAND IN MCMINNVILLE	106
6. COMPREHENSIVE PLAN POLICIES	109
ECONOMIC DEVELOPMENT GOALS AND POLICIES	109
APPENDIX A. BUILDABLE LANDS INVENTORY	117
APPENDIX B. EMPLOYMENT ON OTHER LAND AND EMPLOYMENT DENSITY	121
APPENDIX C. OTHER SITE NEEDS	133
APPENDIX D. SITE NEED LETTERS	137
APPENDIX E. PUBLIC AND INSTITUTIONAL LAND NEED	138

This page intentionally blank

Executive Summary

This section summarizes the high-level findings from the analysis of land sufficiency of employment and public or institutional land in the McMinnville urban growth boundary (UGB).

Background

The City of McMinnville is in the process of reviewing future land needs and sufficiency of its Urban Growth Boundary to meet those needs for a 20-year planning period beginning in 2021, the earliest date by which the City would have a program in place to meet the identified needs.

This evaluation process requires several technical studies. These include:

- a housing needs assessment (HNA) and residential buildable land inventory,
- a Goal 9 compliant Economic Opportunities Analysis (EOA) and an employment buildable lands inventory, and
- an assessment of public and institutional land needs (e.g., parks, schools, etc).

These analyses are combined into a report called an “Urbanization Study” which allows the City of McMinnville to assess whether there is sufficient land within the Urban Growth Boundary (UGB) to accommodate land needs for the 20-year period between 2021 and 2041.

How much growth is McMinnville planning for?

McMinnville is growing. Exhibit 1 summarizes population and employment forecasts for McMinnville. The population forecast projects that McMinnville will grow at 1.36% annually for the 2021-2041 period and 1.20% annually for the 2021-2067 period. The population forecast is based historic population growth trends, demographic changes and trends, and recent development trends. The employment forecast projects employment growing at the same rate as population.

Exhibit 1. Population and employment forecasts, McMinnville UGB, 2021-2041, 2021-2067

Year	Population	Total Employment
2021	36,238	22,157
2041	47,498	29,042
2067	62,803	38,158
<i>Change 2021-2041</i>		
Number	11,260	6,885
Percent	31%	31%
AAGR	1.36%	1.36%
<i>Change 2021-2067</i>		
Number	26,565	16,001
Percent	73%	72%
AAGR	1.20%	1.19%

Source: ECONorthwest

How much employment land does McMinnville currently have?

McMinnville has 7,535 acres within the Urban Growth Boundary (UGB). Of this, about 6,485 acres are in tax lots; the remaining lands are in public right-of-ways, primarily streets, and the Yamhill River. About 1,678 acres are in tax lots with a public or institutional use. The 4,807 remaining acres are on commercial, industrial, or residential land.

There are approximately 1,388 acres of employment land in tax lots, with 857 committed acres, 111 constrained acres, and 421 buildable acres of employment land. This includes 97 buildable acres of commercial land and 324 buildable acres of industrial land. Exhibit 2 summarizes the buildable lands inventory for employment lands. All of the buildable employment lands are in Water Pressure Zone 1. Some higher elevation areas within the westerly UGB are in Water Pressure Zone 2, which requires new infrastructure to serve that zone before the land can develop.

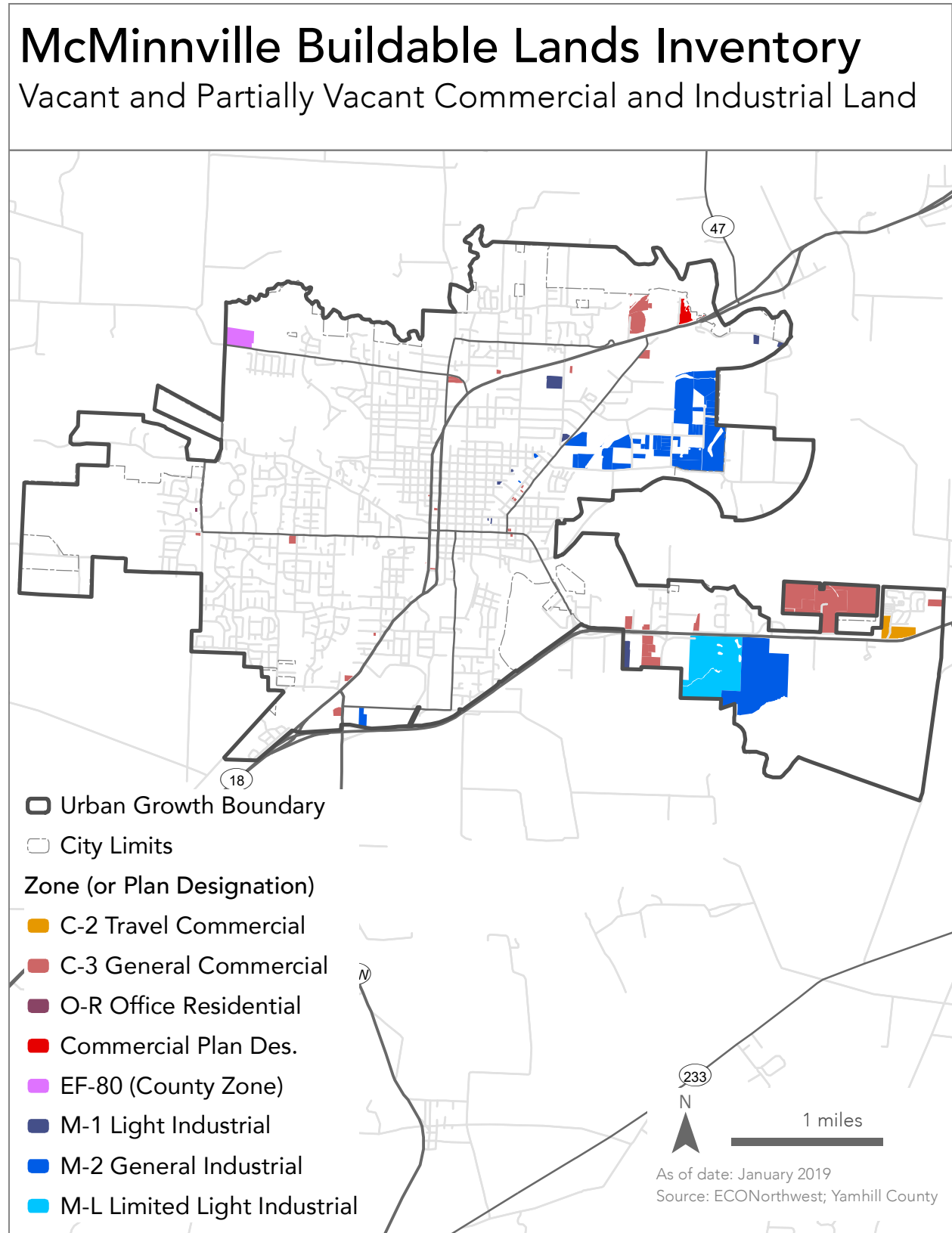
Exhibit 3 shows a map of the buildable employment land by zone. Some properties are subject to “Planned Development” overlays which provide unique land use regulations for certain properties. The classifications are listed below by zone. A few properties still have rural zoning, and are therefore classified by their urban commercial or industrial plan designation, which specifies the zoning and uses that will apply when rezoned. Planned Development overlays are addressed in the EOA for specific properties as needed.

Exhibit 2. Unconstrained buildable vacant and partially vacant land by zoning, McMinnville UGB, 2019

Zone/Plan Designation	Total buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant
Commercial	97	63	33
C-1 Neighborhood Business	-	-	-
C-2 Travel Commercial	12	12	-
C-3 General Commercial	66	38	28
O-R Office Residential	-	-	-
Commercial Plan Des.	5	-	5
EF-80 (County Zone)	13	13	-
Industrial	324	307	17
M-1 Light Industrial	15	13	2
M-2 General Industrial	221	207	15
M-L Limited Light Industrial	88	88	-
Industrial Plan Des.	-	-	-
Total	421	370	50

Source: City of McMinnville GIS data; analysis by ECONorthwest. Note: numbers may not sum due to rounding.

Exhibit 3. Buildable employment land by zone with development constraints, McMinnville UGB, 2019



How much land will be required for employment?

Context

The City last updated its Economic Opportunities Analysis (EOA) in 2013, which was adopted and acknowledged. In 2019, the City adopted the MAC-Town 2032 Economic Development Strategic Plan (EDSP).

The current EOA update bring the 2013 document to the current 20-year planning period of 2021-2041, incorporating new trend and forecast data, and ensuring the City's land use planning documents provide the land use foundation to support the City's newly adopted economic development strategy, and ensure the Comprehensive Plan supports that strategy. It also considers a longer 46-year planning period. Since the City's economic development strategy is articulated in the new EDSP, this EOA update supports and references that work, but the scope didn't duplicate the work that was completed in the EDSP.

Demand

McMinnville will need about 741 gross acres (384 industrial and 357 commercial) for employment for the 2021 to 2041 period and 954 gross acres (384 industrial and 570 commercial) for the 2021 to 2067 period.

Demand was calculated in following components:

- By developing an employment forecast and assigning employment density factors to determine associated land needs, Employment forecasts indicate that McMinnville will add 6,885 jobs between 2021 and 2041 and 16,001 jobs between 2021 and 2067. *For this component of the demand, McMinnville will need at least 405 gross acres (153 industrial and 252 commercial) for employment for the 2021 to 2041 period and 899 gross acres (329 industrial and 570 commercial) for the 2021 to 2067 period.*
- By removing the following employment from the employment forecast, and instead estimating land needs for these employers based on interviews with the respective entities: local government, K-12, and higher education. *These are discussed in the public and institutional land needs section of the Urbanization Summary report, and are not discussed in the land sufficiency analysis for commercial and industrial employment.*
- The City assumed 5% of new employment would be accommodated on sites that don't require new vacant land, through infill, redevelopment, and locations that don't require new employment land.
- By identifying the existing retail leakage identified in a market analysis, which identifies existing deficits in the base year which are not otherwise accounted for in the forecast of future employment from 2021-2041. *McMinnville will need about 12.2 acres to address existing retail leakage.*
- By estimating other needed sites which are not accounted for in the average density assumptions. The sites for these uses are unique and not accounted for in the standard employment density factors. These are target industries and uses in the MAC-Town

2032 Economic Development Strategic Plan. *McMinnville will need 104 acres for other needed sites on commercial (e.g., land needs not accounted for in the employment projections) in the 2021 to 2041 period.* A net increase of 93 acres when adjusting the employment forecast to reflect these unique site needs and adjustments to average density assumptions for these sites and uses.

- Calculation of additional needed sites on industrial land, based on target industries identified in the EDSP, resulted in *overall demand for 384 acres of industrial land.*

Supply

In 2019, within the UGB, McMinnville has 421 buildable acres of employment land, with 370 buildable acres in vacant lots and 50 buildable acres in partially-vacant lots. This includes 97 buildable acres of commercial land and 324 buildable acres of industrial land. By 2021, the forecast assumes there will have been demand for 31 gross acres of employment land: 11 gross acres of industrial land and 20 gross acres of commercial land. That leaves a 2021 supply of 390 buildable acres of employment land: 313 buildable acres of industrial land and 77 buildable acres of commercial land

- **Commercial.** Of the 97 buildable acres of commercial land, about 63 acres are in vacant lots, and 33 acres are in partially-vacant lots. About 27 acres (approximately 30% of the buildable commercial land) is on the Evergreen property, which is subject to a Planned Development that limits uses to tourism-related uses consistent with the master plan. There are only about two dozen tax lots with buildable commercial acreage, and only some of these contiguous. There are about a half dozen sites or contiguous properties that have buildable acreage over five acres, accounting for about 72% of the buildable acres.
- **Industrial.** Of the 324 buildable acres of industrial land, about 307 acres are in vacant lots, and 17 acres are in partially-vacant lots. About 55% of the supply (177 acres) is in two tax lots over 50 acres, about 88 and 90 acres. One site is just under 50 buildable acres (15% of the supply), and the remaining sites are below 15 buildable acres.

Sufficiency

Exhibit 4 shows the capacity of unconstrained vacant land and the demand for employment land over the 5-, 10-, 20-, and 46-year planning periods, as well as the pre-2021 period.

Exhibit 4. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2019-2021, 2021-2026, 2021-2031, 2021-2041, and 2021-2067

Land Use Type	2019-2021			5-year (2021-2026)			10-year (2021-2031)			20-year (2021-2041)			46-year (2021-2067)		
	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)
Industrial	324	11	313	313	38	275	313	77	237	313	384	(70)	313	384	(70)
Commercial	97	20	77	77	63	14	77	126	(49)	77	357	(280)	77	570	(494)

Source: ECONorthwest.

How much land will be required for public or institutional uses?

Land needed for public or institutional use in McMinnville is shown in Exhibit 5. These needs are not addressed in the HNA or EOA documents, but will be included in the Urbanization Study report. (Appendix E. Public and Institutional Land Need provides the detailed results for public and institutional uses.) McMinnville will need an additional 473 acres in the 2021 to 2041 period and 780 acres in the 2021-2067 period.

Exhibit 5. Estimated demand (in acres) for public and institutional land, McMinnville UGB, 2021-2041 and 2021-2067

Organization	Additional Land Need	
	20-year (2021-2041)	46-year (2021-2067)
City of McMinnville		
Non-Parks	7	11
Parks	392	606
McMinnville Water & Light	21	21
Chemeketa Community College	0	0
Linfield College	0	0
McMinnville School Dist.	10	40
Yamhill County (non-Fairgrounds)	8	19
State of Oregon	1	2
Federal Government	2	4
Churches	32	77
Other Institutional	0	0
Total	473	780

Source: ECONorthwest

1. Introduction

This report presents an update to the 2013 Economic Opportunities Analysis (EOA) for the City of McMinnville. The purpose of an EOA is to develop information as a basis for policies that capitalize on McMinnville's opportunities and help address the City's challenges. In 2019, the City adopted the *MAC-Town 2032 Economic Development Strategic Plan*. This EOA Update is intended to:

- Provide the analysis and land use foundation necessary to achieve the City's economic development strategy.
- Identify policy issues that will need to be reflected in the Comprehensive Plan to achieve the economic development strategy.
- Update the trend data and forecasting, the buildable land inventory, and employment land needs to a common planning period with the City's housing needs analysis and other land needs. This update is part of an urbanization report to inform the strategy and identify land needs for a 20-year planning period to determine sufficiency of buildable lands and land use policies to meet identified needs consistent with the City's vision. Additional long-term and short-term planning periods are also analyzed consistent with planning for Urban Reserves and to ensure adequate short-term supply of needed sites.

This version of the EOA is intended to provide an update to the previous 2013 EOA, and thus retains portions of the content and narrative throughout. Where necessary, this update uses updated data on employment trends and commercial and industrial land needs, as well as refined approaches to methods for forecasting employment growth. The competitive advantages (i.e., advantages and disadvantages) for economic development in McMinnville did not change substantially since evaluation of these factors in the 2013 EOA or the *MAC-Town 2032 Economic Development Strategic Plan* adopted in 2019. This 2020 EOA updates the information included in the 2013 EOA to include the new information on competitive advantages and the target industries identified in the Strategic Plan, with consideration for any outdated information.

Contents, Format, and Guiding Requirements

The EOA includes technical analysis to address a range of questions that McMinnville faces in managing its commercial and industrial land. For example, the EOA includes an employment forecast that describes how much growth McMinnville should plan for over the planning period and identifies the amount and type of employment land necessary to accommodate growth in McMinnville over that period. The EOA also includes an inventory of commercial and industrial land within McMinnville's urban growth boundary (UGB) to provide information about the amount of land available to accommodate employment growth.

This EOA complies with the requirements of statewide planning Goal 9, the Goal 9 administrative rules (OAR 660 Division 9), and the court decisions that have interpreted them. Goal 9 requires cities to identify the characteristics of sites needed to accommodate industrial and other employment uses (OAR 660-009-0025(1)) over the 2021-2041 20-year planning period. This approach could be characterized as a *site-based* approach that projects land need based on the forecast for employment growth, the City's economic development objectives, and the specific needs of target industries. This updated analysis is more comprehensive than the State requires, as it looks at the employment needs for a 5-, 10-, and 46-year period, in addition to the 20-year period. The shorter-term analyses are intended to identify immediate employment land needs and strategies given current land-need deficiencies, and the 46-year analysis can provide a basis for the establishment of urban reserve areas (URAs).

Background

The City adopted an updated EOA in 2013. It provided the following history of work prior to the 2013 EOA update:

McMinnville's Comprehensive Plan, as adopted in 1981, consists of three interrelated volumes:

- Volume I – covering background information for the plan process
- Volume II – listing adopted goals and policies
- Volume III – consisting of implementation ordinances and measures including the comprehensive plan and zoning maps, annexation, zoning and land division ordinances, and planned development overlays on areas of special significance

In 2001, the City of McMinnville completed an Economic Opportunities Analysis (EOA) aimed to “inventory all non-residential lands and conduct an analysis of its future commercial and industrial land needs, consistent with the requirements of current Statewide Planning Goals, laws, and administrative rules.” The EOA identified a potential surplus of industrial land and a deficit of commercial land over what was then a 20-year forecast horizon of 2000-2020. The EOA was approved by the City Council in February 2002 and subsequently acknowledged by the State Land Conservation and Development Commission (LCDC).

In 2003, a McMinnville Growth Management and Urbanization Plan (MGMUP) was adopted as an element of the Comprehensive Plan. This document provided guiding principles and a development concept for future growth, including a proposed expansion of McMinnville's Urban Growth Boundary (UGB).

In conjunction with this process, the City also updated the work of the 2001 EOA with respect to a revised Population and Employment Justification and a Revised Buildable Land Analysis, to bring these analyses current to the January 1, 2003 starting benchmark of the UGB review process. In effect, the 20-year planning horizon was shifted from 2000-2020 by three years to 2003-2023. In addition, the buildable lands analysis was updated to reflect changes that occurred between 2001 and 2003, and land need projections were adjusted accordingly.

The MGMUP documented the need for UGB expansion approaching 1,125 buildable acres (to meet needs for 2003-2023), with more than 90% of the need accounted by proposed expansion of land for residential, parks and related public uses. The remaining 9% represented land documented as needed for commercial development. The MGMUP was approved by LCDC, but then appealed by private parties to the Oregon Court of Appeals for issues related to prioritization of the types of agricultural land that can be added to the UGB. The Court eventually reversed and remanded LCDC's approval; LCDC subsequently reversed and remanded their action to the City of McMinnville.

2013 EOA Update

The City of McMinnville last conducted a Goal 9-compliant analysis and evaluation of economic trends in the 2013 EOA update, which was based on 2010 Census and other employment data. The 2019 Economic Development Strategic Plan also included a Demographic and Economic profile of McMinnville.

The 2013 EOA acknowledged that due to the prior Court of Appeals decision, "a previously determined 106-acre deficiency of commercial land for McMinnville's 20-year need has not been fully remedied. While the City of McMinnville is not pursuing any proposal to increase its UGB at this time, the need to address the potential imbalance of commercial and industrial land requirements has become more apparent due to the effects of a changing global, regional and local economy..."

The 2013 EOA stated, "As noted, while always an option for potential consideration, this EOA update assumes that McMinnville's UGB will not be expanded during the updated 20-year forecast period for purposes of providing non-residential (or employment) land need; rather, any needs for added forecast employment growth are anticipated to be accommodated through efficiency or other measures as available to avoid UGB expansion." The 2013 EOA found a 36-acre shortfall of commercial land for the 2013-2033 planning period, and a surplus of industrial land. This resulted in findings that led to subsequent rezoning of some of the surplus industrially-zoned acreage to commercially-zoned acreage in response to identified commercial land deficits.

Planning Area Definition

The EOA provides the data and analysis necessary to evaluate the sufficiency of McMinnville's UGB to meet needs for the identified planning period. As such, it includes an evaluation of the buildable lands within McMinnville's current UGB (as illustrated by the Comprehensive Plan map on the following page). This EOA also provides discussion of the Yamhill County, regional, statewide and national context within which local economic development opportunities are appropriately framed. The report provides information that will be needed to address UGB and Urban Reserve needs for any deficit of lands that isn't met within the current UGB. It also provides information about site needs and characteristics that will assist with UGB an Urban Reserve alternatives analysis. The analysis area for alternatives analysis is articulated in state law and will be addressed in a separate step in this review.

Community Economic Development Objectives

Current community objectives for economic development can be found as part of the following City documents:

MAC-Town 2032 Strategic Plan (adopted 2019)

In 2019, McMinnville adopted the *MAC-Town 2032 Strategic Plan*, which includes new vision, mission, and values statements. It also includes goals for seven strategic priorities, and for each goal, there are identified objectives and priority actions. Additional actions are also identified.

Vision, Mission, Values

Vision

A collaborative and caring city inspiring an exceptional quality of life.

Mission

The City of McMinnville delivers high-quality services in collaboration with partners for a prosperous, safe, and livable community.

Values

- **Stewardship.** We are responsible caretakers of our shared public assets and resources. We do this to preserve the strong sense of community pride which is a McMinnville trademark.
- **Equity.** We are a compassionate and welcoming community for all – different points of view will be respected. Because not all members of our community are equally able to access our services or participate in public process, we commit ourselves to lowering these barriers.
- **Courage.** We are future-oriented, proactively embracing and planning for change that is good for our community and consistent with our values.
- **Accountability.** We believe healthy civil discourse is fostered through responsive service and clear, accurate, useful information.

Strategic Priorities. To move McMinnville toward its vision, the City believes it will need to make disproportionate investment in time and resources in these areas.

One of these strategic priorities is Economic Prosperity, with the following goal and objectives. Each objective also has associated priority actions.

- Goal: Provide economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors.
- Objectives:
 - Accelerate growth in living wage jobs across a balanced array of industry sectors

- Improve systems for economic mobility and inclusion
- Foster opportunity in technology and entrepreneurship
- Be a leader in hospitality and place-based tourism
- Locate higher job density activities in McMinnville
- Encourage connections to the local food system and cultivate a community of exceptional restaurants

MAC-Town 2032 Economic Development Strategic Plan (adopted 2019)

In 2019, McMinnville adopted the *MAC-Town 2032 Economic Development Strategic Plan*, which updated the City's mission and goals related to economic development, as a supplement to the goals and policies in the Strategic Plan and Comprehensive Plan. The mission in the Plan states:

“McMinnville provides economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors, from steel manufacturing to technology. Economic growth is collaborative, and inclusive of individuals from diverse backgrounds. Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville's high quality of life. Our strong downtown serves residents and visitors alike, featuring unique shops and world-class restaurants that offer locally-produced food products and globally-renowned wine. As we evolve, we prize our small-town roots and we maintain McMinnville's character.”

The “foundational goals and strategies” defined in the plan are:

1. Accelerate growth in living-wage jobs across a balanced array of industry sectors
2. Improve systems for economic mobility and inclusion
3. Maintain and enhance our high quality of life

The “target sector goals and strategies” defined in the plan are:

4. Sustain and innovate within traditional industry and advanced manufacturing
5. Foster opportunity in technology and entrepreneurship
6. Be a leader in hospitality and place-based tourism
7. Align and cultivate opportunities in craft beverages and food systems
8. Proactively assist growth in education, medicine, and other sciences

Economic Opportunities Analysis (2013)

McMinnville last completed an EOA in 2013, as an update to the 2001/2003 EOA process. Section 6 of the EOA provided discussion and findings for each relevant goal in the Comprehensive Plan for community economic development objectives. Chapter 6 provides updated discussion of these Goals. The 2013 EOA also recommended updates to the list of cluster target industries to include Advanced Manufacturing and Healthcare/Traded Sector Services. A full discussion of these sectors is included in Chapter 4 of this EOA.

Comprehensive Plan (Adopted 1981, and subsequently amended).

McMinnville's Comprehensive Plan consists of three interrelated volumes.

- Volume I – covering background information for the plan process
- Volume II – listing adopted goals and policies
- Volume III – consisting of implementation ordinances and measures including the comprehensive plan and zoning maps, annexation, zoning and land division ordinances, and planned development overlays on areas of special significance

A more detailed statement of economic development goals is embodied by the Comprehensive Plan (Volume II Goals and Policies), Chapter IV – Economy of McMinnville (as amended)

General:

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Commercial Development:

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future neighborhood and community serving commercial lands and discouraging strip development.

Goal IV 4: To promote the downtown as a cultural, administrative service, and retail center of McMinnville.

Industrial Development:

Goal IV 5: To continue the growth and diversification of McMinnville's industrial base through the provision of an adequate amount of properly designated lands.

Goal IV 6: To insure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

Each goal has associated policies and proposals. The Comprehensive Plan includes a series of general, locational and design policies as “more precise and limited statements intended to further define the goals.” Also included as part of the Economic Development element of the existing adopted plan are three proposals as “possible courses of action” to further implement the goals and policies.

The 2020 EOA draws on information from numerous data sources, such as the Oregon Employment Department, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, and the U.S. Census. In addition to retaining all relevant information from the 2013 EOA, the EOA update also uses information from the Three Mile Lane market analysis, completed in March 2019.

Statewide Planning Guidance

The content of this report is designed to meet the requirements of Oregon Statewide Planning Goal 9 and the administrative rule that implements Goal 9 (OAR 660-009). The analysis in this report is designed to conform to the requirements for an Economic Opportunities Analysis in OAR 660-009 as amended.

1. *Economic Opportunities Analysis (OAR 660-009-0015)*. The Economic Opportunities Analysis (EOA) requires communities to identify the major categories of industrial or other employment uses that could reasonably be expected to locate or expand in the planning area based on information about national, state, regional, county or local trends; identify the number of sites by type reasonably expected to be needed to accommodate projected employment growth based on the site characteristics typical of expected uses; include an inventory of vacant and developed lands within the planning area designated for industrial or other employment use; and estimate the types and amounts of industrial and other employment uses likely to occur in the planning area. Local governments are also encouraged to assess community economic development potential through a visioning or some other public input-based process in conjunction with state agencies.
2. *Industrial and commercial development policies (OAR 660-009-0020)*. Cities are required to develop commercial and industrial development policies based on the EOA. Local comprehensive plans must state the overall objectives for economic development in the planning area and identify categories or particular types of industrial and other employment uses desired by the community. Local comprehensive plans must also include policies that commit the city or county to designate an adequate number of employment sites of suitable sizes, types and locations. The plan must also include policies to provide necessary public facilities and transportation facilities for the planning area.

3. *Designation of lands for industrial and commercial uses (OAR 660-009-0025).* Cities and counties must adopt measures to implement policies adopted pursuant to OAR 660-009-0020. Appropriate implementation measures include amendments to plan and zone map designations, land use regulations, public facility plans, and transportation system plans. More specifically, plans must identify the approximate number, acreage and characteristics of sites needed to accommodate industrial and other employment uses to implement plan policies, and must designate serviceable land suitable to meet identified site needs.

Public Process

At the broadest level, the purpose of the project was to understand how McMinnville's employment has changed since the completion of the 2013 EOA, as well as update the city's employment land needs to align with planning periods used in the 2019 HNA. In 2019, the city adopted an economic development strategy that provided a framework for policies and implementation actions for economic development. The update to the EOA requires a broad range of assumptions that influence the outcomes. Public engagement during the project was accomplished through facilitation of a Project Advisory Committee as described below.¹

Project Advisory Committee Meetings

The City of McMinnville and ECONorthwest solicited public input from an ad-hoc Project Advisory Committee. The Project Advisory Committee met 5 times² to discuss project assumptions, results, and implications. The project relied on the Project Advisory Committee to:

- Review work products, advise on public involvement, and consider public input when making recommendations.
- Advise the project team on matters regarding employment needs and the buildable lands inventory in McMinnville.
- Work collaboratively with, and provide guidance to, the staff and consultant project team in the preparation for the McMinnville Economic Opportunities Analysis.

A public lands work group was also established to review and make recommendation regarding unique land needs associated with employment and land uses for public and institutional organizations.

¹ In addition to Project Advisory Committee meetings, the City of McMinnville also maintained a project website and social media presence.

² Project Advisory Committee meeting dates: July 10, 2019; September 5, 2019; October 10, 2019; November 13, 2019; and January 21, 2020.

Organization of this Report

This report is organized as follows:³

- **Chapter 2. The McMinnville Economy** – as a review of pertinent population, demographic and economic trends for McMinnville in the context of what is occurring throughout Yamhill County, a larger economic region, statewide and nationally.
- **Chapter 3. National, State & Regional Outlook** – covering recent economic experience and forecasts external to the community that could influence employment uses reasonably expected to locate or expand in the McMinnville UGB over the 5-, 10-, 20-, and 46-year planning horizons of this EOA.
- **Chapter 4. Economic Development Potential** – focused on factors that currently and prospectively affect economic development in McMinnville.
- **Chapter 5. Forecast Employment & Land Needs** – detailing an updated UGB employment forecast together with industrial/commercial buildable lands inventory and determination of long- and short- term needs, parcel size evaluation, site characteristics, and commercial/industrial policy options necessary to provide the land use foundation for the City’s economic development strategy.

This report also includes two appendices:

- **Appendix A, Buildable Lands Inventory Methodology**
- **Appendix B, Employment on Other Land and Employment Density**
- **Appendix C, Other Site Needs**
- **Appendix D, Site Need Letters**
- **Appendix E, Public and Institutional Land Need**

³ The organization of the report is intended to align as closely as possible to the 2013 EOA. Some subsections may differ due to changes in methodology or alternative data sources.

2. The McMinnville Economy

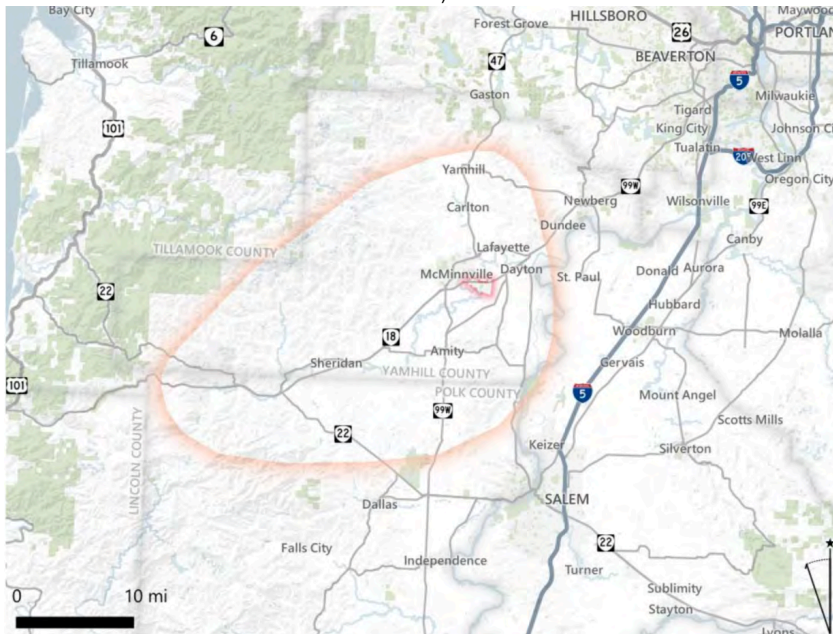
This chapter describes the factors affecting economic growth in McMinnville within the context of national and regional economic trends. The analysis presents the City's competitive advantages for growing and attracting businesses, which forms the basis for identifying potential growth industries in McMinnville.

McMinnville exists within the context of the county, market area, region, state, national, and international context and economies. OAR 660-009-0015 (1) requires a review of national, state, regional, county and local trends.

Regions are defined differently for different purposes. McMinnville exists as part of the economy of the following regions. Also included, as available, are pertinent comparable data for Yamhill County, the state of Oregon and United States.

- 10-County Economic Region. (used for 2013 EOA)
- 7-County Portland MSA (US Census Bureau-defined economically integrated region)
- 6-County North Valley Region (used in 2001/03 EOA, which also used "Willamette valley with three additional counties for some indicators)
- 4-County Mid-Valley Region (defined by the Oregon Employment Department and used in their reporting): Linn, Marion, Polk, Yamhill
- Market Area (relates predominantly to retail trade) (Exhibit 6). Market area will vary depending on the type of attractor. Larger regional shopping may have a larger market areas while neighborhood retail will have a smaller market area).

Exhibit 6. McMinnville Market Area, 2019



Source: McMinnville Three Mile Lane Area Plan: Market Analysis; TIGER, Leland Consulting Group.

Employment Trends in McMinnville and Yamhill County

The economy of the nation changed substantially between 1980 and 2018. These changes affected the composition of Oregon’s economy, including McMinnville’s economy. At the national level, the most striking change was the shift from manufacturing employment to service-sector employment. The most important shift in Oregon during this period has been the shift from a timber-based economy to a more diverse economy, with the greatest employment in services. This section focuses on changes in the economy in Yamhill County since 2001 and in McMinnville since 2007.

Exhibit 7 shows covered employment⁴ in Yamhill County for 2001 and 2018. Employment increased by 8,202 jobs, or 29%, over this period, which included the Great Recession and subsequent recovery. The sectors with the largest increases in numbers of employees were Arts, entertainment, and recreation; Healthcare and social assistance; Other services; Accommodation and food services; and Professional and business services.

The average wage for employment in Yamhill County in 2018 was about \$42,321. Employment in higher wage industries, such as Information and Transportation, Warehousing, and Utilities, decreased by 204 jobs over the 2001 to 2018 time period.

Exhibit 7. Covered Employment by Industry, Yamhill County, 2001-2018

Sector	2001	2018	Change 2001 to 2018		
			Difference	Percent	AAGR
Natural Resources and Mining	2,824	3,668	844	30%	1.6%
Construction	1,492	1,977	485	33%	1.7%
Manufacturing	5,584	6,901	1,317	24%	1.3%
Wholesale trade	560	629	69	12%	0.7%
Retail trade	3,157	3,728	571	18%	1.0%
Transportation, Warehousing, and Utilities	645	468	-177	-27%	-1.9%
Information	269	242	-27	-10%	-0.6%
Financial Activities	972	1,007	35	4%	0.2%
Professional and Business Services	1,371	1,936	565	41%	2.1%
Educational Services	1,166	1,512	346	30%	1.5%
Health care and social assistance	2,792	4,881	2,089	75%	3.3%
Arts, entertainment, and recreation	172	350	178	103%	4.3%
Accommodation and food services	2,145	3,441	1,296	60%	2.8%
Other Services	852	1,378	526	62%	2.9%
Unclassified	19	10	-9	-47%	-3.7%
Government	4,090	4,184	94	2%	0.1%
Total	28,110	36,312	8,202	29%	1.5%

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2001-2018.

Exhibit 8 shows covered employment and average wage for the 10 largest employment industries in Yamhill County in 2018. Jobs in manufacturing account for about 19% of the

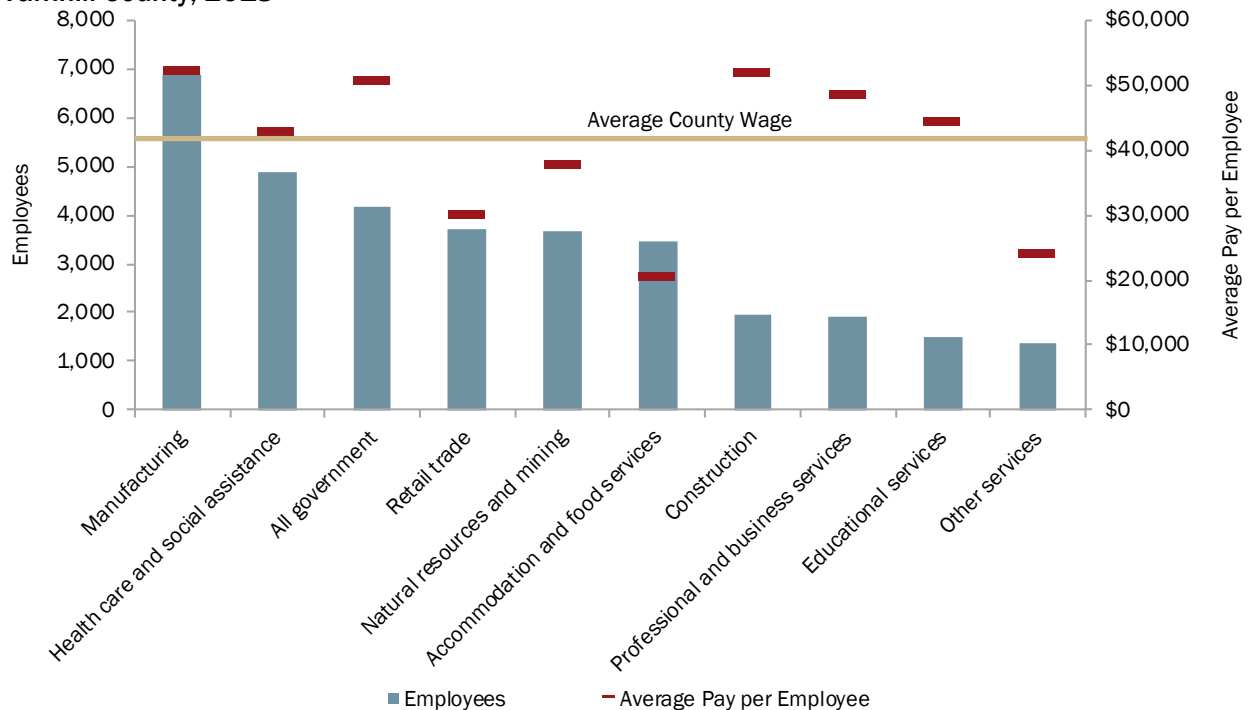
⁴ **Covered** employment includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as “1099 employees”), or some railroad workers. Covered employment data is from the Oregon Employment Department.

county’s covered employment and these jobs pay approximately 24% more than the county average wage (\$52,303 compared to \$42,321). Healthcare and social assistance jobs are the next largest employment sector, making up about 13% of Yamhill County’s covered employment. Wages in this industry are closer to the county average, paying employees an average of \$42,952. Government jobs account for 12% of the county’s covered employment. These jobs pay roughly 20% more than the county average (\$50,765 compared to \$42,321).

Though not shown in Exhibit 8 due to relatively low employment levels, wholesale trade, on average, pays employees \$62,411, 47% above the county average wage. This sector only makes up about 2% of Yamhill County’s total covered employment, though it pays the highest wages.

Additionally, jobs in construction (\$51,947), professional and business services (\$48,497), and educational services (\$44,398), pay more per year than the county average. However, these three sectors make up a smaller employment base than Retail trade, Natural resources and mining, and Accommodation and food services, which pay below the average county wage.

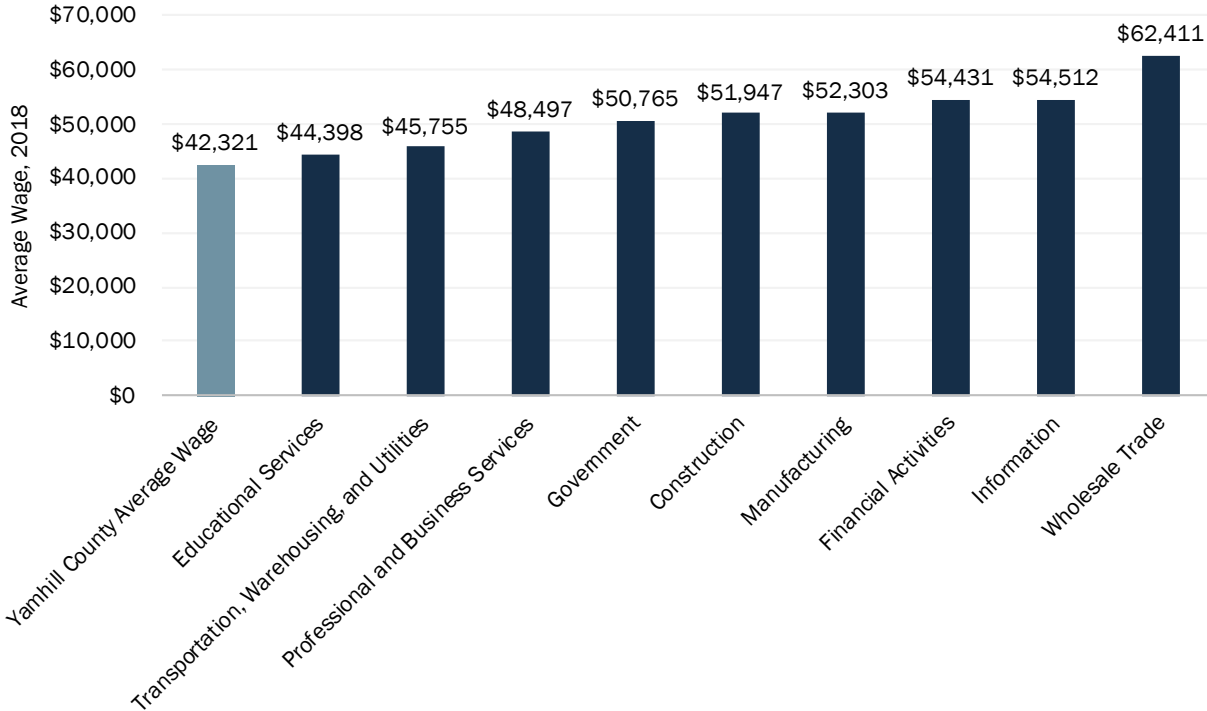
Exhibit 8. Covered Employment and Average Pay by Sector, 10 Largest Employment Sectors Yamhill County, 2018



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2018.

Exhibit 9 shows the sectors in Yamhill County that pay an annual average wage above the countywide average wage. Some of these sectors, such as wholesale trade and construction, are shown in Exhibit 8; however, other higher paying sectors include information (\$54,512), financial activities (\$54,431), and manufacturing (\$52,303).

Exhibit 9. Highest Paying Sectors in Yamhill County, 2018



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2018.

Between 2007 and 2017, employment in McMinnville increased by about 1,123 employees (8%) at an annual average growth rate of 0.8%. Employment in Accommodation and food services and Retail trade increased by 372 employees and 309 employees respectively, while employment in Transportation and warehousing and Utilities decreased by about 229 (Exhibit 10).

Exhibit 10. Change in Covered Employment, McMinnville UGB, 2007-2017

Sector	Employment		Change in		AAGR
	2007	2017	Employment	Percent	
Agriculture, Forestry, and Mining	244	356	112	46%	3.8%
Construction	634	585	(49)	-8%	-0.8%
Manufacturing	2,300	2,277	(23)	-1%	-0.1%
Wholesale Trade	264	127	(137)	-52%	-7.1%
Retail Trade	1,861	2,170	309	17%	1.5%
Transportation and Warehousing and Utilities	369	140	(229)	-62%	-9.2%
Information	136	127	(9)	-7%	-0.7%
Finance and Insurance	511	459	(52)	-10%	-1.1%
Real Estate and Rental and Leasing	138	113	(25)	-18%	-2.0%
Professional and Technical Services	265	367	102	38%	3.3%
Management of Companies	221	117	(104)	-47%	-6.2%
Admin. and Support/Waste Mgmt/Remediation Serv.	494	584	90	18%	1.7%
Health Care and Social Assistance; Private Education Serv.	2,564	3,159	595	23%	2.1%
Arts, Entertainment, and Recreation	134	168	34	25%	2.3%
Accommodation and Food Services	1,131	1,503	372	33%	2.9%
Other Services	417	630	213	51%	4.2%
Government	2,158	2,082	(76)	-4%	-0.4%
Total	13,841	14,964	1,123	8%	0.8%

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2007 and 2017.

Exhibit 11 shows a summary of covered employment data for the McMinnville UGB in 2017. The sectors with the greatest number of employees were Health care and social assistance and Private education (21%); Manufacturing (15%); and Retail trade (15%). Exhibit 12 shows employment in McMinnville in 2017 for detailed industries in the manufacturing sector. Employment in Food manufacturing and Beverage and tobacco product manufacturing accounted for about one quarter of McMinnville's manufacturing employment overall.

Exhibit 11. Covered Employment and Average Pay by Sector, McMinnville UGB, 2017

Sector	Establishments	Employees	Payroll	Average pay per employee
Agriculture, Forestry, and Mining	24	356	\$ 11,188,173	\$ 31,427
Construction	104	585	\$ 27,931,863	\$ 47,747
Manufacturing	71	2,277	\$ 113,267,986	\$ 49,744
Wholesale Trade	41	127	\$ 7,778,100	\$ 61,245
Retail Trade	141	2,170	\$ 62,991,136	\$ 29,028
Transportation and Warehousing and Utilities	20	140	\$ 4,582,386	\$ 32,731
Information	19	127	\$ 5,010,927	\$ 39,456
Finance and Insurance	51	459	\$ 29,183,634	\$ 63,581
Real Estate and Rental and Leasing	38	113	\$ 3,815,372	\$ 33,764
Professional and Technical Services	100	367	\$ 21,852,471	\$ 59,544
Management of Companies	9	117	\$ 7,033,600	\$ 60,116
Admin. and Support/Waste Mgmt/Remediation Serv.	49	584	\$ 14,681,454	\$ 25,139
Health Care and Social Assistance; Private Education	173	3,159	\$ 144,631,456	\$ 45,784
Arts, Entertainment, and Recreation	9	168	\$ 3,128,546	\$ 18,622
Accommodation and Food Services	99	1,503	\$ 27,941,666	\$ 18,591
Other Services	218	630	\$ 13,857,430	\$ 21,996
Government	42	2,082	\$ 101,259,952	\$ 48,636
Total	1,208	14,964	\$ 600,136,152	\$ 40,105

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 12. Covered Employment in Manufacturing Industries, McMinnville UGB, 2017

Sector	Establishments	Employees
Food Manufacturing	14	448
Beverage and Tobacco Product Manufacturing	18	134
Wood, Plastic, and Chemical Product Manufacturing	18	536
Metal, Electronic, and Other Product Manufacturing	21	1,159
Total	71	2,277

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

The average size for a private business in McMinnville is 12 employees per business, compared to the State average of 11 employees per private business. Businesses with 50 or fewer employees account for 55% of private employment and 10 or fewer account for 19% of private employment. Exhibit 13 shows the distribution of establishments by size class (i.e., number of employees). Over 75% of the private (i.e., non-government) establishments are businesses with fewer than 10 employees.

Exhibit 13. Covered Private Employment by Size Class, McMinnville UGB, 2017

Establishment size (number of employees)	Number of establishments
0 to 4	682
5 to 9	211
10 to 19	141
20 to 49	87
50 to 99	27
100+	18
Total	1,166

Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 14 shows the employment and average pay per employee for sectors in McMinnville. Average pay for all employees (\$40,105) is shown as a light brown line across the graph and average pay for individual sectors as short red lines. The figure shows that Health care, social assistance, and Private education; Manufacturing; Government; and Other industrial sectors had above average wages. The lowest wages were in Retail trade and Leisure activities, which includes arts, entertainment, and recreation and accommodation and food services.

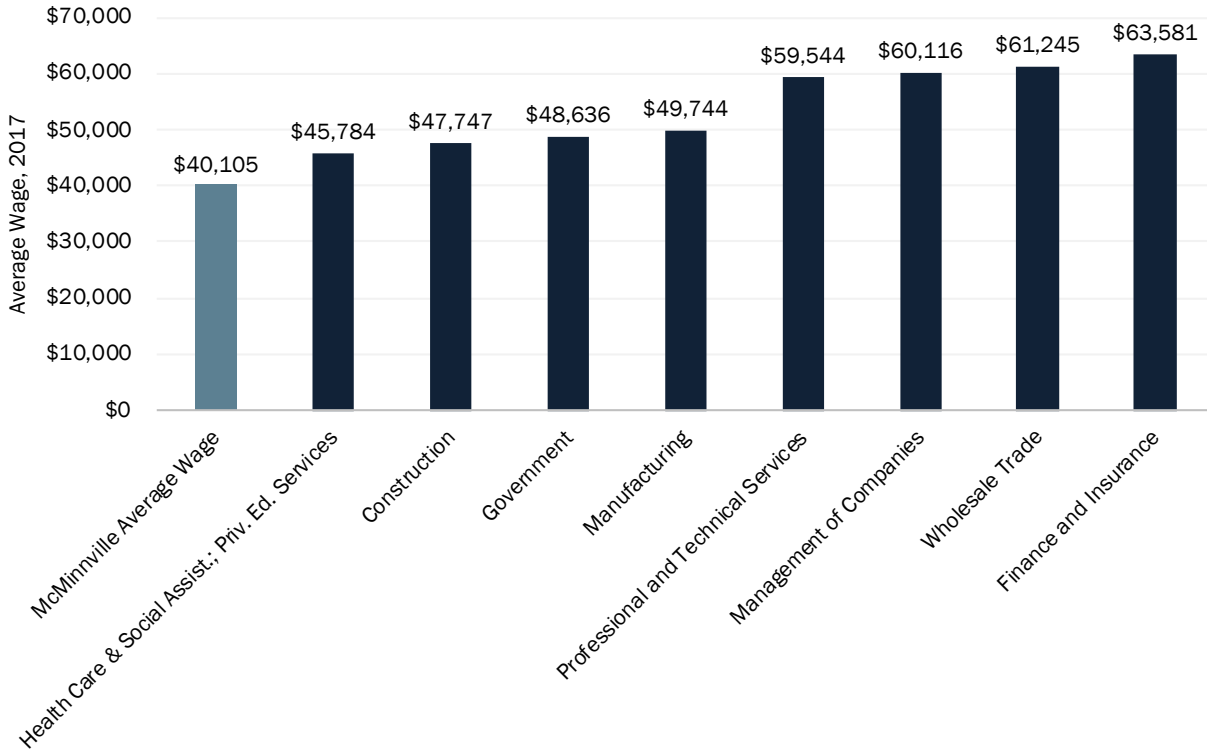
Exhibit 14. Covered Employment and Average Pay by Sector, McMinnville UGB, 2017



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Exhibit 15 shows the sectors with average annual wages that exceed the McMinnville City average. The three highest paying sectors, finance and insurance, wholesale trade, and management of companies, all paid over \$60,000 in 2017. Other higher paying sectors include professional and technical services, manufacturing, government, and construction.

Exhibit 15. Highest Paying Sectors Exceeding Average Wage in McMinnville UGB, 2017



Source: Oregon Employment Department, Quarterly Census of Employment and Wages, 2017.

Outlook for growth in Yamhill County

Exhibit 16 shows the Oregon Employment Department's forecast for employment growth by industry for the Mid-Valley Region (Linn, Marion, Polk, and Yamhill Counties) over the 2017 to 2027 period. Employment in the region is forecasted to grow at an average annual growth rate of 1.1%.

The sectors that will lead employment in the region for the 10-year period are: Private educational and health services (adding 8,100 jobs), Trade, transportation, and utilities (5,100), Government (3,500), Construction (3,000), Leisure and hospitality (3,000), and Manufacturing and Natural resources and mining (2,400 each). In sum, these sectors are expected to add 27,500 new jobs or about 88% of employment growth in the Mid-Valley Region. Yamhill County accounts for about 14% of employment in these four counties, and McMinnville accounts for about 42% of the County's employment.

Exhibit 16. Regional Employment Projections, 2017-2027, Mid-Valley Region (Linn, Marion, Polk, and Yamhill Counties)

Industry Sector	2017	2027	Change 2017 - 2027		
			Number	Percent	AAGR
Total private	208,800	236,400	27,600	13%	1.2%
Natural resources and mining	17,700	20,100	2,400	14%	1.3%
Mining and logging	1,200	1,300	100	8%	0.8%
Construction	14,700	17,700	3,000	20%	1.9%
Manufacturing	27,700	30,100	2,400	9%	0.8%
Durable goods	16,300	17,700	1,400	9%	0.8%
Nondurable goods	11,400	12,400	1,000	9%	0.8%
Trade, transportation, and utilities	42,500	47,600	5,100	12%	1.1%
Wholesale trade	6,200	6,900	700	11%	1.1%
Retail trade	27,800	30,200	2,400	9%	0.8%
Transportation, warehousing, and utilities	8,500	10,500	2,000	24%	2.1%
Information	1,800	1,900	100	6%	0.5%
Financial activities	9,200	9,700	500	5%	0.5%
Professional and business services	19,000	21,000	2,000	11%	1.0%
Private educational and health services	43,700	51,800	8,100	19%	1.7%
Health care and social assistance	35,300	42,500	7,200	20%	1.9%
Leisure and hospitality	22,400	25,400	3,000	13%	1.3%
Accommodation and food services	19,900	22,600	2,700	14%	1.3%
Other services and private households	10,100	11,100	1,000	10%	0.9%
Government	52,200	55,700	3,500	7%	0.7%
Federal government	2,100	2,100	0	0%	0.0%
State government	21,900	23,900	2,000	9%	0.9%
Local government	28,200	29,700	1,500	5%	0.5%
Local education	16,000	16,900	900	6%	0.5%
Total payroll employment	261,000	292,100	31,100	12%	1.1%

Source: Oregon Employment Department. Employment Projections by Industry 2017-2027.

3. National, State, and Regional Outlook

Consistent with Oregon Administrative Rules (OAR 660), McMinnville's Economic Opportunities Analysis is set within the context of broader nationwide, state, and regional trends. Recent trends and conditions at a national and state level are considered first, followed by detailed information at a regional and local level.

National Trends

Economic development in McMinnville over the next 20 years will occur in the context of long-run national trends. The most important of these trends include:

- **Economic growth will continue at a moderate pace.** Analysis from the Congressional Budget Office (CBO) estimates after the 3.1% real GDP growth in 2018, real GDP will grow by approximately 2.3% in 2019. After 2019, the CBO forecasts the annual average growth of real GDP to slow and stabilize around 1.7% across the 2020 to 2029 period. The primary reason they provide for this slowing growth is that they expect the labor force to grow at a slower rate than historical trends.⁵

The unemployment rate is forecasted to decrease to 3.5% in the second-half of 2019, which is the rate's lowest point since the 1960s. After this year, the CBO predicts the unemployment rate will rise between 2020 and 2023 due to slower growth in economic output.⁶

- **The aging of the Baby Boomer generation, accompanied by increases in life expectancy.** As the Baby Boomer generation continues to retire, the number of Social Security recipients is expected to increase from 62.5 million in 2018 to over 87.0 million in 2040, a 39% increase. However, due to lower-birth rate replacement generations, the number of covered workers is only expected to increase 12% over the same time period, from 176.0 million to 196.4 million in 2040. Currently, there are 35 Social Security beneficiaries per 100 covered workers in 2018 but by 2040 there will be 44 beneficiaries per 100 covered workers. This will increase the percent of the federal budget dedicated to Social Security and Medicare.⁷

Baby Boomers are expecting to work longer than previous generations. An increasing proportion of people in their early- to mid-50s expect to work full-time after age 65. In 2004, about 40% of these workers expect to work full-time after age 65, compared with

⁵ Congressional Budget Office. *The Budget and Economic Outlook: 2019 to 2029. January 2019*. Retrieved from: <https://www.cbo.gov/system/files/2019-03/54918-Outlook-3.pdf>.

⁶ *Ibid.*

⁷ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, *The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, April 25, 2019. Retrieved from: <https://www.ssa.gov/OACT/TR/2019/tr2019.pdf>.

about 30% in 1992.⁸ This trend can be seen in Oregon, where the share of workers 65 years and older grew from 2.9% of the workforce in 2000 to 4.1% of the workforce in 2010. In 2017, this share reached 5.5%. Over the same eighteen-year period, the share of workers 45 to 64 years increased from 35% of all employed Oregonians in 2000 to 37% in 2017.⁹

- **Need for replacement workers.** The need for workers to replace retiring Baby Boomers will outpace job growth. According to the Bureau of Labor Statistics, total employment in the United States will grow by about 11.5 million jobs over 2016 to 2026. Annually, they estimate there will be 18.7 million occupational openings over the same period. This exhibits the need for employees over the next decade as the quantity of openings per year is large relative to expected employment growth. About 71% of annual job openings are in occupations that do not require postsecondary education.¹⁰
- **The importance of education as a determinant of wages and household income.** According to the Bureau of Labor Statistics, a majority of the fastest growing occupations will require an academic degree, and on average, they will yield higher incomes than occupations that do not require an academic degree. The fastest-growing occupations requiring an academic degree will be registered nurses, software developers, general and operations managers, accountants and auditors, market research analysts and marketing specialists, and management analysts. Occupations that do not require an academic degree (e.g., retail sales person, food preparation workers, and home care aides) will grow, accounting for approximately 71% of all new jobs by 2026. These occupations typically have lower pay than occupations requiring an academic degree.¹¹

The national median income for people over the age of 25 in 2018 was about \$48,464. Workers without a high school diploma earned \$19,708 less than the median income, and workers with a high school diploma earned \$10,504 less than the median income. Workers with some college earned \$6,760 less than median income, and workers with a bachelor's degree earned \$13,832 more than median. Workers in Oregon experience the same patterns as the nation but pay is generally lower in Oregon than the national average.¹²

- **Increases in labor productivity.** Productivity, as measured by output per hour of labor input, increased in most sectors between 2000 and 2010, peaking in 2007. However, productivity increases were interrupted by the recession. After productivity decreases from 2007 to 2009, many industries saw large productivity increases from 2009 to 2010.

⁸ "The Health and Retirement Study," 2007, National Institute of Aging, National Institutes of Health, U.S. Department of Health and Human Services.

⁹ Analysis of 2000 Decennial Census data, 2010 U.S. Census American Community Survey, 1-Year Estimates, and 2017 U.S. Census American Community Survey, 1-Year Estimates, for the table Sex by Age by Employment Status for the Population 16 Years and Over.

¹⁰ "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

¹¹ "Occupational Employment Projections to 2016-2026," Bureau of Labor Statistics, 2018.

¹² Bureau of Labor Statistics, Employment Projections, March 2019. <http://www.bls.gov/emp/epchart001.htm>.

Industries with the fastest productivity growth were Information Technology-related industries. These include wireless telecommunications carriers, computer and peripheral equipment manufacturing, electronics and appliance stores, and commercial equipment manufacturing wholesalers.¹³

Since the end of the recession (2010), labor productivity has increased across a handful of large sectors but has also decreased in others. In wholesale trade, productivity—measured in output per hour—increased by 19% over 2009 to 2017. Retail trade gained even more productivity over this period at 25%. Food services, however, have remained stagnant since 2009, fluctuating over the nine-year period and shrinking by 0.01% over this time frame. Additionally, the Bureau of Labor Statistics reports multifactor productivity in manufacturing has been slowing down 0.3% per year over the 2004 to 2016 period. Much of this, they note, is due to slowdown in semiconductors, other electrical component manufacturing, and computer and peripheral equipment manufacturing.¹⁴

- **The importance of entrepreneurship and growth in small businesses.** According to the U.S. Small Business Office of Advocacy, small businesses are those that have fewer than 500 employees. However, the Oregon Office of Small Business Advocacy defines small businesses as those with fewer than 100 employees. For consistency in our small business data comparisons, we will maintain the definition of small businesses to be those with fewer than 100 employees.

The U.S. Census Bureau’s Statistics of U.S. Businesses (SUSB) shows in 2016 that about 98% of all firms in the United States had fewer than 100 employees. Their employees accounted for approximately 33% of American workers.¹⁵ The National League of Cities suggests ways that local governments can attract entrepreneurs and increase the number of small businesses including strong leadership from elected officials; better communication with entrepreneurs, especially about the regulatory environment for businesses in the community; and partnerships with colleges, universities, small business development centers, mentorship programs, community groups, businesses groups, and financial institutions.¹⁶

- **Increases in automation across sectors.** Automation is a long-running trend in employment, with increases in automation (and corresponding increases in productivity) over the last century and longer. The pace of automation is increasing, and the types of jobs likely to be automated over the next 20 years (or longer) is broadening.

¹³ Brill, Michael R. and Samuel T. Rowe, “Industry Labor Productivity Trends from 2000 to 2010.” Bureau of Labor Statistics, *Spotlight on Statistics*, March 2013.

¹⁴ Michael Brill, Brian Chanksy, and Jennifer Kim. “Multifactor productivity slowdown in U.S. manufacturing,” *Monthly Labor Review*, U.S. Bureau of Labor Statistics, July 2018. Retrieved from: <https://www.bls.gov/opub/mlr/2018/article/multifactor-productivity-slowdown-in-us-manufacturing.htm>.

¹⁵ U.S. Census Bureau, Statistics of U.S. Businesses. Data by Enterprise Employment Size, 2016. Retrieved from: <https://www.census.gov/data/tables/2016/econ/susb/2016-susb-annual.html>

¹⁶ National League of Cities “Supporting Entrepreneurs and Small Businesses” (2012). <https://www.nlc.org/supporting-entrepreneurs-and-small-business>.

Lower paying jobs are more likely to be automated, with potential for automation of more than 80% of jobs paying less than \$20 per hour over the next 20 years. About 30% of jobs paying \$20 to \$40 per hour and 4% of jobs paying \$40 or more are at risk of being automated over the next 20 years.¹⁷

Low- to middle-skilled jobs that require interpersonal interaction, flexibility, adaptability, and problem solving will likely persist into the future as will occupations in technologically lagging sectors (e.g. production of restaurant meals, cleaning services, hair care, security/protective services, and personal fitness).¹⁸ This includes occupations such as (1) recreational therapists, (2) first-line supervisors of mechanics, installers, and repairers, (3) emergency management directors, (4) mental health and substance abuse social workers, (5) audiologists, (6) occupational therapists, (7) orthotists and prosthetists, (8) healthcare social workers, (9) oral and maxillofacial surgeons, and (10) first-line supervisors of firefighting and prevention workers. Occupations in the service and agricultural or manufacturing industry are most at-risk of automation because of the manual-task nature of the work.^{19,20,21} This includes occupations such as (1) telemarketers, (2) title examiners, abstractors, and searchers, (3) hand sewers, (4) mathematical technicians, (5) insurance underwriters, (6) watch repairers, (7) cargo and freight agents, (8) tax preparers, (9) photographic process workers and processing machine operators, and (10) accounts clerks.²²

- **Transformation of retail.** Historical shift in retail businesses, starting in the early 1960s, was the movement from one-off, ‘mom and pop shops’ toward superstores and the clustering of retail into centers or hubs. Notably, we still see this trend persist; for example, in 1997, the 50 largest retail firms accounted for about 26% of retail sales and by 2007, they accounted for about 33%.²³ The more recent shift began in the late 1990s, where technological advances have provided consumers the option to buy goods through e-commerce channels. The trend toward e-commerce has become increasingly preferential to millennials and Generation X, who are easier to reach online and are more responsive to digital ads than older generations.²⁴ Since 2000, e-commerce sales

¹⁷ Executive Office of the President. (2016). Artificial Intelligence, Automation, and the Economy.

¹⁸ Autor, David H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *Journal of Economic Perspectives*, Volume 29, Number 3, Summer 2015, Pages 3–30.

¹⁹ Frey, Carl Benedikt and Osborne, Michael A. (2013). *The Future of Employment: How Susceptible Are Jobs to Computerisation?* Oxford Martin School, University of Oxford.

²⁰ Otekhile, Cathy-Austin and Zeleny, Milan. (2016). Self Service Technologies: A Cause of Unemployment. *International Journal of Entrepreneurial Knowledge*. Issue 1, Volume 4. DOI: 10.1515/ijek-2016-0005.

²¹ PwC. (n.d.). Will robots really steal our jobs? An international analysis of the potential long-term impact of automation.

²² Frey, Carl Benedikt and Osborne, Michael A. (2013). *The Future of Employment: How Susceptible Are Jobs to Computerisation?* Oxford Martin School, University of Oxford.

²³ Hortaçsu, Ali and Syverson, Chad. (2015). The Ongoing Evolution of US Retail: A Format Tug-of-War. *Journal of Economic Perspectives*, Volume 29, Number 4, Fall 2015, Pages 89-112.

²⁴ Pew Research Center (2010b). *Generations 2010*. Retrieved Online at: <http://www.pewinternet.org/Reports/2010/Generations-2010.aspx>

grew from 0.9% of total retail sales to 9.7% (2018). Over 2000 to 2018, e-commerce retail sales have grown at a rate 18% per year.²⁵ It is reasonable to expect this trend to continue. While it is unclear what impact e-commerce will have on employment and brick and mortar retail, it seems probable that e-commerce sales will continue to grow, shifting business away from some types of retail. Over the next decades, communities must begin considering how to redevelop and reuse retail buildings in shopping centers, along corridors, and in urban centers.

The types of retail and related services that remain will likely be sales of goods that people prefer to purchase in person or that are difficult to ship and return (e.g., large furniture), specialty goods, groceries and personal goods that maybe needed immediately, restaurants, and experiences (e.g., entertainment or social experiences). According to the Urban Land Institute, in the post-disruption era of retail, new trends in this sector are beginning to emerge. These changes include the convergence of technology and shopping, as businesses focus on brand awareness and customer engagement via digital channels in the physical retail space.²⁶

In addition to dynamics with e-commerce, other factors influencing changes in retail include the growth of big box stores, income inequality, and changing preferences. The New York Times reported that while Amazon had \$38 billion in sales between 2000 and 2013, Costco had about \$50 billion and Sam’s Club had about \$32 billion.²⁷ The other factors influencing traditional retail—income inequality and emphasis on services over goods—result in either less consumer spending overall or changes in preferences of consumers who increasingly spend more on services or experiences.

This shift in the retail industry is also described in the *Three-Mile Lane Area Plan: Market Analysis*, which documents proactive steps to adapt to the changing retail landscape by "commissioning studies of the marketplace and developing new strategies to maintain and foster better retail environments."²⁸ It specifically describes the difference between "experiential consumerism" and other types of retail that are more likely to directly compete with e-commerce. Examples of "experiential consumerism" include dining, grocery, health and fitness clubs, etc.²⁹ These types of retail are typically located on main streets and neighborhood or commercial centers.

- **The importance of high-quality natural resources.** The relationship between natural resources and local economies has changed as the economy has shifted away from resource extraction. High-quality natural resources continue to be important in some

²⁵ U.S. Census Bureau, Monthly Retail Trade, Latest Quarterly E-Commerce Report. Retrieved online at: <https://www.census.gov/retail/index.html#ecommerce>

²⁶ Diane Hoskins. "Three Trends Shaping Retail's Great Transformation." *Urban Land Institute*, September 3, 2019. Retrieved from: <https://urbanland.uli.org/economy-markets-trends/three-trends-shaping-retails-great-transformation/>

²⁷ Austan Goolsbee. "Never Mind the internet. Here's What's Killing Malls." *The New York Times*. February 14, 2020 <https://www.nytimes.com/2020/02/13/business/not-internet-really-killing-malls.html>

²⁸ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

²⁹ *Ibid.* pg 36.

states, especially in the Western U.S. Increases in the population and in households' incomes, plus changes in tastes and preferences have dramatically increased demands for outdoor recreation, scenic vistas, clean water, and other resource-related amenities. Such amenities contribute to a region's quality of life and play an important role in attracting both households and firms.³⁰

- **Continued increase in demand for energy.** Energy prices are forecasted to increase over the planning period. While energy use per capita is expected to decrease through 2050, total energy consumption will increase with rising population. Energy consumption is expected to grow primarily from industrial (0.7%) and, to a lesser extent, commercial users (0.2%). Residential and transportation consumption are forecasted to decrease (-0.2% for both). This decrease in energy consumption for transportation is primarily due to increased federal standards and increased technology for energy efficiency in vehicles. The unspecified sector, which is made up of consumption not attributed to residential, commercial, industrial, or transportation, is forecasted to increase consumption by 1.4% through 2050. Going forward through the projection period, potential changes in federal laws (such as decreases in car emissions) leave energy demand somewhat uncertain.

Energy consumption by type of fuel is expected to change over the planning period. By 2050, the U.S. will continue to shift from crude oil towards natural gas and renewables. For example, from 2018 to 2050, the Energy Information Administration projects that U.S. energy consumption of motor gasoline will average a 0.9% annual decrease, while consumption of renewable sources will grow at 1.6% per year and natural gases liquefied for exporting will grow 5.0% per year through 2050. With increases in energy efficiency, strong domestic production of energy, and relatively flat demand for energy by some industries, the U.S. will be able to be a net exporter of energy over the 2018 to 2050 period. Demand for electricity is expected to increase 0.2% per year annually over 2018 to 2050 as the population grows and economic activity increases.³¹

- **Impact of rising energy prices on commuting patterns.** As energy prices increase over the planning period, energy consumption for transportation will decrease. These increasing energy prices may decrease willingness to commute long distances, though with expected increases in fuel economy, it could be that people commute further while consuming less energy.³² Over 2018 to 2038, the U.S. Energy Information Administration estimates in its forecast that the decline in transportation energy consumption is a result

³⁰ For a more thorough discussion of relevant research, see, for example, Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press, and Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. "Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes." *Growth and Change* 36 (2): 273-297.

³¹ Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019. <https://www.eia.gov/outlooks/aeo/pdf/AEO2019.pdf>. Note, the cited growth rates are shown in the Executive Summary and can be viewed here: <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=1-AEO2019&cases=ref2019&sid=&sourcekey=0>.

³² Energy Information Administration, 2019, *Annual Energy Outlook 2019 with Projections to 2050*, U.S. Department of Energy, January 2019.

of increasing fuel economy offsetting the total growth in vehicle miles traveled (VMT). VMT for passenger vehicles is forecasted to increase through 2050.

- **Potential impacts of global climate change.** The consensus among the scientific community that global climate change is occurring expounds important ecological, social, and economic consequences over the next decades and beyond.³³ Extensive research shows that Oregon and other western states already have experienced noticeable changes in climate and predicts that more change will occur in the future.³⁴

In the Pacific Northwest, climate change is likely to (1) increase average annual temperatures, (2) increase the number and duration of heat waves, (3) increase the amount of precipitation falling as rain during the year, (4) increase the intensity of rainfall events, and 5) increase sea level. These changes are also likely to reduce winter snowpack and shift the timing of spring runoff earlier in the year.³⁵

These anticipated changes point toward some of the ways that climate change is likely to impact ecological systems and the goods and services they provide. There is considerable uncertainty about how long it would take for some of the impacts to materialize and the magnitude of the associated economic consequences. Assuming climate change proceeds as today's models predict, however, some of the potential economic impacts of climate change in the Pacific Northwest will likely include:³⁶

³³ Karl, T.R., J.M. Melillo, and T.C. Peterson, eds. 2009. *Global Climate Change Impacts in the United States*. U.S. Global Change Research Program. June. Retrieved June 16, 2009, from www.globalchange.gov/usimpacts; and Pachauri, R.K. and A. Reisinger, eds. 2007. *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

³⁴ Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Upper Willamette River Basin of Western Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009, from <http://climlead.uoregon.edu/pdfs/willamettereport3.11FINAL.pdf> and Doppelt, B., R. Hamilton, C. Deacon Williams, et al. 2009. *Preparing for Climate Change in the Rogue River Basin of Southwest Oregon*. Climate Leadership Initiative, Institute for a Sustainable Environment, University of Oregon. March. Retrieved June 16, 2009 from <http://climlead.uoregon.edu/pdfs/ROGUE%20WSFINAL.pdf>

³⁵ Mote, P., E. Salathe, V. Duliere, and E. Jump. 2008. *Scenarios of Future Climate for the Pacific Northwest*. Climate Impacts Group, University of Washington. March. Retrieved June 16, 2009, from <http://cse.washington.edu/db/pdf/moteetal2008scenarios628.pdf>; Littell, J.S., M. McGuire Elsner, L.C. Whitely Binder, and A.K. Snover (eds). 2009. "The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate - Executive Summary." *In The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate*, Climate Impacts Group, University of Washington. Retrieved June 16, 2009, from www.cse.washington.edu/db/pdf/wacciaexecsummary638.pdf; Madsen, T. and E. Figdor. 2007. *When it Rains, it Pours: Global Warming and the Rising Frequency of Extreme Precipitation in the United States*. Environment America Research & Policy Center and Frontier Group.; and Mote, P.W. 2006. "Climate-driven variability and trends in mountain snowpack in western North America." *Journal of Climate* 19(23): 6209-6220.

³⁶ The issue of global climate change is complex and there is a substantial amount of uncertainty about climate change. This discussion is not intended to describe all potential impacts of climate change but to present a few ways that climate change may impact the economy of cities in Oregon and the Pacific Northwest.

- *Potential impact on agriculture and forestry.* Climate change may impact Oregon’s agriculture through changes in growing season, temperature ranges, and water availability.³⁷ Climate change may impact Oregon’s forestry through an increase in wildfires, a decrease in the rate of tree growth, a change in the mix of tree species, and increases in disease and pests that damage trees.³⁸
- *Potential impact on tourism and recreation.* Impacts on tourism and recreation may range from (1) decreases in snow-based recreation if snow-pack in the Cascades decreases, (2) negative impacts to tourism along the Oregon Coast as a result of damage and beach erosion from rising sea levels,³⁹ (3) negative impacts on availability of water summer river recreation (e.g., river rafting or sports fishing) as a result of lower summer river flows, and (4) negative impacts on the availability of water for domestic and business uses.

Short-term national trends will also affect economic growth in the region, but these trends are difficult to predict. At times, these trends may run counter to the long-term trends described above. A recent example is the downturn in economic activity in 2008 and 2009 following declines in the housing market and the mortgage banking crisis. The result of the economic downturn was decreases in employment related to the housing market, such as construction and real estate. As these industries recover, they will continue to play a significant role in the national, state, and local economy over the long run. This report takes a long-run perspective on economic conditions (as the Goal 9 requirements intend) and does not attempt to predict the impacts of short-run national business cycles on employment or economic activity.

State Trends

Short-Term Trends

According to the Oregon Office of Economic Analysis (OEA), the Oregon economy “is on firmer ground today following a rocky start to the year...” They emphasize, however, that the economy continues to strike the “sweet spot” despite a rocky start to 2019.⁴⁰ The OEA also reports that although the Oregon economy has been slowing down over the last couple of years and is not outpacing the nation any longer, its “growth is strong enough to keep up with a growing population but also deliver economic and income gains to Oregonians.”⁴¹

³⁷ “The Economic Impacts of Climate Change in Oregon: A preliminary Assessment,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

³⁸ “Economic Impacts of Climate Change on Forest Resources in Oregon: A Preliminary Analysis,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, May 2007.

³⁹ “The Economic Impacts of Climate Change in Oregon: A preliminary Assessment,” Climate Leadership Initiative, Institute for Sustainable Environment, University of Oregon, October 2005.

⁴⁰ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 2. Retrieved from: <https://www.oregon.gov/das/OEA/Documents/forecast0519.pdf>.

⁴¹ *Ibid*, page 2.

Wages in Oregon continue to remain below the national average, but they continue to rise and remain strong, staying at their highest point relative to the state's mill closures in the 1980s.⁴² By the end of 2019, the OEA forecasts 39,800 jobs will be added to Oregon's economy. This is an approximate 2.1% annual growth in total nonfarm employment relative to 2018 levels.⁴³ The health services, professional and business services, leisure and hospitality, retail trade, and manufacturing industries are forecasted to account for well over half of the total job growth in Oregon for 2019. Oregon continues to have an advantage in job growth compared to other states, due to its industrial sector and in-migration flow of young workers in search of jobs.

The housing market continues to recover as Oregon's economy improves, though new supply is not keeping up with demand. As a result, prices continue to rise to considerable levels and the OEA reports housing "(in)affordability is becoming a larger risk" to Oregon's economic outlook.⁴⁴ Oregon is seeing an increase in household formation rates, which is good for the housing market as this will "help drive up demand for new houses."⁴⁵ Though younger Oregonians are tending to live at home with their parents longer, the aging Millennial generation (from their early 20s to mid-to-late 30s) and the state's increase in migration will drive demand for homes in the coming years. Housing starts in 2019 are on track to reach 20,600 units and in 2020, starts are expected to increase to 21,800. Beyond 2020, the OEA forecasts an average growth of 24,000 units per year to satisfy the demand for Oregon's growing population and to make up for the under development of housing post-recession.⁴⁶

The Oregon Index of Leading Indicators (OILI) continues to grow quite rapidly in 2019 despite a decrease in 2018. The leading indicators showing improvement are: air freight, consumer sentiment, and withholding. Indicators that are slowing down include: help wanted ads, housing permits, industrial production, initial claims, the manufacturing purchasing managers index (PMI), new incorporations, and the Oregon Dollar Index. The one indicator not improving at this point in time is semiconductor billings. Relative to their September 2018 forecast, many economic indicators in their May 2019 forecast have changed from *improving* to *slowing*, which further illustrates the slowing down of Oregon's economy after several years of extended growth.⁴⁷

Oregon's economic health is dependent on export markets. The value of Oregon exports in 2018 was \$22.3 billion, a 2% growth from 2017. In 2018, Oregon's exports made up approximately 9.4% of its total 2018 GDP.⁴⁸ The countries that Oregon exports the most to are China (21.4% of total Oregon exports), Canada (14.4%), Japan (9.8%), South Korea (7.6%), Malaysia (6.6%), and

⁴² *Ibid*, page 6.

⁴³ *Ibid*, page 36.

⁴⁴ *Ibid*, page 13.

⁴⁵ *Ibid*, page 12.

⁴⁶ *Ibid*, page 12.

⁴⁷ *Ibid*, page 9.

⁴⁸ U.S. Bureau of Economic Analysis. Gross Domestic Product (GDP) by State (Millions of current dollars). Retrieved from: <https://apps.bea.gov/iTable/indexregional.cfm>

Vietnam (5.0%).⁴⁹ With the escalating trade war occurring overseas, specifically with China, Oregon exports are left potentially vulnerable, as China is a top destination for Oregon exports.⁵⁰ The OEA notes that it is too soon to assess the disruptiveness of the trade war on global supply chains, however, developments will be tracked as it continues. An economic slowdown across many parts of Asia will have a spillover effect on the Oregon economy.

Long-term Trends

State, regional, and local trends will also affect economic development in McMinnville over the next 20 years. The most important of these trends includes: continued in-migration from other states, distribution of population and employment across the state, and change in the types of industries in Oregon.

- **Continued in-migration from other states.** Oregon will continue to experience in-migration (more people moving *to* Oregon than *from* Oregon) from other states, especially California and Washington. From 1990 to 2018, Oregon’s population increased by about 1.35 million, 69% of which was from people moving into Oregon (net migration). The average annual increase in population from net migration over the same time period was approximately 32,000 persons. During the early- to mid-1990’s, Oregon’s net migration was highest, reaching over 60,000 in 1991, with another relatively high peak of 57,100 persons in 2017. Oregon has not seen negative net migration since the early- to mid-1980’s.⁵¹
- **Forecast of job growth.** Total nonfarm employment is expected to increase from 1.95 million in 2019 to 2.04 million in 2022, an increase of 88,000 jobs. The industries with the largest growth are forecasted to be Government, Health Services, Professional and Business Services, Leisure and Hospitality, and Retail, accounting for 89% of employment growth.⁵²
- **Continued importance of manufacturing to Oregon’s economy.** Oregon’s exports totaled \$19.4 billion in 2008, nearly doubling since 2000, and reached \$22.3 billion in 2018. The majority of Oregon exports go to countries along the Pacific Rim, with China, Canada, Japan, South Korea, Malaysia, and Vietnam as top destinations. Oregon’s largest exports are tied to high tech and mining, as well as agricultural products.⁵³

⁴⁹ United States Census Bureau. State Exports from Oregon, 2015-2018. Retrieved from: <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

⁵⁰ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 2.

⁵¹ Portland State University Population Research Center. 2018 Annual Population Report Tables. April 2019. Retrieved from: <https://www.pdx.edu/prc/population-reports-estimates>.

⁵² Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 36.

⁵³ United States Census Bureau. State Exports from Oregon, 2015-2018. Retrieved from: <https://www.census.gov/foreign-trade/statistics/state/data/or.html>.

Manufacturing employment is concentrated in five counties in the Willamette Valley or Portland area: Washington, Multnomah, Lane, Clackamas, and Marion Counties.⁵⁴

- **Shift in manufacturing from natural resource-based to high-tech and other manufacturing industries.** Since 1970, Oregon started to transition away from reliance on traditional resource-extraction industries. A significant indicator of this transition is the shift within Oregon’s manufacturing sector, with a decline in the level of employment in the Lumber & Wood Products industry and concurrent growth of employment in other manufacturing industries, such as high-technology manufacturing (Industrial Machinery, Electronic Equipment, and Instruments), Transportation Equipment manufacturing, and Printing and Publishing.⁵⁵
- **Income.** Oregon’s income and wages are below that of a typical state. However, Oregon wages continue to grow and remain strong, and they are at their highest point relative to the mill closures resulting from the early 1980’s recession. In 2018, the average annual wage in Oregon was \$53,058, and in 2017, the median household income in Oregon was \$60,212 (compared to national average wages of \$57,265 in 2018, and national household income of \$60,336 in 2017).⁵⁶ Total personal income (all classes of income, minus Social Security contributions, adjusted for inflation) in Oregon is expected to increase by 22%, from \$219.5 billion in 2019 to \$267.6 billion in 2023.⁵⁷ Per capita income is expected to increase by 16% over the same time period, from \$51,700 (thousands of dollars) in 2019 to \$60,200 in 2023 (in nominal dollars).⁵⁸
- **Small businesses continue to account for a large share of employment in Oregon.** While small firms played a large part in Oregon’s expansion between 2003 and 2007, they also suffered disproportionately in the recession and its aftermath (64% of the net jobs lost between 2008 and 2010 was from small businesses).

In 2016, small businesses (those with 100 or fewer employees) accounted for 95% of privately-owned businesses in Oregon. Said differently, most businesses in Oregon are small (in fact, 76% of all businesses have fewer than 10 employees), but the largest share of Oregon’s employees work for medium-to-large businesses (those with 100 or more employees).⁵⁹

⁵⁴ Oregon Employment Department. *Employment and Wages by Industry (QCEW)*. 2018 Geographic Profile, Manufacturing (31-33). Retrieved from: qualityinfo.org.

⁵⁵ Although Oregon’s economy has diversified since the 1970’s, natural resource-based manufacturing accounts for about 37% of employment in manufacturing in Oregon in 2018, with the most employment in Food Manufacturing (29,900) and Wood Product Manufacturing (23,400) (QCEW).

⁵⁶ Average annual wages are for “Total, all industries,” which includes private and public employers. Oregon Quarterly Census of Employment and Wages, 2018. Retrieved from: <https://www.qualityinfo.org>; Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2017; Total, U.S. Census American Community Survey 1-Year Estimates, 2017, Table B19013.

⁵⁷ Office of Economic Analysis. Oregon Economic and Revenue Forecast, May 2019. Vol. XXXIX, No. 2, page 36.

⁵⁸ *Ibid*, page 36.

⁵⁹ U.S. Census Bureau, 2016 Statistics of U.S. Businesses, Annual Data, Enterprise Employment Size, U.S and States.

The average annualized payroll per employee for small businesses was \$37,958 in 2016, which is considerably less than that for large businesses (\$57,488) and the statewide average for all businesses (\$47,746).⁶⁰ Younger workers are important to continue growth of small businesses across the nation. More than one-third of Millennials (those born between 1980 - 1999) are self-employed, with approximately half to two-thirds interested in becoming an entrepreneur. Furthermore, in 2011, about 160,000 startup companies were created each month; 29% of these companies were founded by people between 20 to 34 years of age.⁶¹ According to the Kauffman Indicators of Entrepreneurship, in 2018, about 79% of startups nationwide were still active after one year. On average, startups nationwide created approximately 5.2 jobs in their first year (when normalized by population).⁶² However, it is typically the case that startups are important for job creation on a longer time horizon, well beyond their first year, as “fewer than half of all startups in America are still in business after five years.”⁶³

- **Entrepreneurship in Oregon.** The creation of new businesses is vital to Oregon’s economy as their formations generate new jobs and advance new ideas and innovations into markets. They also can produce more efficient products and services to better serve local communities. The Kauffman Foundation reports several statistics at the state level related to entrepreneurship. They report: the rate of new entrepreneurs, the opportunity share of new entrepreneurs (new entrepreneurs who created a business by choice instead of necessity), startup early job creation (the average number of jobs created by startups in their first year, normalized by population), and startup early survival rate (the percent of startups that are still active after one year).

According to Kauffman’s indicators, Oregon’s opportunity share of new entrepreneurs is at its highest relative point post-recession, reaching approximately 80% in 2017, up from its post-recession low of 71% in 2012. Startup early job creation also continues to increase. In 2017, the average number of jobs created by startups in their first year reached 5.24, which is comparable to the national average of 5.27. Relative to Oregon’s post-recession low of 3.80 in 2010, the average number of startup jobs have increased approximately 38%. However, the two remaining entrepreneurial indicators, the rate of new entrepreneurs and startup early survival rate, are declining somewhat in Oregon. In 2017, the rate of new entrepreneurs decreased by 0.02 percentage points, from 0.34% in 2016 to 0.32% in 2017, though Oregon’s 2017 rate aligns closely with the national average of 0.33%. For Oregon’s startup early survival rate, it declined to 78.4% in 2017 from a post-recession peak of 80.1% in 2015. Though this decline is not substantially large, the downward trend suggests startups, on average, are not persisting as well as they used to

⁶⁰ *Ibid.*

⁶¹ Cooper, Rich, Michael Hendrix, Andrea Bitely. (2012). "The Millennial Generation Research Review." Washington, DC: The National Chamber Foundation. Retrieved from: <https://www.uschamberfoundation.org/sites/default/files/article/foundation/MillennialGeneration.pdf>.

⁶² Kauffman Foundation. *Kauffman Indicators of Entrepreneurship*. Indicators: Startup Early Job Creation and Startup Early Survival Rate. Information retrieved on December 19, 2019 from: <https://indicators.kauffman.org/data-table>

⁶³ Nish Acharya. “Small Business Are Having A Bigger Impact on Job Creation Than Large Corporations.” *Forbes*, May 5, 2019. <https://www.forbes.com/sites/nishacharya/2019/05/05/who-is-creating-jobs-in-america/#5c74c156597d>

relative to two years ago. Oregon's startup early survival rate in 2017 is 1.4 percentage points below the national average of 79.8%.⁶⁴

Moreover, in 2018, the Oregon OEA reports new business applications in Oregon are increasing. They do, however, simultaneously note startup businesses "are a smaller share of all firms than in the past."⁶⁵ Though this measurement of economic activity does not constitute a full understanding of how well entrepreneurship is performing, it does provide an encouraging signal.

Regional and Local Trends

Throughout this section and the report, McMinnville is compared to Yamhill County and the State of Oregon. These comparisons are to provide context for changes in McMinnville's socioeconomic characteristics.

Availability of Labor

The availability of trained workers in McMinnville will impact development of its economy over the planning period. A skilled and educated populace can attract well-paying businesses and employers and spur the benefits that follow from a growing economy. Key trends that will affect the workforce in McMinnville over the next 20 years include its growth in its overall population, growth in the senior population, and commuting trends.

Growing Population

Population growth in Oregon tends to follow economic cycles. Oregon's population grew from 2.8 million people in 1990 to nearly 4.2 million people in 2018, an increase of over 1,350,000 people at an average annual growth rate of 1.4%. Oregon's growth rate slowed to 1.1% annual growth between 2000 and 2018.

McMinnville's population increased by 15,916 residents over 1990 to 2018, nearly doubling in size. This growth is reflected in its average annual growth rate (AAGR) of 2.3% (and notably, the growth rate used for the 2000-2020 period in the 2002 McMinnville Housing Needs Analysis), which is 0.9 percentage points higher than the State's rate of 1.4%. Similar to McMinnville, Yamhill County's population grew more rapidly than the State, averaging 1.8% growth year-over-year. The County added 41,864 residents over 1990 to 2018 and McMinnville accounts for about 38% of this growth.

⁶⁴ Kauffman Foundation. *Kauffman Indicators of Entrepreneurship. State Profile: Oregon*. Retrieved from: <https://indicators.kauffman.org/state/oregon>

⁶⁵ Lehner, Josh. (August 2018). "Start-Ups, R&D, and Productivity." Salem, OR: Oregon Office of Economic Analysis. Retrieved from: <https://oregoneconomicanalysis.com/2015/03/13/start-ups-and-new-business-formation/>.

Exhibit 17. Population Growth, McMinnville, Yamhill County, and Oregon, 1990 – 2018

Geography	1990	2000	2010	2018	Change, 1990 - 2018		
					Number	Percent	AAGR
McMinnville	17,894	26,499	32,930	33,810	15,916	89%	2.3%
Yamhill County	65,551	84,992	95,925	107,415	41,864	64%	1.8%
Oregon	2,842,337	3,421,399	3,844,195	4,195,300	1,352,963	48%	1.4%

Source: U.S. Census Bureau, 1990, 2000, and 2010. Portland State University Population Estimates, 2018.

Age Distribution

The number of people aged 65 and older in the U.S. is expected to increase by nearly three-quarters by 2050, while the number of people under age 65 will only grow by 16%. The economic effects of this demographic change include a slowing of the growth of the labor force, need for workers to replace retirees, aging of the workforce for seniors that continue working after age 65, an increase in the demand for healthcare services, and an increase in the percent of the federal budget dedicated to Social Security and Medicare.⁶⁶

Exhibit 18 through Exhibit 21 show the following trends:

- McMinnville’s population is aging slightly faster than Yamhill County’s population. Populations of both McMinnville and Yamhill County are aging faster than Oregon’s population with respect to each region’s growth in median age.
- Over the 2000 to 2013-2017 period, those in the age groups of 45 to 64 and 65 years and older in McMinnville increased by 59% and 48%, respectively. These age groups grew substantially more than all other age categories. This suggests that McMinnville may be retaining residents throughout their mid-to-late careers as they age and/or attracting more people in their mid-to-late careers.
- Yamhill County’s population is expected to continue to age, with people 60 years and older increasing from 23% of the population in 2017 to 28% of the population in 2035. This is consistent with statewide trends. McMinnville and Yamhill County may continue to attract mid-life and older workers over the twenty-year planning period. While the share of retirees in these respective areas may increase over the next 20 years, availability of people nearing retirement (e.g., 55 to 70 years old) is likely to increase. People in this age group may provide sources of skilled labor, as people continue to work until later in life. These skilled workers may provide opportunities to support business growth in these areas.

⁶⁶ The Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, 2017, *The 2017 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, July 13, 2017. *The Budget and Economic Outlook: Fiscal Years 2018 to 2028*, April 2018.

McMinnville’s median age increased by about 4.6 years between 2000 and 2013-2017.

This change is slightly larger than Yamhill County’s increase of 4.1 years. Median age increases for both regions exceeded Oregon’s change of 2.8.

Exhibit 18. Median Age, McMinnville, Yamhill County, and Oregon, 2000 to 2013-2017

Source: U.S. Census Bureau, 2000 Decennial Census, Table P013; American Community Survey 2013-2017 5-year estimates, Table B01002.

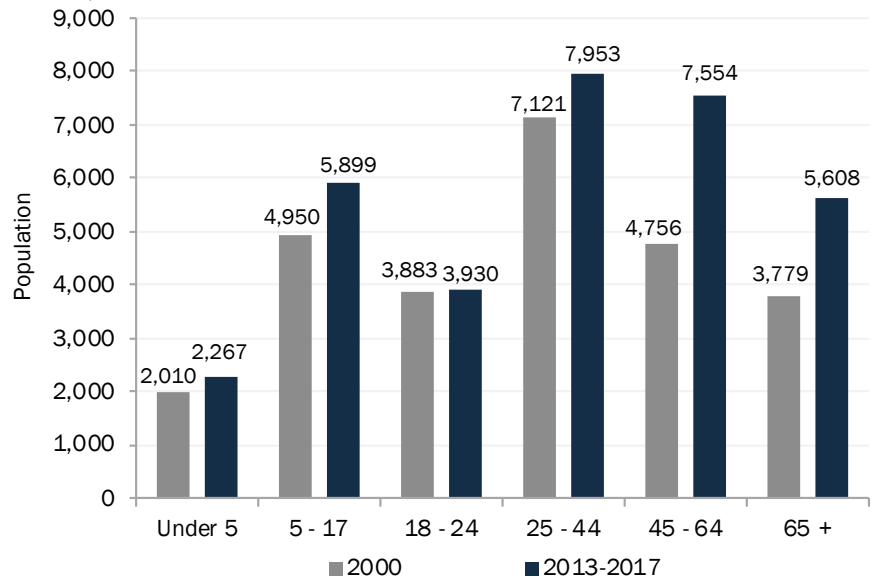
2000	31.5 McMinnville	34.1 Yamhill County	36.3 Oregon
2013-17	36.1 McMinnville	38.2 Yamhill County	39.2 Oregon

Over the 2000 to 2013-2017 period, McMinnville’s largest population increase was for those 45 to 64 (59%) and those aged 65 and older (48%).

This is consistent with statewide trends, where the aforementioned age categories increased the most relative to younger age categories. The Oregon population of those 45 to 64 years of age increased by 30% and those 65 and older increased by 50%.

Exhibit 19. McMinnville Population Change by Age Group, 2000 to 2013-2017

Source: U.S. Census Bureau, 2000 Summary File; American Community Survey 2013-2017 5-year estimates, Table B01001.



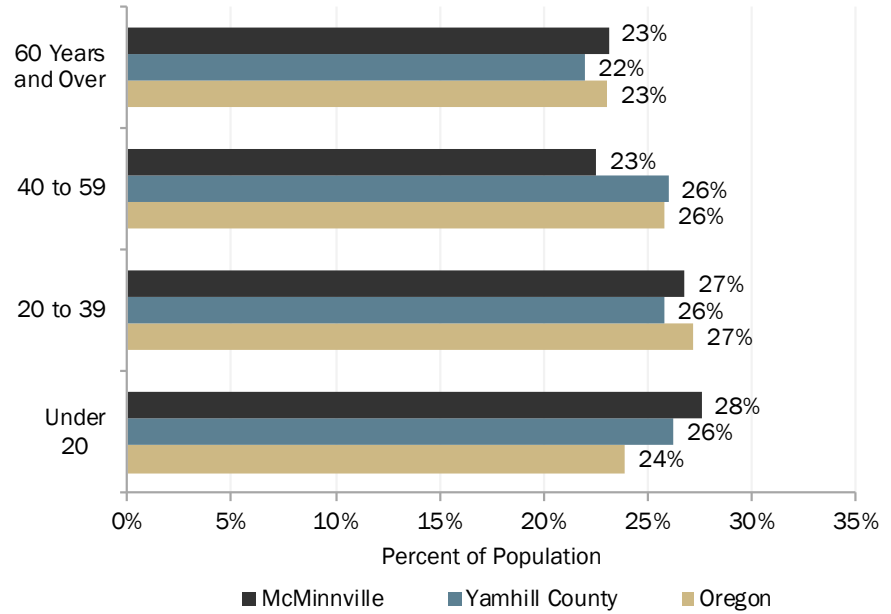
During the 2013-2017 period, the age distribution of McMinnville residents was roughly even across each category, with a slightly smaller proportion of middle-to-older aged adults (40 and older) relative to those 39 years of age and younger.

About 46% of McMinnville residents are 40 years and older and 54% are 39 and younger.

Additionally, the proportion of McMinnville residents under 20 years of age was four percentage points higher than Oregon.

Exhibit 20. Population Distribution by Age, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey, 2013-2017 5-year estimate, Table B01001.

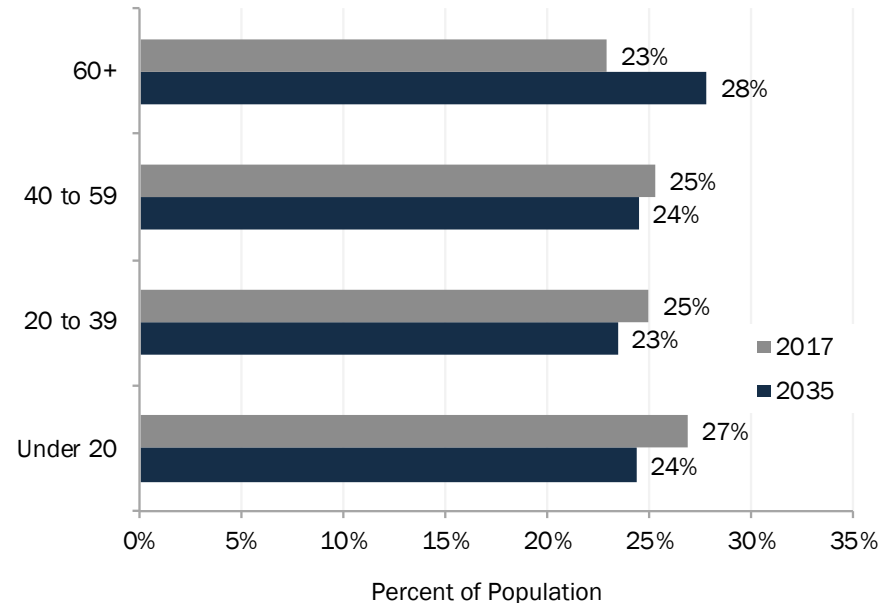


By 2035, Yamhill County will have a larger share of residents older than 60 than it does today. The population forecast for all other age groups projects smaller County population shares by 2035.

The share of residents aged 60 years and older will account for 28% of Yamhill County's population, compared to 23% in 2017.

Exhibit 21. Population Growth by Age Group, Yamhill County, 2017 - 2035

Source: Oregon Population Forecast, 2017.



Income

Income and wages affect business decisions for locating in a city. Areas with higher wages may be less attractive for industries that rely on low-wage workers. McMinnville’s median household income (\$50,299) was below the County median (\$58,392) during the 2013-2017 period. Average wages at businesses in McMinnville (\$40,105) were lower than the County average (\$42,315).⁶⁷

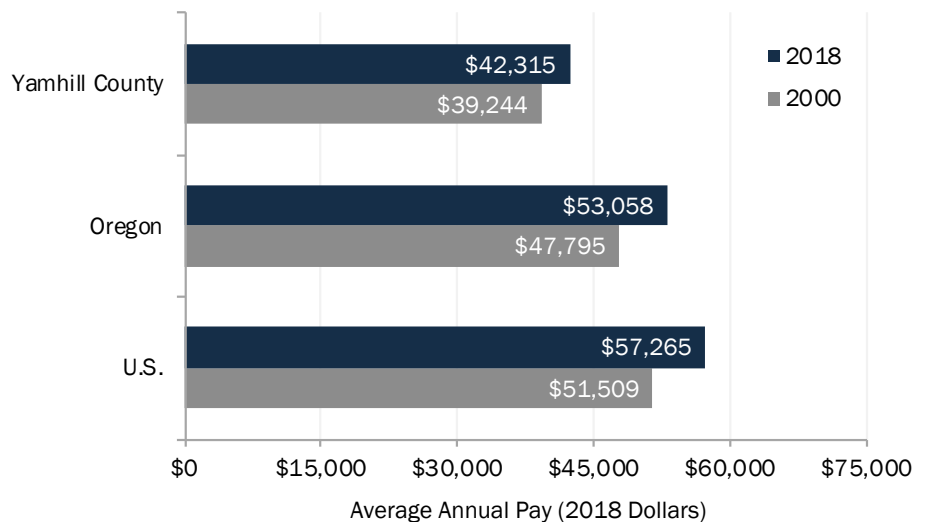
Between 2000 and 2018, Yamhill County’s average wages increased as they also did in Oregon and the nation. When adjusted for inflation to 2018 dollars, average annual wages grew by 8% in Yamhill County, 11% in Oregon, and 11% in the nation.

From 2000 to 2018, average annual wages rose in Yamhill County, Oregon, and the nation.

In 2018, average annual wages were \$42,321 in Yamhill County, \$53,058 in Oregon, and \$57,265 across the nation.

Exhibit 22. Average Annual Wage, Covered Employment, Yamhill County, Oregon, and the U.S., 2000 to 2018, Inflation-adjusted 2018 Dollars

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.
Note: 2018 average annual pay estimates are preliminary, according to the BLS.



Over the 2013-2017 period, the median household income in McMinnville was below that of Yamhill County and Oregon by 14% and 10%, respectively.

Exhibit 23. Median Household Income (MHI),⁶⁸ 2013-2017, Inflation-adjusted 2017 Dollars

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19013.



⁶⁷ According to the Census, Household income includes the income of the householder and other income earners ages 15 or older, thus the mix of sources of income ranges in reporting of household income. Average wage is calculated using Quarterly Census of Employment and Wages data, based on payroll information and number of employees by establishment.

⁶⁸ The Census calculated household income based on the income of all individuals 15 years old and over in the household, whether they are related or not.

McMinnville median family income during the 2013-2017 period, similar to median household income, was below the median family income of both Yamhill County and Oregon by 12% and 15%, respectively.

Exhibit 24. Median Family Income,⁶⁹ 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19113.

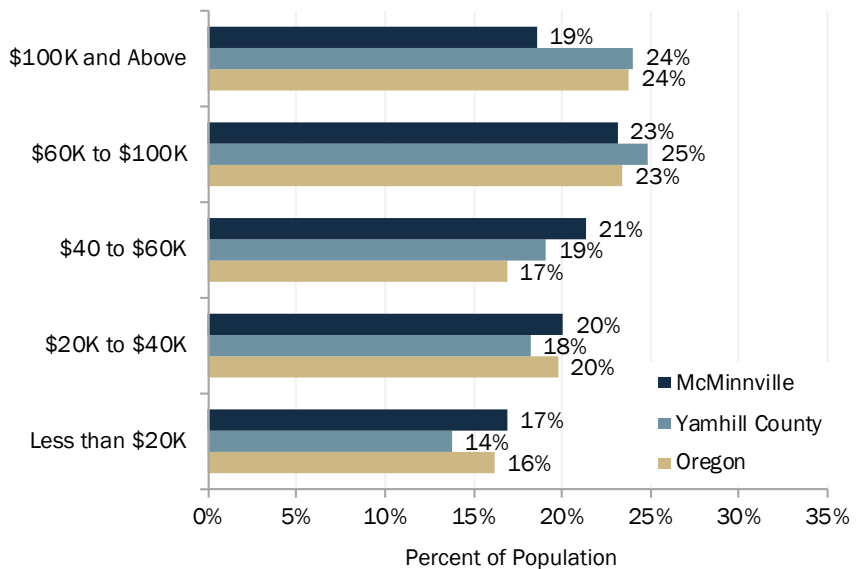
\$58,620 McMinnville	\$66,732 Yamhill County	\$69,031 Oregon
--------------------------------	-----------------------------------	---------------------------

During the 2013-2017 period, 37% of McMinnville households earned less than \$40,000 annually, compared to 32% of Yamhill County households and 36% of Oregon households.

Over the same period, McMinnville households had a lower proportion of higher income earnings (\$100,000 and above) relative to Yamhill County and Oregon.

Exhibit 25. Household Income by Income Group, McMinnville, Yamhill County, and Oregon, 2013-2017, Inflation-adjusted 2017 Dollars

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B19001.



⁶⁹ The Census calculated family income based on the income of the head of household, as identified in the response to the Census forms, and income of all individuals 15 years old and over in the household who are related to the head of household by birth, marriage, or adoption.

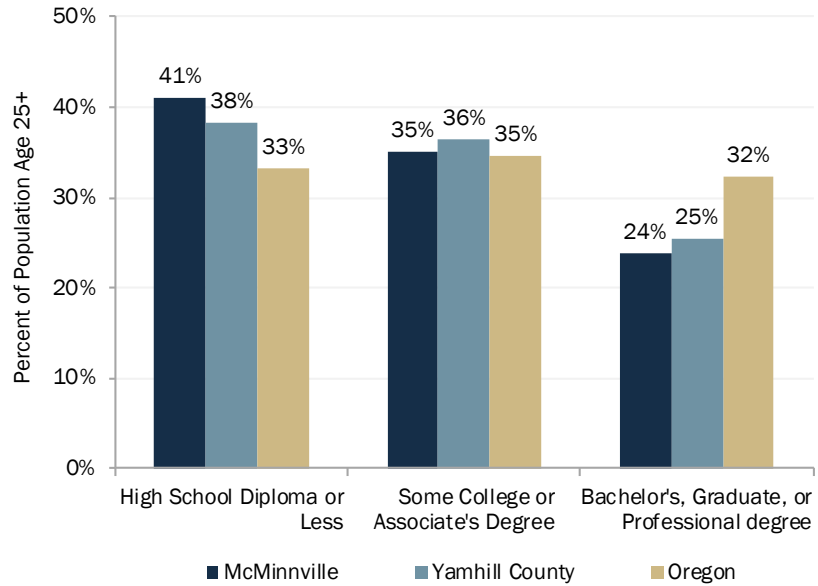
Educational Attainment

The availability of trained, educated workers affects the quality of labor in a community. Educational attainment is an important labor force factor because firms need to be able to find educated workers.

McMinnville's residents are consistent with residents statewide regarding their completion of some college or attainment of an Associate degree; however, attainment of a Bachelor's degree or a professional degree is lower for McMinnville's residents relative to statewide trends.

Exhibit 26. Educational Attainment for the Population 25 Years and Over, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B15003.



Labor Force Participation and Unemployment

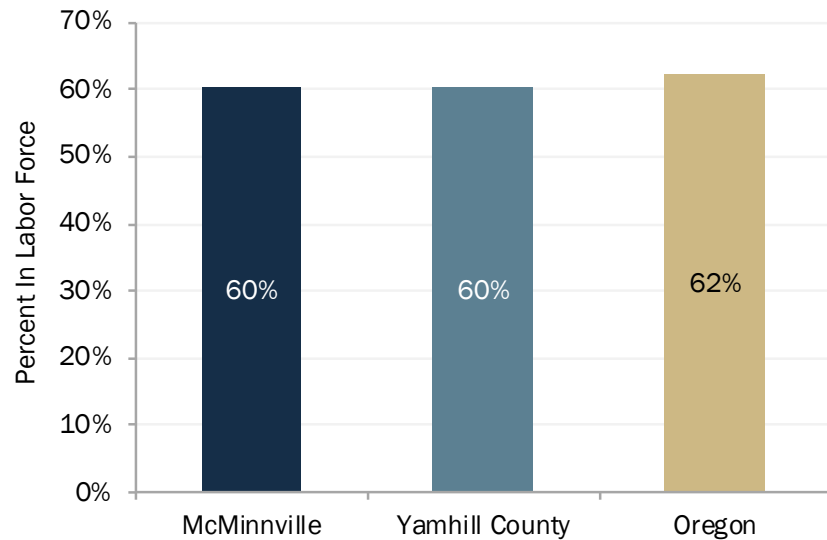
The current labor force participation rate is an important consideration in the availability of labor. The labor force in any market consists of the adult population (16 and over) who are working or actively seeking work. The labor force includes both the employed and unemployed. Children, retirees, students, and people who are not actively seeking work are not considered part of the labor force. According to the 2013-2017 American Community Survey, Yamhill County had more than 49,000 people in its labor force during that period and McMinnville had close to 15,500 people in its labor force.

In 2017, the Oregon Office of Economic Analysis reported that 64% of job vacancies were difficult to fill. The most common reason for difficulty in filling jobs included a lack of applications (30% of employers' difficulties), lack of qualified candidates (17%), unfavorable working conditions (14%), a lack of soft skills (11%), and a lack of work experience (9%).⁷⁰ These statistics indicate a mismatch between the types of jobs that employers are demanding and the skills that potential employees can provide.

McMinnville's labor force participation rate for the 2013-2017 period is comparable to Yamhill County.

Exhibit 27. Labor Force Participation Rate, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B23001.



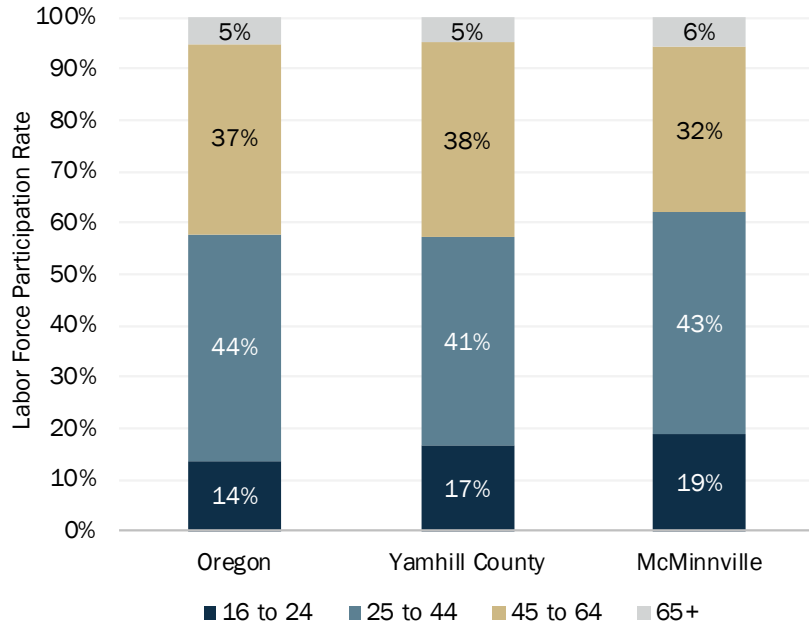
⁷⁰ Oregon's Current Workforce Gaps: Difficult-to-fill Job Openings, Oregon Job Vacancy Survey, Oregon Employment Department, June 2018.

By age group, McMinnville has a larger share of residents aged 16 to 24 participating in the labor force relative to Yamhill County and Oregon.

In contrast, McMinnville has a smaller share of residents aged 45 to 64 participating in the labor force compared to Yamhill County and Oregon.

Exhibit 28. Labor Force Participation Rate, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table S2301.

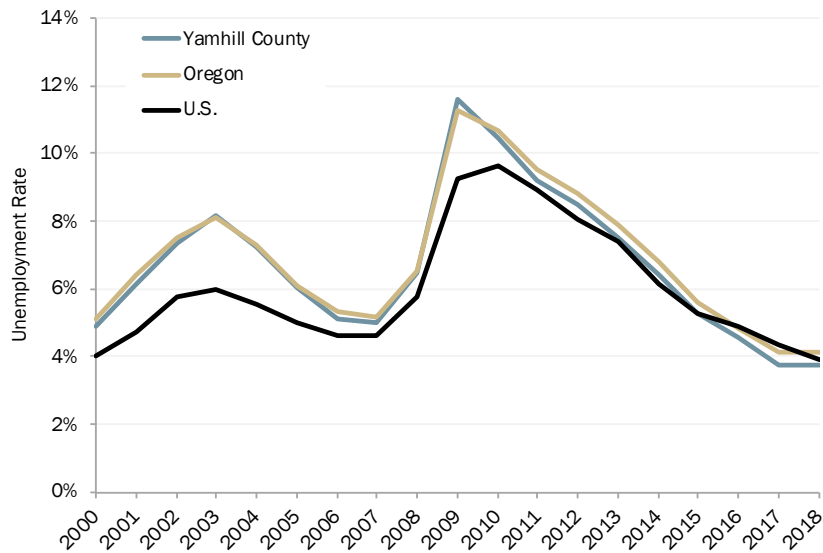


The unemployment rates in Yamhill County, Oregon, and the nation have declined below their respective 2000 rates.

Yamhill County closely follows Oregon's unemployment rate. In 2018, the unemployment rate in Yamhill County was 3.8%. In Oregon, the rate was 3.9%, and in the nation, 4.2%.

Exhibit 29. Unemployment Rate, Yamhill County, Oregon, and the U.S., 2000 - 2018

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics and Labor Force Statistics.



Commuting Patterns

Commuting plays an important role in the McMinnville’s economy because employers in these areas are able to access workers from people living in cities across Yamhill County and from the broader Mid-Willamette Valley Region.

Exhibit 31 shows that 38% of people who work in McMinnville reside in McMinnville, 4% commute from Salem, 3% commute from Portland, and 3% from Newberg. The remaining workers commute from various other cities located across the Region.

McMinnville is part of an interconnected regional economy.

Of the approximate 15,080 persons employed in McMinnville (as of 2017), 62% of workers commute to their jobs from outside of the City. The remaining 38% of workers both live and are employed in McMinnville.

Exhibit 30. Commuting Flows, McMinnville, 2017

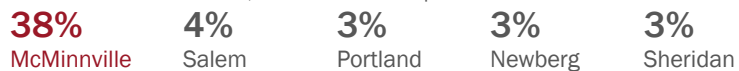
Source: U.S. Census Bureau, Census On the Map.



As of 2017, about 38% of all people who work in McMinnville also live in McMinnville.

Exhibit 31. Places Where McMinnville Workers Lived,⁷¹ 2017

Source: U.S. Census Bureau, Census On the Map.



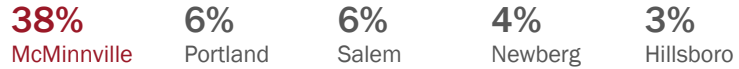
⁷¹ In 2017, 15,080 people worked at businesses in McMinnville, with 38% (5,721) people both employed and working in McMinnville.

About 38% of residents who live in McMinnville also work in McMinnville.

Six percent of McMinnville residents commute to Portland for work and another six percent commute to Salem.

Exhibit 32. Places Where McMinnville Residents were Employed,⁷² 2017

Source: U.S. Census Bureau, Census On the Map.



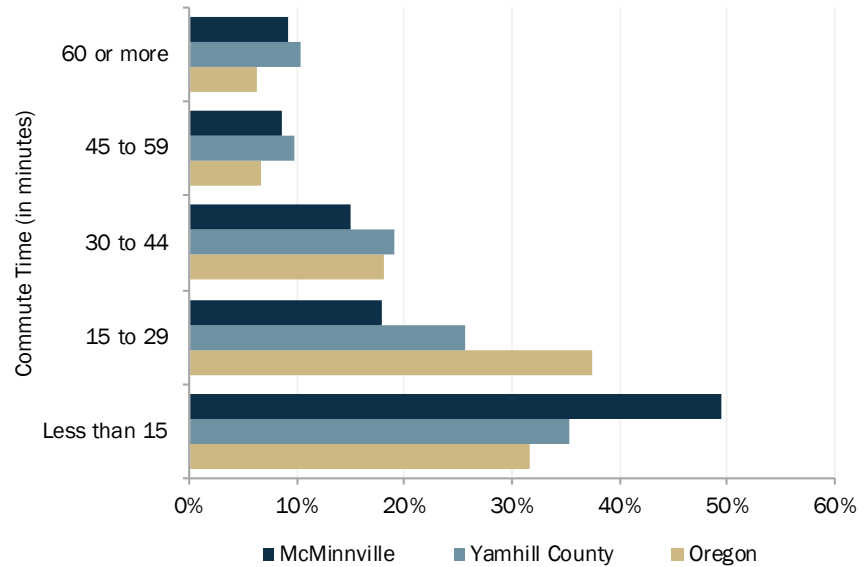
During the 2013-2017 period, about 49% of McMinnville workers had a commute of less than 15 minutes, compared to 35% of Yamhill County workers and 32% of Oregon workers.

Relative to Yamhill County and Oregon workers, McMinnville workers tend to have shorter commute times.

Where the majority (55%) of Oregon workers have commutes between 15 to 44 minutes, only 33% of McMinnville workers have commute times of that length. However, at the higher end of commuting times (45 minutes or more), almost one-fifth (18%) of McMinnville workers spend a sizable amount of time on the road.

Exhibit 33. Commute Time by Place of Residence, McMinnville, Yamhill County, and Oregon, 2013-2017

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-year estimates, Table B08303.



⁷² In 2017, 5,569 residents of McMinnville worked, with 38% of McMinnville residents (5,569 people) both living and employed in McMinnville.

Tourism in the Willamette Valley Region and Yamhill County

Longwoods International provides regional statistics on travel. The following information is from Longwoods International's 2017 Regional Visitor Report for the Willamette Valley Region, which is defined as Benton, Lane (eastern, non-coastal region), Linn, Marion, Polk, and Yamhill counties.⁷³ Broadly, travelers to the Willamette Valley Region accounted for:⁷⁴

- 5.5 million overnight trips in 2017, or 16% of all Oregon overnight travel that year.
- The primary market area for travelers over 2016 and 2017 were Oregon, California, and Washington.⁷⁵ 48% of Willamette Valley visitors came from Oregon, 19% came from California, and 14% came from Washington.
- About 53% of visitors stayed 2 or fewer nights over 2016 and 2017 in the Willamette Valley, 32% stayed 3 to 6 nights, and 15% stayed 7 or more nights. The average nights spent in the Willamette Valley Region was 4.3.
- The average per person expenditures on overnight trips in 2017 ranged from \$9 on recreation, sightseeing, and entertainment to \$35 per night on lodging.
- About 75% of visits to the Willamette Valley Region over 2016 and 2017 were via personally-owned automobiles/trucks, 18% were by rental car, and 13% were via an online taxi service (such as Lyft or Uber).
- Over 2016 and 2017, visitors tended to be middle-to-older aged adults, with the average age being about 48.7. Those aged 18 to 34 made up 24% of overnight visits, 34% were between 35 and 54, and 42% were 55 and older. About 56% of visitors graduated college or completed a post-graduate education. Additionally, 44% of visitors earned less than \$50,000 in household income, 37% earned between \$50,000 and \$99,999, and 19% earned more than \$100,000. The average household income for Willamette Valley visitors was about \$64,560.

⁷³ Travel Oregon. "Oregon 2017: Regional Visitor Report, Willamette Valley Region," Longwoods International, October 2018. Retrieved from: <http://industry.traveloregon.com/research/archive/willamette-valley-oregon-overnight-travel-study-2017-longwoods-international/>.

⁷⁴ Longwoods International issues caution in interpreting these tourism estimates in the Willamette Valley Region as the sample size for the marketable trips this region is low. For this reason, the data reported is a combination of survey data from 2016 and 2017.

⁷⁵ The data reported in this bullet as well as other bullets noting years "2016 and 2017" are based on *marketable trips*. Longwoods International states marketable trips "are defined as those trip types that can be influenced by marketing efforts and include leisure and business-leisure trips."

Yamhill County's direct travel spending increased 139% from 2000 to 2018.

The Willamette Valley Region's direct travel spending increased by 100% over the same period.

Exhibit 34. Direct Travel Spending (\$ millions), 2000 and 2018

Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2018.

2000	\$1,000	\$56.7
	Willamette Valley Region	Yamhill County
2018	\$2,000	\$135.7
	Willamette Valley Region	Yamhill County

Yamhill County's lodging tax receipts increased 653% over 2006 to 2018.

Exhibit 35. Lodging Tax Receipts (\$ millions), 2006 and 2018

Source: Dean Runyan Associates, Oregon Travel Impacts, 1991-2018.

2006	\$111.0
	Yamhill County
2018	\$835.8
	Yamhill County

Yamhill County's largest visitor spending for purchased commodities is accommodation and food services.

Exhibit 36. Largest Visitor Spending Categories (\$ millions), Yamhill County, 2018

Source: Dean Runyan Associates, Oregon Travel Impacts.

\$27.9	\$6.3	\$3.9
Accommodations and Food Services	Arts, Entertainment, and Recreation	Retail

Yamhill County's largest employment generated by travel spending is also in the accommodations and food services industry.

Exhibit 37. Largest Industry Employment Generated by Travel Spending (thousands), Yamhill County, 2018

Source: Dean Runyan Associates, Oregon Travel Impacts.

1.1 jobs	0.5 jobs	0.1 jobs
Accommodations & Food Services	Arts, Entertainment, and Recreation	Retail

The number of person nights spent in Yamhill County increased from 1,706,000 in 2017 to 1,773,000 in 2018, an increase of 67,000 overnight stays, or 4%. Over the last nine years, from 2010 to 2018, person nights increased approximately 19%.

4. Economic Development Potential

The fundamental purpose of Goal 9 is to make sure that a local government plans for economic development. The planning literature provides many definitions of economic development, both broad and narrow. Broadly,

“Economic development is the process of improving a community’s well-being through job creation, business growth, and income growth (factors that are typical and reasonable focus of economic development policy), as well as through improvements to the wider social and natural environment that strengthen the economy.”⁷⁶

That definition acknowledges that a community’s wellbeing depends in part on narrower measures of economic wellbeing (e.g., jobs and income) and on other aspects of quality of life (e.g., the social and natural environment). In practice, cities and regions trying to prepare an economic development strategy typically use a narrower definition of economic development; they take it to mean business development, job growth, and job opportunity. The assumptions are that:

- Business and job growth are contributors to and consistent with economic development, increased income, and increased economic welfare. From the municipal point of view, investment and resulting increases in property tax are important outcomes of economic development.
- The evaluation of tradeoffs and balancing of policies to decide whether such growth is likely to lead to overall gains in wellbeing (on average and across all citizens and businesses in a jurisdiction, and all aspects of wellbeing) is something that decision makers do after an economic strategy has been presented to them for consideration.

That logic is consistent with the tenet of the Oregon land-use planning program: all goals matter, no goal dominates, and the challenge is to find a balance of conservation and development that is acceptable to a local government and the State. Goal 9 does not dominate, but it legitimizes and requires that a local government focus on the narrower view of economic development regarding economic variables.

In that context, a major part of local economic development policy is about local support for business development and job growth; that growth comes from the creation of new firms, the expansion of existing firms, and the relocation or retention of existing firms. Specifically, new, small businesses (those with fewer than 100 employees) are accounting for a larger share of the job growth in the United States.⁷⁷ This shift toward a focus on entrepreneurship, innovation, and small businesses presents additional options for local support for economic development

⁷⁶ *An Economic Development Toolbox: Strategies and Methods*, Terry Moore, Stuart Meck, and James Ebenhoh, American Planning Association, Planning Advisory Service Report Number 541, October 2006.

⁷⁷ According to the 2018 Small Business Profile from the US Small Business Office of Advocacy, small businesses account for over 99 percent of total businesses in the United States, and their employees account for nearly 50% of American workers. <https://www.sba.gov/sites/default/files/advocacy/2018-Small-Business-Profiles-US.pdf>

beyond firm attraction and retention. Thus, a key question for economic development policy is: *What are the factors that influence business and job growth, and what is the relative importance of each?* Specifically, OAR 660-009-0015(4) requires that cities conduct an assessment of community economic development potential, as part of the EOA. This assessment considers: market factors, infrastructure and public facility availability and access, labor, proximity to suppliers and other necessary business services, regulations, and access to job training.

The local factors that form McMinnville’s competitive advantage are summarized in the subsections below.

Factors Affecting Community Economic Development Potential

OAR 660-009-0015(4) stipulates that relevant economic advantages and disadvantages considered with the EOA “may include but are not limited to” factors of: location, size and buying power of markets; availability of transportation facilities for access and freight mobility; public facilities and public services; labor market factors; access to suppliers and utilities; necessary support services; limits on development due to federal and state environmental protection laws; and educational and technical training programs.” This 2020 EOA update is organized to address these considerations together with other factors distinctive to economic development in McMinnville.

Location, Size & Buying Power of Markets. Location is an economic factor that is prominently mentioned in prior planning documents. The 2019 *MAC-Town 2032 Economic Development Strategic Plan* identifies both strengths and weaknesses related to McMinnville’s location and associated transportation factors. Comparative advantages and disadvantages and their implications for economic opportunity in McMinnville are drawn from the 2013 EOA together with more recent MEDP, SEDCOR, and related industry analyses, summarized as follows.⁷⁸

Advantages:

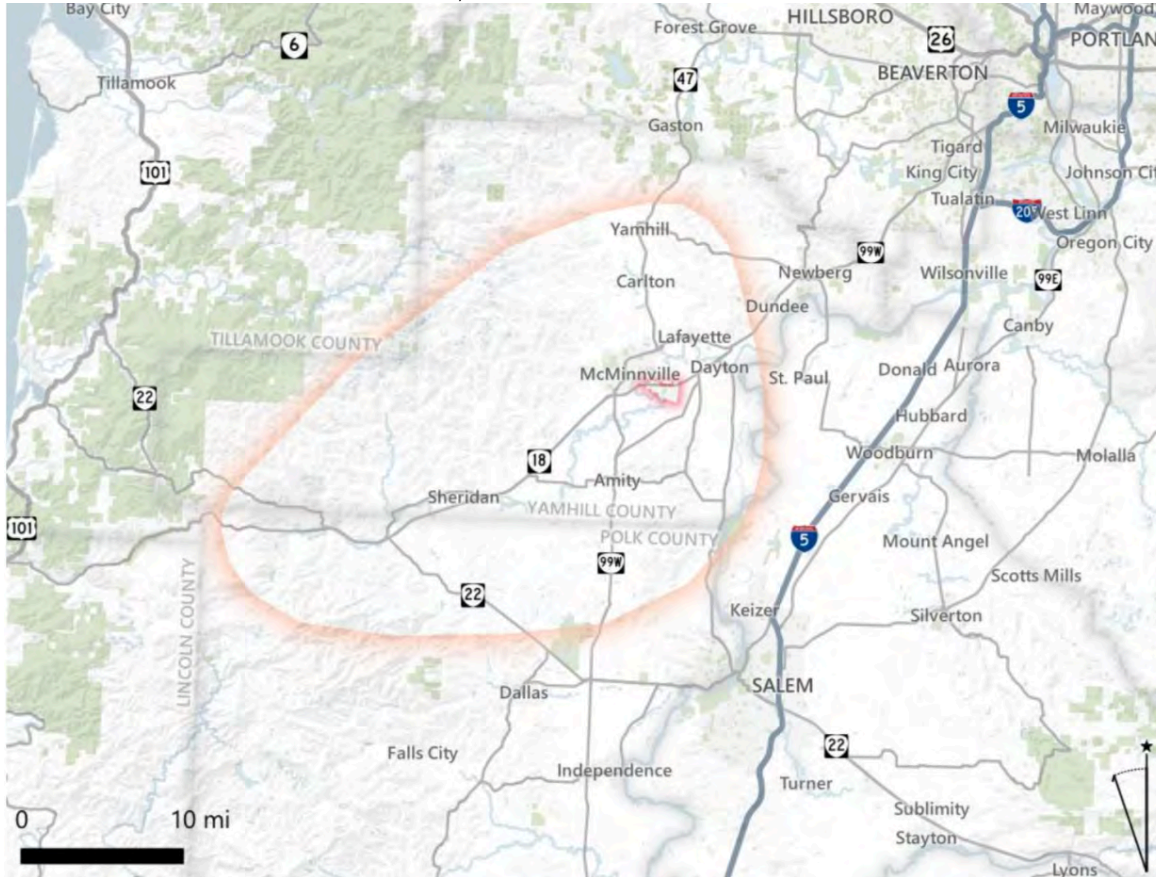
- *Ease of access – with proximity to Portland, Salem & the Oregon coast.* McMinnville is only 40 miles from Portland, 27 miles from Salem, and 51 miles from Lincoln City on the Oregon coast.⁷⁹
- *Central location to serve local community and regional employment and commercial service needs.* McMinnville is well situated to serve the employment and commercial needs of the local community and a larger market area of approximately 75,000 residents, according to the Three Mile Lane market analysis. The City’s market area encompasses

⁷⁸ The 2020 EOA update provides updated information related to comparative advantages and disadvantages, while keeping the structure of the 2013 EOA. Factors that are no longer relevant to McMinnville were removed.

⁷⁹ Source is www.maps.google.com.

the majority of Yamhill County. For reference, a map of McMinnville’s market area is provided in Exhibit 38.⁸⁰

Exhibit 38. McMinnville Market Area, 2019



Source: McMinnville Three Mile Lane Area Plan: Market Analysis; TIGER, Leland Consulting Group.

McMinnville has a substantial population-to-jobs ratio of 2.2, compared to 2.5 in Newberg, and 3.0 in Yamhill County.⁸¹ This is due in part to McMinnville’s ability to attract workforce both locally and regionally. As noted by the 2007 MEDP, McMinnville offers potential for commercial retail uses that often require a substantial trade area base of 50,000-100,000 or more customers for market viability.⁸² The competitive viability of service uses such as regional professional, business, financial and medical facilities also benefits from the ability to serve a market area extending beyond the immediate community. The 2019 Strategic Plan confirms opportunities for McMinnville to expand on both retail and non-retail commercial uses.

- *Proximity to regionally recognized destination attractions including Yamhill and Willamette Valley wineries, Evergreen Museum & downtown McMinnville as specialty destinations. The*

⁸⁰ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

⁸¹ Based on analysis of 2017 covered employment data from OED and population data from PSU.

⁸² Population standards for a regional center are included in sources such as the Urban Land Institute, *Shopping Center Development Handbook*, 1999. Minimum population size can vary by type of retail or service commercial business.

North Willamette Valley region—comprised of Yamhill-Carlton, Chehalem Mountains, McMinnville, Ribbon Ridge, Dundee Hills, and Eola-Amity Hills – has been identified with 503 wineries and 20,279 acres of grapes as of 2018.

In addition to recognition as the leading production area for Oregon’s wine industry, Yamhill County agricultural production adds to both local and visitor appeal. The area is known for quality fresh-to-market products including berries, nuts, milk, eggs, fruits and vegetables – and increasingly for custom/organic livestock production. Nursery crops, grass and legume seeds, Christmas trees, grain and hay add to the diversity of Yamhill County agricultural production – as the 6th leading county in terms of value of production in Oregon in 2017.⁸³

The Evergreen Air Museum attracted an estimated 88,400 visitors in 2018. With over 3 million annual visitors, the Spirit Mountain Casino located 24 miles from downtown McMinnville is widely cited as one of the top visitor draws in the state.⁸⁴

McMinnville also is recognized statewide for its remarkable comeback and current vitality of its historic downtown core area. Promoted as “Oregon’s favorite main street,” the McMinnville Downtown Association characterizes the appeal of downtown in these terms:

“Quaint boutiques, unique shops, and local galleries abound. Music fills the air from our farmers’ market performers and outdoor concerts all summer long, and pours out of our restaurants and pubs on winter evenings.”⁸⁵

Disadvantages:

- *Retail sales leakage occurring due to lack of major comparison retail.* As described by the Three Mile Lane market analysis, there is a considerable retail sales leakage of an estimated \$208 million annually throughout the McMinnville Market Area. Factoring in household growth projections, the market analysis forecasts demand for an additional 539,000 square feet of retail development in the McMinnville market area over the coming decade, with 150,000 square feet (or about 28%) being captured in the Three Mile Lane area.⁸⁶

Sites in the McMinnville UGB offer the potential to serve a local and regional market extending to Sheridan/Willamina, Polk County and even some coastal communities – with improved opportunity to serve the Newberg-Dundee area as a result of the recently completed bypass construction. Centrally located sites with good highway access and street visibility can be instrumental to attract commercial businesses that may require market areas of 50,000-100,000+ population.

⁸³ U.S. Census of Agriculture. Yamhill County Profile. 2017.

⁸⁴ As cited by Memorandum #2, Market Study Current Conditions, prepared as part of Northeast Gateway Plan by Leland Consulting Group for the City of McMinnville, May 23, 2011.

⁸⁵ As cited by www.downtownmcminnville.com, as of September 2012.

⁸⁶ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

- *Need for additional value-added opportunities for visitors.* A key challenge for the future is to provide more and better value-added opportunities for visitors to spend more time and money while visiting the McMinnville area.

Also, the 2019 *Willamette Valley Winery Association Visitor Profile Study* reported that about 53.8% of domestic visitors to the area are non-Oregon residents. Survey respondents noted difficulty of travel to the Willamette Valley as a key factor in not returning to the area. The study also stated that the typical Oregon resident wine tourist spends about \$151.63 per person per day, while the typical non-Oregon resident spends about \$416.43 per person per day.

Note: The 2013 EOA noted the following disadvantage at that time:

“Limited duration of tourism visitation & low expenditure capture. While the McMinnville area and Yamhill County can now boast some of the state’s top tourism attractions, visitor spending does not appear to match visitation. This is because visitors tend not to stay overnight (but are often day visitors) and do not appear to be making substantial expenditures while in the area.”

This has changed substantially. Visit McMinnville reports that visitor spending in Yamhill County has doubled in the last ten years. Lodging statistics in McMinnville are up across the board, including demand, rate, length of stay, occupancy, revenue, and number of properties & inventory of rooms.

Availability of Transportation Facilities for Access & Mobility. Location, size and buying power of markets are substantially affected by current and planned transportation facilities. This is particularly the case in Yamhill County which increasingly has experienced the negative economic development effects of highway congestion on the 99W corridor. However, completion of Phase 1 of the Newberg-Dundee Bypass in January of 2018 has partially reduced congestion, especially for local residents of the region.

Economic development opportunities may be substantially enhanced with further plans for transportation improvements—as with the second phase of the Newberg-Dundee bypass, which is currently in its design phase. A broader look at the role transportation plays in shaping McMinnville’s economic opportunities is outlined as follows.

Advantages:

- *Western & mid-valley cross-roads.* McMinnville is directly served by Highway 99W – as a historically significant central organizing spine to access commercial and industrial businesses throughout the community. Highway 18 has come to play an increasingly important role, not only as a by-pass route for through traffic traveling between the Oregon coast and the Portland metro area but also as a means of accessing more local and regional employment/institutional uses as well as the McMinnville airport. While not directly in McMinnville, Highway 22 (via 99W) provides access to Salem and to Interstate 5 (within approximately 30 miles).

- *Changing traffic patterns.* While serving as one indicator of overall economic activity, this is of particular importance for retail and service businesses as well as tourism oriented destinations reliant on high traffic counts. As of 2018, an estimated 22,900 vehicles per day traveled Highway 18 in the vicinity of the McMinnville airport – an increase of 44% over 2005 counts.⁸⁷

On Highway 99W, up to an estimated 21,900 vehicles traveled daily through McMinnville in 2018, (representing an increase in 99W in-town traffic with 18,900 vehicles in 2013).⁸⁸

- *Air and rail accessibility.* As a general aviation airport, McMinnville Municipal Airport has the capacity to handle corporate jet aircraft – together with availability of aircraft rentals, flight instruction, aircraft maintenance, and fuel. The Portland International Airport (PDX) is located 36 miles from McMinnville, offering daily direct flights with passenger and freight service to Asia, Europe, and Mexico as well as cities throughout the U.S.

The Willamette and Pacific Railroad maintains freight service to McMinnville industrial users. This short-line carrier connects to the Burlington Northern Santa Fe and Union Pacific carriers for transcontinental shipments to and from McMinnville.

Disadvantages:

- *Poor linkages to Interstate freeway access.* Congestion on the 99W corridor in the area of Dundee and further north is cited as a disincentive to business investment from existing and prospective new firms in documents including the 2019 *MAC-Town 2032 Economic Development Strategic Plan*. Of particular concern is the approximate 30-mile distance from McMinnville to the Interstate 5 corridor, exacerbated by substantial congestion affecting connecting routes during much of the business day, especially for the segment of the 99W corridor extending from the Highway 18 merge north of McMinnville through Newberg. The *MAC-Town 2032 Economic Development Strategic Plan* notes that the development of the Highway 99 bypass will likely “improve access to McMinnville.”
- *Challenging Air & Rail Service.* While the distance to PDX for scheduled air service is less than 50 miles, regional roadway congestion makes travel times unpredictable during business hours and about half this distance from McMinnville occurs on two-lane roadways. With increasing regional traffic congestion, access to Portland International Airport is ever more problematic both for freight shippers and employees who must travel for their jobs.

As described by the 2001 EOA, “lack of convenient and efficient access to Portland International Airport was one factor cited by Hewlett-Packard in its decision to leave McMinnville, and it may discourage other existing or prospective firms from expanding

⁸⁷ Annual Average Daily Traffic counts (point near McMinnville Airport). Oregon Department of Transportation. <https://gis.odot.state.or.us/transgis/>

⁸⁸ Annual Average Daily Traffic counts (point near McMinnville High School). Oregon Department of Transportation. <https://gis.odot.state.or.us/transgis/>

or locating in McMinnville.” Also noted is that rail traffic bound for Portland has been routed south, then north, due to the unsuitability of existing trackage north of McMinnville.

The Oregon Department of Transportation (ODOT) completed construction of Phase 1 of the Newberg-Dundee Bypass and has proceeded into the design phase for Phase 2, which will affect economic opportunities in the coming years. Per the fact sheet associated with Phase 1 of the Bypass project, congestion was reduced by approximately 20% in downtown Newberg and by 40% in downtown Dundee. Freight traffic was also reduced by approximately 45% in Newberg and 68% in Dundee. These congestion reductions have the added benefit of increasing safety on 99W and simultaneously diminishing travel time during peak commute periods.⁸⁹ The Phase 2 improvement (currently in a design phase) is expected to have the effect of further reducing travel times on the 99W corridor north of McMinnville to Newberg via an extension of the Phase 1 Bypass.

Public-Private Facilities, Services & Environmental Factors. This discussion combines related items of OAR 660-009-0015(4) as related to public facilities and public services, access to suppliers and utilities, necessary support services, and environmental limitations. This is due to the inter-connected roles of these factors in affecting overall economic activity for both industrial and commercial business activities.

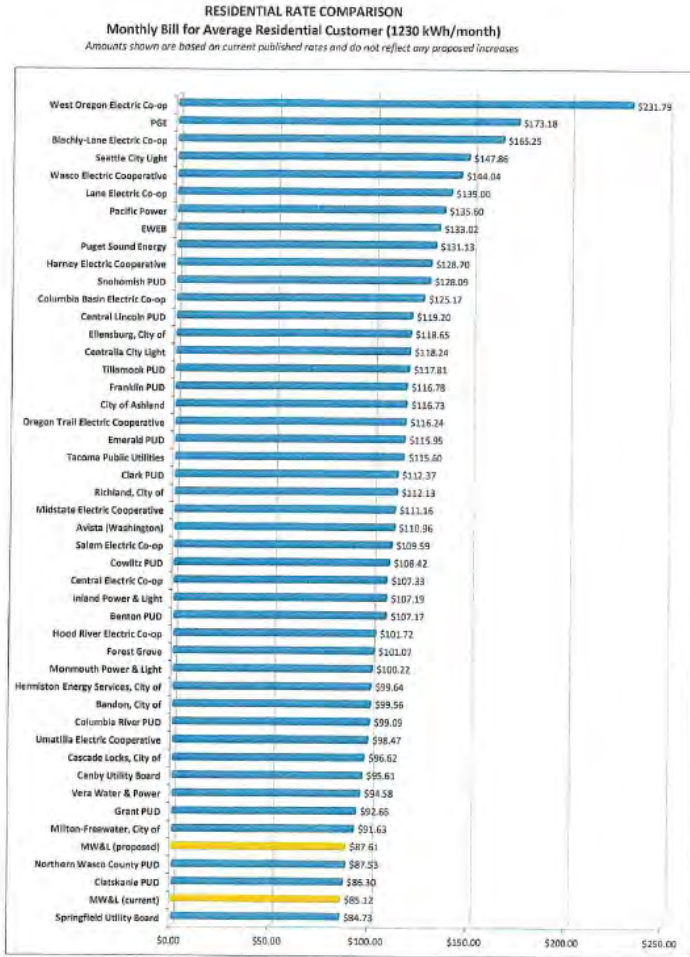
The availability and cost of both public and private support services can affect the costs of living or doing business in McMinnville. Environmental factors can similarly serve to constrain or, in some cases, benefit economic development investments. A firm’s location decision may reflect consideration of the comparative value versus cost of doing business in McMinnville or other potentially viable locations in Oregon or elsewhere.

Advantages:

- *Low public utility rates.* McMinnville is recognized as offering low electricity and water rates compared with other public and private utilities region-wide and statewide (Exhibit 39). The public utility provider, McMinnville Water and Light (MW&L), was founded in 1889 and continues to provide low cost, reliable water and power services.

⁸⁹ Oregon Department of Transportation. 2014. *Newberg-Dundee Bypass Project*. Retrieved from: <http://oregonjta.org/region2/files/highway99w/docs/overall-fact-sheet-for-web-dec-2014.pdf>

Exhibit 39. Residential Rate Comparison for Oregon Utility Services



Source: McMinnville Water and Light.

- Water & sewer capacity for growth.**
 - Water supply and water rights.* Water supply is from the Yamhill and Nestucca River basins. In 2005, MW&L completed expansion of McGuire Reservoir, more than doubling reservoir capacity, providing ample water supply through at least 2025. Beyond 2025, MW&L has sufficient capacity for water rights and supply to meet needs through at least 2075. This will address needs for the City’s 20-year planning horizon of 2041 and the longer 2067 planning horizon.
 - Treatment capacity.* In 2010, MW&L completed expansion of the Water Treatment Plant (WTP). This increased capacity from 13 MGD to 22 MGD. The WTP can be expanded from the current 22 MGD to a maximum of 30 MGD. MW&L’s 2010 master plan projects that this will provide treatment capacity through 2045. This addresses needs through the City’s 20-year planning horizon through 2041, and MW&L can either expand treatment capacity at this location or supplement with new treatment capacity from the new intake on the Willamette to meet needs beyond 2045 through the 2067 planning horizon.

- *Long-Term Water Supply.* Previously noted as a disadvantage in the 2013 EOA, recent actions have turned long-term water supply into an advantage. While recent expansions to McGuire Reservoir are expected to provide ample supply through about 2025, actions are also being undertaken to address longer-term needs. A 2008 Yamhill County Water Supply Analysis concluded that most providers in Yamhill County have adequate water rights to meet projected maximum day demands to 2050; exceptions are noted for Dayton, Lafayette, McMinnville Water and Light (MWL), and Yamhill. As a result, MWL is partnering with the Cities of Carlton, Dayton and Lafayette in an application to the state to secure a water permit to the Willamette River as a potential second municipal source. In addition, this will provide McMinnville with a secondary source, as well as adequate supply and water rights through 2075.

In 2011, the Yamhill Regional Water Authority (YRWA) acquired a water right on the Willamette River with a 2011 priority date. In 2016, MW&L acquired an additional right with a priority date of 1982. In 2017, MW&L purchased a site on the Willamette River for a future intake and pump station. In 2018, MW&L procured the services of Carrollo Engineering to verify that the site would support facilities for a 50 MGD intake and pump station. In 2019, MW&L signed an agreement to supply water to the City of Lafayette. Engineering Design of the inter-tie is underway with construction in 2020. Tentative plans are to start supplying Lafayette with water in the summer of 2020. In 2020, MWL anticipates acquiring an additional senior water right from the Willamette for 4.8 MGD. For McMinnville, this means there will be adequate supply and water rights to meet needs through at least 2075.

- *Internet Services.* In the 2019 strategic plan, goal 1.4.3, which is to "identify and complete high-priority infrastructure projects that serve McMinnville's current and future business community," details a potential project where City staff will evaluate a 10GB fiber network with local Internet Service Provider, Online Northwest.
- *Local business entrepreneurship – with a record of technological innovation.* Focus groups conducted in 2007 for the MEDP strategic economic development plan coupled with interviews for the Marion-Polk-Yamhill County regional economic development strategy have pointed to this factor as a major distinctive strength of the mid-Willamette Valley region. The *MAC-Town 2032 Economic Development Strategic Plan* dedicates one of its target sector goals to foster opportunities in technology and entrepreneurship. This goal is comprised of four strategies, which include making McMinnville a location for small- and medium-sized technology firms to relocate and grow, provide co-working and other work arrangements enabled by telecommunications technology, incubate new businesses and start-ups, and create new talent pipelines for tech-related occupations.⁹⁰

⁹⁰ City of McMinnville. *MAC-Town 2032: Economic Development Strategic Plan*. Retrieved from: <https://www.mcminnvilleoregon.gov/sp/page/mac-town-2032-economic-development-strategic-plan>

Perhaps less readily recognized is the diversity of other small manufacturing and industrial companies that serve global markets through technological innovation and astute market positioning. Examples range from area aerospace and metals component manufacturers to technology companies to wineries.

- *Comparative property tax rates.* While the significance of property and other taxes to business investment decisions is debated nationally and regionally, there is no question that McMinnville’s relative tax burden has changed appreciably in a more favorable direction in recent years.
- *Economic development assistance.* A public services advantage noted with the 2001 EOA is the presence of the McMinnville Downtown Association, providing economic development assistance for businesses locating or expanding in the historic downtown. Since its formation in 1976, the association has been recognized for successful downtown revitalization and leadership among Oregon Main Street communities. Formed in 2006, the public-private organization, McMinnville Economic Development Partnership (MEDP), continues to serve as a single point of contact for economic development assistance for industrial and other firms throughout the McMinnville community. Further, the 2019 *MAC-Town 2032 Economic Development Strategic Plan* identified a “positive business climate perceptions and a sense of civic leadership” as a strength in McMinnville.

Disadvantages:

- *Environmental Effects on Land Supply.* The City of McMinnville has identified lands in steep slopes (of 15% or greater), floodplains, and wetlands identified in the National Wetlands Inventory (NWI) as environmental constraints. Lands with any of these characteristics are considered as constrained or unbuildable and have been deducted from lands identified as available whether vacant or partially vacant.

Labor Market Factors (including Training). This discussion combines two factors listed by OAR 660-009-0015(4) – notably items (d) labor market factors and (h) education and technical training programs – due to their mutual interdependence.

The availability of adequate, qualified labor is critical for economic development. This labor force is not limited to local McMinnville residents as local firms can draw workers from surrounding communities situated within a reasonable commute distance. Similarly, a portion of the McMinnville adult population may find employment in other communities – both nearby as well as extending into the Salem and Portland metro areas.

While direct information on the quality of the workforce is not always readily available, demographic characteristics that are typically used to indicate the quality of the labor force include age distribution, educational attainment, employment by occupation or industry, and race/ethnicity. Also of importance are opportunities for workforce training.

Advantages:

- *Favorable workforce demographics.* As detailed with the comparative demographic and economic data in Chapters 2 and 3 of this EOA update, factors conducive to adequacy of abundant labor supply in McMinnville include above average population growth rates, low median age of population, and high proportion of McMinnville residents who are able to find work locally. A well-represented Latino population also offers advantages for businesses that benefit from greater cultural diversity in accessing customers in a more diverse marketplace both regionally and nationally.
- *Ability to access much larger metro area workforce pool.* With an in-city labor pool of over 15,000, McMinnville employers have ready access to a countywide labor market of nearly 50,000. For some specialty positions in which the local market may not have adequate depth, there is an even larger regional Mid-Valley labor pool on which to draw – much of which is located within a 20-40 mile drive from McMinnville. However, employers have noted the immediately available labor pool in McMinnville as an issue.
- *Moderate local & countywide unemployment.* The 2013 EOA noted that McMinnville unemployment in McMinnville (in 2010) was 9.3%—above the U.S. rate of 9.0% and below the statewide rate of 10.4%. Comparatively, unemployment has improved since the recession. In 2018, the unemployment rate in Yamhill County was 3.8%.
- *The Linfield/Chemeketa Community College connection.* As a top-ranked U.S. News & World Report college in the western U.S., Linfield College has established a west coast if not national reputation for academic excellence and value. In December 2019, Linfield was ranked #117 among national liberal arts colleges by the national magazine U.S. News & World Report.⁹¹ A question for the future may be how best to leverage this reputation for greater community and economic benefit.

The Chemeketa Community College – Yamhill Campus offers increasing opportunity for linkages with economic development, particularly through workforce training targeted to the needs of local employers. Another example of a partnership opportunity would be the creation of an entrepreneurship program – marketed cooperatively to area businesses. The Yamhill Valley Campus was expanded to a new location directly adjacent to the Highway 18 corridor in 2011.

- *Workforce training resources.* Workforce recruitment programs are available through the McMinnville WorkSource Center (Oregon’s public workforce system), Express Employment Professionals, and the Oregon Employment Department. For young professionals, career centers at Linfield College, Chemeketa Community College (Yamhill Valley Campus), George Fox University, Portland Community College (Newberg), and McMinnville High School, provide support for improving skills and

⁹¹ U.S. News. *Best Colleges Rankings*. Linfield College, 900 S.E. Baker St., McMinnville, OR. Rank information retrieved on December 19, 2019 from: <https://www.usnews.com/best-colleges/linfield-college-3198>

connecting them with businesses in the broader Yamhill County region.⁹² Additionally, the MDEP operates a summer internship program named McMinnville WORKS, which assists in connecting local businesses with talented collegiate youth.⁹³

Disadvantages:

- The most significant labor force disadvantage is indicated by relatively low rates of college graduates. Only 24% of McMinnville adults have college degrees, compared to 25% in Yamhill County and 32% in Oregon, according to 2013-2017 ACS 5-year estimates.
- A related disadvantage may lie with relatively high proportions of service workers – as compared with the entire county, Mid-Valley region, entire state and U.S. This is one reason that McMinnville household incomes are also below those of the comparison geographies.

However, in some cases this available labor force will constitute a comparative advantage for firms that depend on service occupations. This is especially the case if local work force skills can also be enhanced over time to allow for improved wages and career options.

Other Factors. In addition to the factors identified in conjunction with OAR 660-009-0015(4), there are other factors of importance specifically to the McMinnville community. These relate to local demographics and also land availability. Key advantages and disadvantages as noted from this and other similar analyses pertinent to McMinnville are outlined below.

Advantages:

- *Diverse industry mix.* McMinnville has a relatively diverse mix of industry for a community its size, a factor noted by the 2001 EOA. This diverse employment base is attributed, in part, to the actions of McMinnville Economic Development Partnership (MEDP). Also noted by the 2001 EOA, the 2007 MEDP Strategic Plan, and more recently in the 2019 *MAC-Town 2032 Economic Development Strategic Plan*), is that the local diversity of employment is due in part to the perceived quality of life in McMinnville. This factor is important to attracting businesses and entrepreneurs seeking quality communities for themselves and their employees.
- *A relatively young & diverse population – with increased Latino presence.* Median age of McMinnville residents is three years less than that of the entire state of Oregon. Higher proportions of residents are found locally for all age cohorts from childhood to young adults (to age 39). Companies looking for youthful workforce can find it in McMinnville.

⁹² McMinnville Economic Development Partnership (MDEP), Find Your Workforce. <https://www.mcminnvillebusiness.com/workforce>

⁹³ MDEP, The McMinnville WORKS Summer Internship Program. <https://www.mcminnvillebusiness.com/mcminnville-works-internship-program>

McMinnville is at the leading edge of Oregon's population transformation. The community's Latino population increased from less than 15% of the city-wide total in 2000 to 22% in 2013-2017 (well above the statewide proportion of 13%). Throughout the entire mid-Willamette Valley region as well as statewide, the Hispanic/Latino population is expected to represent an increasingly important component of the next generation of workers and of customers for commercial services. McMinnville has an opportunity to lead the way – providing new career options for Latino workers and business development options for Hispanic-owned businesses.

- *Small-town residential charm including a walkable downtown.* While quality of life is often considered difficult to quantitatively assess, perceptions of quality of life relative to other communities can affect business location and expansion decisions. This is especially the case for entrepreneurial and other individually owned, non-corporate enterprises.

The 2018 Economic Development Strategic Plan's mission states, "Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville's high quality of life... As we evolve, we prize our small-town roots and we maintain McMinnville's character."⁹⁴ As described by the website of the McMinnville Area Chamber of Commerce, "McMinnville is located in the western portion of Oregon's agriculturally rich Willamette Valley on U.S. Highway 99W."

The quiet, friendly city enjoys a central location to Pacific Ocean beaches (50 miles), the big city (Portland - 30 miles to the northeast), and the state capitol (Salem - 25 miles southeast), with an easy scenic drive to Mt. Hood and other ski areas. "McMinnville offers small-town charm in a full-service city."⁹⁵

Disadvantages:

- *Restricted population growth.* Since 2000, population has been increasing somewhat more rapidly than the state, but at an approximate 1.4% per year average rate. In the past, City services have been able to match without experiencing major fiscal issues. However, continued population growth at a somewhat reduced coordinated population growth rate averaging about 1.2% per year is now forecast through 2067. Constrained land supply is restricting growth and the cost of services is increasing faster than increases in assessed values.
- *Vulnerability to eroding incomes & standard of living.* As of 2013-2017, median household incomes for McMinnville are 14% below Yamhill County and 10% below statewide medians. Average wages for the McMinnville UGB are comparable to Yamhill County but below comparable regional, statewide and national figures.

⁹⁴ MAC-Town 2032 Economic Development Strategic Plan. 2019. p.10.

⁹⁵ Cited from www.mcminnville.org, as of September 2012.

As is occurring statewide and nationally, wages are now accounting for less than a 50% share of total personal income. Yamhill County residents also are more dependent on transfer payments than is the case regionally or nationally.

Future prosperity may be jeopardized to the extent that non-wage sources of income are subject to changing federal policies and the status of national/global investment markets – combined with social service needs for those dependent on transfer payments. Improving the ratio of wage to non-wage income will be influenced directly through the combination of providing more jobs and better paying job opportunities locally.

- *Tentative integration of Latino population into community & business leadership.* As noted with the 2007 MEDP Strategic Plan, in many communities with rapidly growing Hispanic populations, it has proven challenging to effectively draw Latinos into positions of community leadership and business ownership. The result can be lost opportunity for Latino business patronage and a more dynamic cultural environment that draws new blood, new ideas and new investment. A foundational strategy in the *MAC-Town 2032 Economic Development Strategic Plan* is to “improve systems for economic mobility and inclusion,” with emphasis on training, resources, and support for underrepresented entrepreneurs and workers.
- *Inadequacy of commercial and industrial buildable land.* The 2001/03 and 2013 EOA processes all concluded that the McMinnville UGB would experience a deficit of buildable commercial land over a 20-year time horizon. The 2013 EOA resulted in a 36-acre deficit of commercial land for the 2013 to 2033 planning period, and the results in Chapter 5 show deficits of both commercial and industrial land for the 2021-2041 planning period.

McMinnville’s Strengths, Weaknesses, Opportunities, and Threats

As part of the *MAC-Town 2032 Economic Development Strategic Plan*, McMinnville community members completed a SWOT analysis for economic development in McMinnville. It describes McMinnville’s Strengths, Weaknesses, Opportunities, and Threats.

<p>Strengths</p> <ul style="list-style-type: none"> • High quality of life to boast about and attract investment • Strong, widely-recognized downtown • Robust wine and tourism economy, as well as cultural (e.g. Air and Space Museum) and recreational amenities that bring visitors • Well known regionally and nationally as a destination for wine and food, with some supporting tourist assets • Balanced employment across industry sectors • Presence and involvement of postsecondary educational institutions (Linfield College and Chemeketa Community College) • Location advantages: <ul style="list-style-type: none"> • Good location in proximity to major metro area • High quality soils in surrounding areas, climate suited for agriculture • Natural environment assets nearby, including Yamhill River, access to the ocean and mountains • Inexpensive power and water, with sustainable sources • Major infrastructure assets: major highways, freight rail, airport • Various parks and recreational assets • Positive business climate perceptions and a sense of civic leadership 	<p>Weaknesses</p> <ul style="list-style-type: none"> • Relatively low educational attainment • A limited labor pool for local companies and those looking to relocate • Difficult access to and from I-5 and no near near-term possibility of a more direct connection • End-of -the-line location for wine country visitors coming from the Portland area • Lack of housing options • Low levels of professional and office office-using employment • Comparatively high poverty rates and low median household income
<p>Opportunities</p> <ul style="list-style-type: none"> • Proximity to Portland allows McMinnville to capitalize on urban infrastructure and amenities • Local airport has comparative advantages over other regional airports • Highway 99 bypass : future completion will improve access to McMinnville • A stronger framework for regional collaboration , improved opportunity in surrounding communities • Opportunity sites for new downtown development • New housing development – higher density , diversity of types, live live-work units • Improved connections to the University of Oregon and Oregon State University • Stronger branding and improved gateways into McMinnville • Innovation in agriculture and food systems • Wine -oriented makerspace • Food hub • \$6M gift to Linfield College’s wine program • Expanded culinary and craft beverage retail offerings 	<p>Threats</p> <ul style="list-style-type: none"> • Limited land availability for residential, commercial and industrial development • Regulatory challenges associated with UGB expansion • Worsening housing affordability • Brain drain due to local graduates leaving for other job markets • Absorption of projected growth without detrimental impacts to character, congestion, affordability • Future oversaturation of wine/tourism and increasing concentration of low-wage service industry jobs • Need to find a sustainable solution to homelessness • Future impacts of climate change on agriculture and related industries, including tourism

Target Industries

The characteristics of McMinnville will affect the types of businesses most likely to locate in the city. McMinnville's attributes that may attract firms are: McMinnville's access to land and resources; recreational opportunities; and quality of life.

2013 Updated Cluster Targets

The 2013 EOA recommended a short list of cluster target industries, described as:

- **Advanced Manufacturing.** Corresponds to an industry cluster pivotal to the Oregon Business Plan and Business Oregon (the Business Development Department). In McMinnville, this cluster is exemplified by major McMinnville employers including Cascade Steel, Meggitt Polymers and Composites, NW Unmanned Aerial Systems, Betty Lou's, Inc., and Freelin-Wade Co. Also included are agricultural producers ranging from employers in the emerging breweries to small boutique wineries as in the Granary district which also serve to complement the Yamhill County Agri-Business Economic and Community Development Plan.
- **Healthcare/Traded Sector Services.** Aimed to facilitate continued competitiveness and future expansion of non-manufacturing businesses that serve area residents plus customers located beyond the immediate McMinnville/Yamhill County community. Willamette Valley Medical Center and associated health care facilities can be expected to continue to experience employment growth in the years ahead. Examples of traded sector service activities are diverse, ranging from Linfield College to Evergreen International Airlines to Oregon Mutual Insurance. Also included is a significant component of small firms as the export-focused portion of McMinnville's fast growing and entrepreneurial service business sector such as Precision Analytical, Hurst Berry Farms Corporate Headquarters, and NW Rapid Manufacturing.

MAC-Town 2032 Economic Development Strategic Plan Target Sectors

Furthermore, Goals 4-8 of the *MAC-Town 2032 Economic Development Strategic Plan* outline the "target sector goals and strategies," as well as potential tasks and projects, as follows:

- **4. Sustain and Innovate within Traditional Industry and Advanced Manufacturing**
 - 4.1 Ensure workforce availability in trades and other mid-skill positions.
 - Encourage expansion and allocate resources for middle, high school, and community and technical college programs that encourage career exploration and skills development in trades and mid-skill occupations
 - Convene a panel of business leaders from traditional industry and advanced manufacturing employers in McMinnville to pioneer a collaborative approach to expanding apprenticeships and volunteering employee time to teach in-demand skills to individuals evaluating trade-based careers.

- 4.2 Connect traditional industry and advanced manufacturing to innovation resources for sustainable growth.
 - Highlight industrial innovation in McMinnville through periodic events, posts and other marketing, connecting innovators through storytelling and innovation partnerships.
 - Plan and participate in an industrial innovation working group or recurring social event to facilitate idea sharing and cross-pollination among business leaders.
 - Connect business leaders with regional innovation resources through Business Oregon and other innovation-oriented organizations.
 - Consider an international sister city program to share innovative practices.
- 4.3 Expand and market land availability for industrial activities.
 - Promote and market the McMinnville Industrial Park as a target area for advanced manufacturing investment within Yamhill County.
 - Coordinate with McMinnville Industrial Promotion to ensure leadership succession and continued engagement.
- **5. Foster Opportunity in Technology and Entrepreneurship**
 - 5.1 Become a place where small and medium technology firms can relocate and grow.
 - Foster physical connections to existing tech and entrepreneurship hubs through low-cost air services.
 - Market McMinnville as a destination for young and aspiring employees to find opportunity in business, entrepreneurship, computer and software engineering and other programs in Oregon's post-secondary institutions.
 - Survey local "tech" employers to identify current regulatory shortcomings or infrastructural needs for business relocation and expansion.
 - Promote the concept of McMinnville's "tech terroir" to emphasize McMinnville's potential assets to entrepreneurs, business owners and others involved in tech-oriented occupations.
 - Explore opportunities to improve connections to and otherwise better leverage McMinnville's dark fiber ring for business use.
 - Hire an innovation officer and/or complete a comprehensive strategy around smart cities and innovation in urban sustainability.
 - Create an "Invest in the Future" grant program that is targeted towards private investment and business development with living wage job outcomes.

- 5.2 Provide opportunities for co-working, teleworking, and other arrangements enabled by telecommunications technology.
 - Collaborate to develop a coworking space to foster entrepreneurship, innovation and to enable convenient telecommuting to regional employers in Portland or elsewhere. Explore unique partnership opportunities for cooperative or pop-up telecommuting spaces.
- 5.3 Incubate new businesses and start-ups.
 - Maintain a list of funding sources for start-up and expansion grants for locally-owned businesses.
 - Coordinate with partners to improve access to funding and resources available through local foundations, non-profits and other funders in McMinnville to empower local capacity-building efforts.
 - Study the feasibility of aggregators or cooperatives to efficiently distribute locally-made products from McMinnville businesses to larger metropolitan markets.
- 5.4 Create new talent pipelines for tech-related occupations.
 - Connect business leaders with interested local educators to develop extracurricular activities and to improve current curricula and align education and training with emerging employer needs.
 - Cultivate relationships with post-secondary institutions to ensure awareness of job opportunities in McMinnville, and ensure that McMinnville job opportunities are represented on school job boards, in job fairs, and other promotional events.
- **6. Be a Leader in Hospitality and Place-Based Tourism**
 - 6.1 Make downtown the best it can be.
 - Evaluate current zoning, historical districts and designations, and existing land use patterns, including underutilized parcels, to ensure that key downtown parcels offer the highest and best use for their location.
 - Communicate with County officials to explore the potential for a purpose-built County facility, outside of downtown, that includes a courthouse, commissioners offices, and clerks office.
 - Continue to evaluate new downtown events to diversify downtown events and activities and publicize emerging retailers or other non-retail organizations.
 - Evaluate the feasibility of improving or expanding the provision of public restrooms in the downtown area.
 - 6.2 Become the preferred destination for wine-related tourism.

- Collaborate to expand marketing of McMinnville and Yamhill Valley products and to improve national and international recognition of local wine.
- Connect hoteliers and other hospitality professionals in Oregon and elsewhere to local opportunities for high-quality additions to McMinnville’s current hospitality offerings.
- Collaborate with Travel Oregon to host a tourism workshop for McMinnville business owners to establish and leverage competitive advantages of over similar regional offerings.
- Leverage Linfield’s wine studies program to identify opportunities to increase visitation to the Willamette Valley region and to the viticultural areas immediately surrounding McMinnville
- 6.3 Diversify tourism destinations beyond wine.
 - Create branded itineraries for a range of activities and distribute online and in hard copy throughout McMinnville and at local and regional airports to offer pre-planned adventures for visitors.
 - Optimize social media performance by continuing and expanding the use of hash tags, branded icons, slogans, and other techniques to highlight and encourage sharing of McMinnville-based experiences.
 - Conduct a feasibility study to identify the potential costs and economic and fiscal impacts of building an indoor sports complex for local recreation and regional event use.
 - Engage the Wings and Waves water park to identify and pursue opportunities for growth and expansion.
 - Become a national destination for bicycle tourism and other recreational and leisure activities.
- 6.4 Market and promote McMinnville.
 - Develop and maintain robust relationships with Travel Oregon, and seek promotion opportunities accordingly.
 - Document and track the economic impact of tourism and outdoor recreation to Yamhill Valley communities.
 - Work with visit McMinnville and local hoteliers to identify gaps in available conference space and to establish a plan to expand McMinnville’s offerings for small and large conferences.
- **7. Align and Cultivate Opportunities in Craft Beverages and Food Systems**
 - 7.1 Maintain prominence in wine while looking for opportunities to innovate within supply chains, viticulture and production.

- Convene a technical assistance panel to identify new opportunities in urban wine-making and distribution and to establish a framework for collaboration and innovation in wine-making that best leverages public and private resources and identifies critical public/private partnerships.
 - Expand programming at IPNC to include a technical component for knowledge sharing between wine-makers and other professionals in viticulture and oenology.
 - Encourage collaborative research at Linfield and Chemeketa CC and facilitate connections between these schools and other viticulture programs nationally.
 - Proactively recruit beverage-makers that complement existing wineries and breweries, such as cideries and distilleries.
- 7.2 Locate higher job-density food and beverage activities within McMinnville.
- Ensure the sufficiency of regulations in applicable zones to accommodate urban wine-making and other non-retail aspects of the wine industry, including transportation and distribution.
 - Encourage further clustering of wine-oriented business in the Granary/Alpine District.
 - Contact wineries throughout the region to identify growth-oriented operations needing new or larger space, and target marketing and recruitment efforts accordingly.
 - Recruit food processing and production companies that offer synergies with wineries, such as charcuterie and cheese companies.
 - Coordinate with educational institutions to anticipate needs and ensure that McMinnville remains a hub for wine education while expanding culinary education and training locally
 - Hire an Agriculture Coordinator or Resource Officer to connect producers with resources and coordinate efforts to innovate within wine and agriculture.
 - Convene a group of wine-makers and entrepreneurs to evaluate the feasibility of a wine maker-space or similarly collaborative wine-making space for small producers, experimental products, or research.
 - Conduct a feasibility study and potentially complete a business plan for an integrated food hub and permanent, year-round farmer's market.
 - In partnership with other Oregon cities and counties, commission a study of value-added industry successes and best practices related to agriculture in western U.S. and Canadian communities.

- Liaise with researchers at OSU's Small Farms Program and other similar agricultural programs throughout the state and the region.
- Invite educators in the region to conduct research and teaching based in the Yamhill Valley, including possible distance learning and online college course options.
- Explore opportunities for expanded agricultural production using hydroponics, aquaponics and other similar cultivation methods
- 7.4 Open new markets for local agricultural products.
 - Establish a branding and marketing program for local agricultural products, such as "Yamhill County Grown" or similar.
 - Develop and market a local Farm-to-Table program by connecting Yamhill Valley farmers with local restaurants.
 - Explore the potential for a cooperative distribution model to move McMinnville's agricultural products to restaurants in the Portland metro.
- 7.5 Encourage a holistic approach to local food culture, improving connections to the local producers and cultivating a community of exceptional restaurants and culinary establishments.
 - Create a forum for local restaurateurs to connect with local agricultural producers and improve culinary offerings.
 - Work with stakeholders to establish a local demonstration or innovation kitchen that can be rented to test new recipes, host small events, or otherwise incubate local culinary endeavors.
 - Publicize local food offerings across all price levels through a branded guide to local cuisine, and distribute at and regional hotels, wineries, airports and other places frequented by travelers.
 - Partner on development of a "Farm-for-a-Day" agri-tourism program connecting local farming operations to paying guests.
 - Evaluate alignment of current food cart regulations with community goals.
- 7.6 Preserve natural assets while ensuring long-term stability in agricultural production.
 - Espouse an approach to environmental stewardship and encourage participation and support by local farmers for initiatives in keeping with this approach.
 - Establish and facilitate a business leadership group to identify solutions to sustainability challenges.

- Establish local resiliency infrastructure and training through programs like FEMA’s Community Emergency Response Teams (CERT) or other community-based models
- **8. Proactively Assist Growth in Education, Medicine and Other Sciences**
 - 8.1 Leverage institutional land assets and support planning for institutional growth and clustering.
 - Ensure that the Willamette Valley Medical Center can accommodate future growth through a master plan that includes supportive zoning, targeted capital improvements and other tools.
 - Use regulatory tools and constructive dialogue with businesses to encourage clustering of medical-professional uses near the Willamette Valley Medical Center and to create a regional anchor for health care.
 - Engage McMinnville’s large institutions in a dialogue about proactive planning for large and underutilized land assets.
 - Assess the desirability and potential feasibility of the creation of a “university district” or similar near one or more of McMinnville’s college campuses.
 - 8.2 Assist in recruitment and training to fill specific workforce needs.
 - Identify and fill gaps in education and training opportunities at local educational institutions for in-demand skills in “Eds and Meds” occupations.
 - Connect employers in education and health care to national skilled workforce pools through branding, recruitment, relocation incentives and other tools.
 - Explore public-private and other partnerships to improve amenities for students and employees, potentially including an expanded supply of student housing or housing appropriate for students on or near Linfield and Chemeketa campuses, and improved transportation to campuses and other institutions.
 - 8.3 Support the expansion of programmatic offerings at local institutions.
 - Work with Linfield College and Chemeketa CC to assess demand for education and training in health care and related services and to expand programming accordingly.
 - Engage Chemeketa CC leadership in a dialogue to explore the creation an on-site culinary and hospitality program.
 - Collaborate with leadership at the school district and at Linfield and Chemeketa to better engage Oregon’s four-year public universities.

- Connect local students with opportunities to work with OSU Extension, in labs or to participate in other UO and OSU programs prior to high school graduation.
 - Explore the creation of an aviation education program that leverages McMinnville's existing infrastructure and workforce assets.
 - Identify opportunities to bring programming offered at other Chemeketa Community College campuses to McMinnville, particular when serving established local industries.
 - Foster R&D opportunities for existing and emerging industries.
- 8.4 Improve and expand connections between key institutions and the City of McMinnville.
- Create safer and more intuitive physical connections to McMinnville from Linfield and Chemeketa, including better sidewalks, lighting and public transportation, particularly along Davis Street.
 - Proactively engage students in community events to improve dialogue between permanent residents and college attendees.

5. Forecast Employment and Land Needs

Goal 9 requires cities to prepare an estimate of the amount of commercial and industrial land that will be needed over a 20-year planning period. The estimate of employment land need and site characteristics for McMinnville is based on expected employment growth and the types of businesses that are likely to locate in McMinnville over the 5-, 10-, 20-, and 46-year periods. This chapter presents the buildable land inventory, analysis of target industries that build from recent economic trends, an employment forecast and associated land needs, and other land needs that aren't accounted for by the employment forecast.

EOA Update Process

The updated employment forecast and land needs estimates started with discussion of the assumptions used in the 2013 EOA. The project team conducted a detailed review of the 2013 assumptions and presented the assumptions, along with updated and new data to the Project Advisory Committee (PAC) for review and discussion during the September and October PAC meetings. The information generated considerable discussion at the PAC and ultimately resulted in PAC recommendations regarding the assumptions. The employment forecasts and land need estimates presented in this chapter reflect the PAC recommendations.

Buildable Lands Inventory

The buildable lands inventory is intended to identify commercial and industrial lands that are available for development for employment uses within the McMinnville UGB. The inventory is sometimes characterized as *supply* of land to accommodate anticipated employment growth. Population and employment growth drive *demand* for land. The amount of land needed depends on the type of development and other factors.

This chapter presents results of the commercial and industrial buildable lands inventory for the McMinnville UGB. The results are based on analyses of Yamhill County GIS property data and State of Oregon GIS employment data by ECONorthwest and reviewed by City staff. The remainder of this chapter summarizes key findings of the draft buildable lands inventory.

The general steps in the buildable lands inventory are:

1. Generate UGB "land base"
2. Classify lands by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

A key step in the buildable lands analysis is to classify each tax lot into a set of mutually exclusive categories based on development status. For the purpose of this study, all commercial

and industrial tax lots in the UGB are classified into one of the following categories and based on a tax lot's status as of January 2019:

- *Vacant land.* Vacant land is defined as tax lots either (a) Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or (b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements. This is consistent with OAR 660-009-005(14).
- *Vacant small lot.* The OAR 660-009-005(14) definition of vacant land does not include lots smaller than one half-acre. McMinnville has a meaningful number of developed sites with existing employment uses that are less than one half-acre. Remaining vacant lots (i.e., with no improvements) less than one half-acre are defined as vacant small lots.⁹⁶
- *Partially vacant land.* Partially vacant land is defined as tax lots between one and five acres occupied by a use that could still be further developed based on the zoning. The final determination of partially vacant land was based on a visual assessment of aerial imagery and City staff verification.
- *Developed land.* OAR 660-009-0005(1) defines developed land as “Non-vacant land that is likely to be redeveloped during the planning period.” Lands not classified as vacant, partially-vacant, or public or exempt are considered developed.
- *Public or exempt land.* Lands in public or semi-public ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches, institutions, and other semi-public organizations, and properties with conservation easements. Public lands were identified using the Yamhill County Assessment property tax exemption codes and City staff verification.

The next section provides a summary of the results of the commercial and industrial buildable lands inventory for the McMinnville UGB in both tabular and map formats. Appendix A. Buildable Lands Inventory presents the detailed methodology for developing the inventory.

⁹⁶ This development status classifications was added to the buildable lands inventory based on PAC recommendation at the February 27, 2020 meeting.

Buildable Lands Inventory Results

Exhibit 40 summarizes all land included in the employment land base (e.g., lands with plan designations that allow employment) in the McMinnville UGB. ECONorthwest used this land base in the buildable lands inventory for McMinnville. The land base includes traditional employment designations within the McMinnville UGB, which includes about 1,388 acres in 958 tax lots in total.⁹⁷

Exhibit 40. Tax lots and total acres in employment land, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Zone/Plan Designation	Number of taxlots	Percent	Total taxlot acreage	Percent (total)
Commercial	708	74%	580	42%
C-1 Neighborhood Business	1	0%	1	0%
C-2 Travel Commercial	3	0%	13	1%
C-3 General Commercial	641	67%	487	35%
O-R Office Residential	58	6%	12	1%
Commercial Plan Des.	4	0%	54	4%
EF-80 (County Zone)	1	0%	13	1%
Industrial	250	26%	809	58%
M-1 Light Industrial	43	4%	74	5%
M-2 General Industrial	199	21%	594	43%
M-L Limited Light Industrial	2	0%	115	8%
Industrial Plan Des.	6	1%	25	2%
Total	958	100%	1,388	100%

Development Status

Exhibit 41 shows commercial and industrial land in McMinnville by development status. Of the 1,388 total acres, about 857 acres (62%) are in classifications with no development capacity (or, “committed acres”). Of the remaining 532 acres, 111 acres (8%) are constrained and 421 acres (30%) are buildable land with development capacity. Appendix A. Buildable Lands Inventory provides more detail about the constraints associated with employment land, as recommended by the PAC.

⁹⁷ Note: the 2013 EOA reported a total acreage that included land with a public or semi-public (i.e., institutional) use. Since the 2020 update accounted for public and institutional land need separately, the resulting total acreage of employment land is lower.

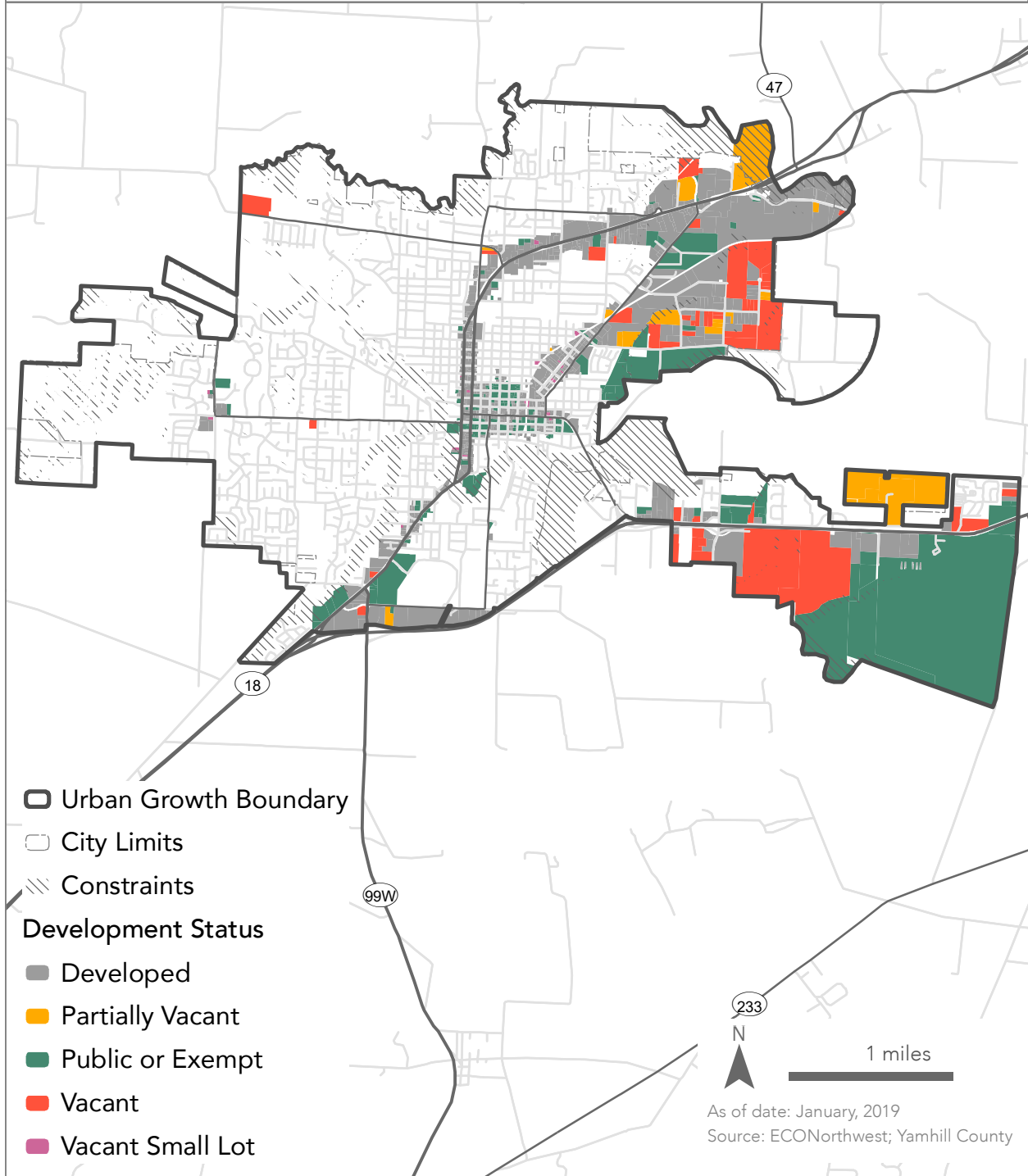
Exhibit 41. Employment acres by classification and plan designation, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Zone/Plan Designation	Total acres	Committed acres	Constrained acres	Buildable acres
Commercial	580	429	54	97
C-1 Neighborhood Business	1	1	0	-
C-2 Travel Commercial	13	0	-	12
C-3 General Commercial	487	415	6	66
O-R Office Residential	12	11	0	0
Commercial Plan Des.	54	1	48	5
EF-80 (County Zone)	13	-	-	13
Industrial	809	428	57	324
M-1 Light Industrial	74	54	5	15
M-2 General Industrial	594	347	26	221
M-L Limited Light Industrial	115	25	3	88
Industrial Plan Des.	25	2	22	-
Total	1,388	857	111	421

Exhibit 42. Employment land by classification with development constraints, McMinnville UGB, 2019

McMinnville Buildable Lands Inventory Commercial/Industrial Development Status



Vacant Buildable Land

The next step in the commercial and industrial buildable land inventory was to net out portions of vacant tax lots that are unsuitable for development. Areas unsuitable for development fall into three categories: (1) developed areas of partially vacant tax lots, (2) areas with service constraints, (3) areas with physical constraints (areas with wetlands, floodways, floodplain, and steep slopes as summarized in Appendix A).

Exhibit 43 shows unconstrained buildable acres for vacant and partially vacant land by zone (or plan designation). The results show that McMinnville has about 421 unconstrained buildable acres in commercial and industrial designations. Of this, 23% (97 acres) is in commercial designations, and 77% (324 acres) is in industrial designations.

Also, in McMinnville, it is common that development applications include approvals for “Planned Developments” which may modify the underlying zoning regulations, and may include an associated master plan for a property. Permitted uses in zoning districts may be amended to include other uses on a portion of the property, or certain uses otherwise permitted in the underlying zoning may be precluded by the Planned Development overlay regulations. For example, while the Evergreen property is zoned C-3 General Commercial, it is subject to a Planned Development overlay that restricts uses to certain tourism-related uses.

Exhibit 43. Employment land with unconstrained development capacity (vacant and partially vacant) by plan designation, McMinnville UGB, 2019

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Zone/Plan Designation	Total buildable acres	Buildable acres on vacant lots	Buildable acres on partially vacant
Commercial	97	63	33
C-1 Neighborhood Business	-	-	-
C-2 Travel Commercial	12	12	-
C-3 General Commercial	66	38	28
O-R Office Residential	-	-	-
Commercial Plan Des.	5	-	5
EF-80 (County Zone)	13	13	-
Industrial	324	307	17
M-1 Light Industrial	15	13	2
M-2 General Industrial	221	207	15
M-L Limited Light Industrial	88	88	-
Industrial Plan Des.	-	-	-
Total	421	370	50

Exhibit 44 shows the size of lots by plan designations for buildable employment land. McMinnville has 22 lots less than 0.5 acre (5.5 acres of land); 15 lots between 0.5 and 1 acres (11.8 acres of land); 34 lots between 1 and 5 acres in size (72.4 acres of land); 10 lots between 5 and 10 acres in size (64.6 acres of land); 3 lots between 10 and 20 acres in size (39.9 acres); and 4 lots over 20 acres in size (226.6 acres of land).

Exhibit 44. Lot size by plan designation, buildable acres, McMinnville UGB, 2019

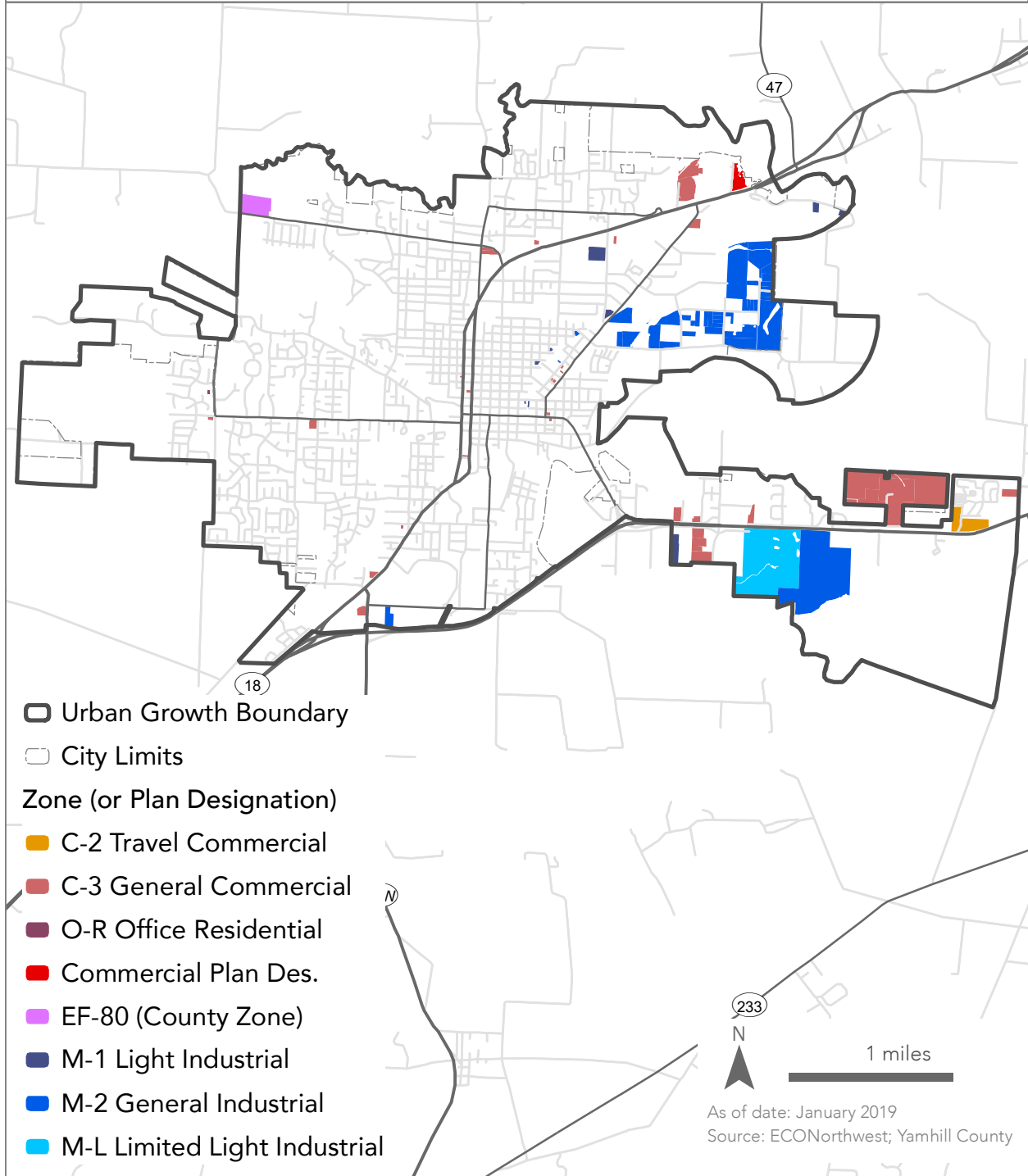
	Buildable acres in taxlots									Total
	<0.50 acre	0.50-0.99 acres	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00-19.99 acres	20.00-25.00 acres	25.01-49.99 acres	50.00+ acres	
Buildable acres on partially vacant tax lots										
<i>Commercial</i>	0.4	0.8	1.5	4.5	13.8	12.1	-	-	-	33
C-3 General Commercial	0.4	0.8	1.5	4.5	8.8	12.1	-	-	-	28
Commercial Plan Des.	-	-	-	-	5.0	-	-	-	-	5
<i>Industrial</i>	0.5	3.5	5.0	8.1	-	-	-	-	-	17
M-1 Light Industrial	0.1	-	2.3	-	-	-	-	-	-	2
M-2 General Industrial	0.4	3.5	2.7	8.1	-	-	-	-	-	15
Buildable acres on vacant tax lots										
<i>Commercial</i>	3.2	2.0	7.5	24.6	12.9	13.5	-	-	-	64
C-2 Travel Commercial	-	-	-	5.0	7.2	-	-	-	-	12
C-3 General Commercial	3.0	2.0	7.5	19.7	5.6	-	-	-	-	38
O-R Office Residential	0.2	-	-	-	-	-	-	-	-	-
Commercial Plan Des.	0.0	-	-	-	-	-	-	-	-	-
EF-80 (County Zone)	-	-	-	-	-	13.5	-	-	-	13
<i>Industrial</i>	1.4	5.4	15.8	5.3	37.9	14.4	24.3	25.2	177.1	307
M-1 Light Industrial	0.8	1.0	-	-	10.9	-	-	-	-	13
M-2 General Industrial	0.6	4.4	15.8	5.3	27.0	14.4	24.3	25.2	89.6	207
M-L Limited Light Industrial	-	-	-	-	-	-	-	-	87.5	88
Acreage subtotal	5.5	11.8	29.8	42.6	64.6	39.9	24.3	25.2	177.1	421
Number of partially vacant taxlots with buildable acreage										
<i>Commercial</i>	1	1	1	1	2	1	-	-	-	7
C-3 General Commercial	1	1	1	1	1	1	-	-	-	6
Commercial Plan Des.	-	-	-	-	1	-	-	-	-	1
<i>Industrial</i>	2	5	4	2	-	-	-	-	-	13
M-1 Light Industrial	1	-	2	-	-	-	-	-	-	3
M-2 General Industrial	1	5	2	2	-	-	-	-	-	10
Number of vacant taxlots with buildable acreage										
<i>Commercial</i>	15	3	5	8	2	1	-	-	-	34
C-2 Travel Commercial	-	-	-	1	1	-	-	-	-	2
C-3 General Commercial	13	3	5	7	1	-	-	-	-	29
O-R Office Residential	1	-	-	-	-	-	-	-	-	1
Commercial Plan Des.	1	-	-	-	-	-	-	-	-	1
EF-80 (County Zone)	-	-	-	-	-	1	-	-	-	1
<i>Industrial</i>	4	6	11	2	6	1	1	1	2	34
M-1 Light Industrial	2	1	-	-	2	-	-	-	-	5
M-2 General Industrial	2	5	11	2	4	1	1	1	1	28
M-L Limited Light Industrial	-	-	-	-	-	-	-	-	1	1
Lot subtotal	22	15	21	13	10	3	1	1	2	88

Source: ECONorthwest analysis of data from Yamhill County and City of McMinnville.

Exhibit 45. Buildable employment land by zone with development constraints, McMinnville UGB, 2019

McMinnville Buildable Lands Inventory

Vacant and Partially Vacant Commercial and Industrial Land



Forecast of Employment Growth and Commercial and Industrial Land Demand

Demand for industrial and commercial land will be driven by the expansion and relocation of existing businesses and by the growth of new businesses in McMinnville. The employment projections in this section build off of McMinnville's existing employment base, assuming overall future growth is similar to Yamhill County's long-term historical employment growth rates.

The employment forecasts do not take into account a major change in employment that could result from the location (or relocation) of one or more large employers in the community during the planning period that would account for a substantial portion of the overall forecast. Such a major change in the community's employment would exceed the growth anticipated by the city's employment forecast and its implied land needs (for employment, but also for housing, parks, and other uses). Major economic events, such as the successful recruitment of a very large employer, are difficult to include in a study of this nature. The implications, however, are relatively predictable: more demand for land (of all types) and public services.

The 2013 EOA defined the process of projecting demand for industrial and commercial land as a series of 10 steps. The table below outlines these steps and identifies the recommendations, if applicable, decided by the PAC during meetings held between July and November of 2019. Generally, the PAC started with a discussion of the assumptions used in the 2013 EOA, and reviewed alternatives for the 2020 update.

Exhibit 46. Steps to project demand for commercial and industrial land in McMinnville

Step	Purpose	Options	Recommended Option
Step 1. Set Forecast Time Period	Establish the 20-year planning period; select a base year	2021-2041 with adjustments to account for 2019-21	The state requires a 20-year planning period; 2021-41 is used for consistency with the Housing Needs Analysis
Step 2. Population Forecast	The population forecast does not serve a direct purpose other than being the basis for one of the safe harbor employment forecast methods.	Use the required PSU forecast.	State policy allows no flexibility in this process.
Step 3. Evaluate UGB Employment Trend	Inform allocations of employment to land use types.	This is an analytical step and does not require assumptions.	
Step 4. Evaluate and Select Job Forecast	Develop a 20- and 46-year employment forecast.	Option 1 (low-growth, 1.13%): OED safe harbor method Option 2 (medium-growth, 1.36%): PSU safe harbor population forecast Option 3 (high-growth, 1.70%): Non-safe harbor method used as the baseline in the 2013 EOA.	Option 2
Step 5. Allocate Job Growth by Land Use Type Scenarios	Allocate jobs to land using land use types.	Option 1: 2013 EOA Method Option 2: Four land use types (service commercial, retail, industrial, govt) Option 3: Five land use types (the four above plus a tourism category).	Option 3
Step 6. Allocate Job Growth by Land Development Status	This step makes deductions for employment that will not require vacant land.	Option 1: 17% (per 2013 EOA) Option 2: Alternative assumption justified by PAC.	5% for all land use types
Step 7. Apply Job Density Factors	Analyze existing job densities to inform density factors (expressed in employees per acre – EPA)	Option 1: use factors from the 2013 EOA Option 2: use modified factors based on analysis	11 employees per acre for industrial land use type 23 employees per acre for commercial land use types
Step 8. Estimate 20-Year Employment Land Demand	Apply all of the assumptions to the land demand model to estimate 20- and 46- year land demand.	No options – this is an analytical step	n/a
Step 9. Estimate Additional Land Need Not Determined in Forecast	This step accounts for other types of employment land need including other needed sites and retail leakage.	Option 1: Do not assume additional need Option 2: Provide findings and analysis that supports additional land needs.	Option 2.
Step 10. Compare Land Demand to Supply	Compare land need to the supply as documented in the buildable land inventory. Conduct one further step of assessing land suitability.	No options – this is an analytical step	n/a
Step 11. Evaluate Policy Options and Objectives	This update will not include a top to bottom review of policy options and objectives – those were assessed in the 2013 EOA and in the 2019 EDSP. Some modifications may be required to reflect changing conditions.		

Employment Base for Projection

This section addresses Step 1: Set Forecast Time Period, Step 2: Population Forecast, and Step 3: Evaluate UGB Employment Trend.

The purpose of the employment projection is to model future employment land need for general employment growth. The forecast of employment growth in McMinnville starts with a base of employment growth on which to build the forecast. Exhibit 47 shows ECONorthwest's estimate of total employment in McMinnville in 2017.

To develop the figures, ECONorthwest started with estimated covered employment in the McMinnville UGB from confidential Quarterly Census of Employment and Wages (QCEW) data provided by the Oregon Employment Department. Based on this information, McMinnville had about 14,964 covered employees in 2017.

Covered employment, however, does not include all workers in an economy. Most notably, covered employment does not include sole proprietors. Analysis of data shows that *covered* employment reported by the Oregon Employment Department for Yamhill County is only about 76% of *total* employment reported by the U.S. Department of Commerce.⁹⁸ We evaluated this ratio for each industrial sector for Yamhill County and used the resulting ratios to determine the number of non-covered employees. This allowed us to determine the total employment in McMinnville. Exhibit 47 shows McMinnville had an estimated 20,990 *total* employees within its UGB in 2017.

The PAC approved the use of the covered to total employment ratios shown in Exhibit 47.

⁹⁸ **Covered** employment includes employees covered by unemployment insurance. Examples of workers not included in covered employment are sole proprietors, some types of contractors (often referred to as "1099 employees"), or some railroad workers. Covered employment data is from the Oregon Employment Department.

Total employment includes all workers based on data from the U.S. Department of Commerce. Total employment includes all covered employees, plus sole proprietors and other non-covered workers.

Exhibit 47. Estimated total employment by sector, McMinnville UGB, 2017

Sector	Generalized Land Use Type	Covered Employment	Estimated Total Employment	Covered % of Total
Agriculture, Forestry, and Mining	Industrial	356	356	100%
Construction	Industrial	585	852	69%
Manufacturing	Industrial	2,277	2,549	89%
Wholesale Trade	Industrial	127	180	71%
Retail Trade	Retail Commercial	2,170	2,842	76%
Transportation and Warehousing and Utilities	Industrial	140	250	56%
Information	Office & Commercial Services	127	211	60%
Finance and Insurance	Office & Commercial Services	459	912	50%
Real Estate and Rental and Leasing	Office & Commercial Services	113	867	13%
Professional and Technical Services	Office & Commercial Services	367	998	37%
Management of Companies	Office & Commercial Services	117	161	73%
Admin. and Support/Waste Mgmt/Remediation Serv.	Office & Commercial Services	584	1,044	56%
Health Care and Social Assistance; Private Education Serv.	Office & Commercial Services	3,159	4,457	71%
Arts, Entertainment, and Recreation	Tourism Services	168	458	37%
Accommodation and Food Services	Tourism Services	1,503	1,666	90%
Other Services	Office & Commercial Services	630	1,105	57%
Government	Government	2,082	2,082	100%
Total Non-Farm Employment		14,964	20,990	76%

Source: 2017 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department.

Forecast growth rates

This section addresses Step 4: Evaluate and Select Job Forecast.

The employment forecast covers the 2021 to 2067 period, with increments of 5, 10, 20, and 46-years. This forecast requires an estimate of total employment for McMinnville in 2021. While there is no required method for employment forecasting, OAR 660-024-0040(9) sets out some optional “safe harbors”⁹⁹ that allow a city to determine employment land need. The PAC evaluated three options for the forecast, including use of two safe harbors from OAR 660-024.

- **Low-growth scenario (1.13%).** The low-growth option uses the safe harbor that allows a city to base their employment forecast on regional employment projections from the Oregon Employment Department (OED).¹⁰⁰ The regional employment projection for the

⁹⁹ A safe harbor is an assumption that a city can use in a housing needs analysis that the State has said will satisfy the requirements of Goal 14. OAR 660-024 defines a safe harbor as, “... an optional course of action that a local government may use to satisfy a requirement of Goal 14. Use of a safe harbor prescribed in this division will satisfy the requirement for which it is prescribed. A safe harbor is not the only way or necessarily the preferred way to comply with a requirement and it is not intended to interpret the requirement for any purpose other than applying a safe harbor within this division.”

¹⁰⁰ OAR 660-024-0040(9) states: “The following safe harbors may be applied by a local government to determine its employment needs for purposes of a UGB amendment under this rule, Goal 9, OAR chapter 660, division 9, Goal 14 and, if applicable, ORS 197.296.

(a) A local government may estimate that the current number of jobs in the urban area will grow during the 20-year planning period at a rate equal to either:

(A) The county or regional job growth rate provided in the most recent forecast published by the Oregon Employment Department; or

Mid-Valley Area (Linn, Marion, Polk, and Yamhill Counties) for the 2017 to 2027 period shows that employment will grow at an average annual growth rate of 1.13%.

- **Medium-growth scenario (1.36%).** The medium-growth option is another safe harbor, based on the rate of growth from the current population projections from Portland State University.¹⁰⁰ The coordinated population forecast for the McMinnville UGB between 2021 and 2041 shows that population will grow at an average annual growth rate of 1.36%, and long-term average annual growth rate between 2021 and 2067 of 1.19%.
- **High-growth scenario (1.70%).** The high-growth option aligns with the moderate (referred to as “baseline”) forecast rate used in the 2013 EOA. The 2013 EOA evaluated low, moderate, and high growth alternative scenarios. At the time the 2013 EOA was completed, the OED forecast for the Mid-Valley region was the “low-growth” scenario at 1.5%, and the “high-growth” scenario of 1.9% was based on the OED forecast for the Portland metro area. This option does not conform to the safe harbors in OAR 660-024-0040(9) and would require substantial evidence as a factual basis for choosing a non-safe harbor growth rate. Examples of substantial evidence to justify a non-safe harbor growth rate include adopted and relevant economic development policies or site needs considerations.

Exhibit 48 shows employment growth in McMinnville between 2021 and 2041, as well as 2021 and 2067, based on the average annual growth rate of each forecast scenario. The estimated number of employees for the beginning of the planning period is extrapolated from the estimate of total employment in 2017 from Exhibit 47 (20,990 employees), using the appropriate forecast rate for each scenario.

For the 2021 to 2041 period, the low-growth scenario would result in an increase of 5,544 employees; an increase of 6,885 employees in the medium-growth scenario; and an increase of 9,003 employees in the high-growth scenario.

(B) The population growth rate for the urban area in the appropriate 20-year coordinated population forecast determined under rules in OAR chapter 660, division 32.

Exhibit 48. Employment growth scenarios, total employment, McMinnville UGB, 2021–2067

Year	Low-growth (based on OED forecast)	Medium-growth (based on PSU population forecast)	High-growth (based on 2013 EOA moderate forecast)
2021	21,957	22,157	22,454
2026	23,228	23,708	24,429
2031	24,573	25,367	26,577
2041	27,501	29,042	31,457
2067	36,853	38,158	48,759
Change 2021 to 2041			
Employees	5,544	6,885	9,003
Percent	25%	31%	40%
AAGR	1.13%	1.36%	1.70%
Change 2021 to 2067			
Employees	14,896	16,001	26,305
Percent	68%	72%	117%
AAGR	1.13%	1.19%	1.70%

Source: ECONorthwest

The PAC recommended using the medium-growth option (1.36% AAGR) for the employment forecast for the 2021-2041 planning period. The results of the employment forecast presented in the EOA reflect this growth rate.

Allocation to land use types

This section addresses Step 5: Allocate Job Growth by Land Use Type Scenario

The next step in forecasting employment is to allocate future employment to broad categories of land use. Firms wanting to expand or locate in McMinnville will look for a variety of site characteristics, depending on the industry and specific circumstances. For example, small retail stores may look for an existing space in a shopping center in an area with high visibility for attracting customers, while a new food product manufacturer may need a mid-sized site of 5 to 10 acres in an area with direct access to a state highway.

At direction from the PAC, ECONorthwest grouped employment into five broad proposed categories of land use based on North American Industrial Classification System (NAICS): industrial, retail commercial, office and commercial services, tourism services, and government.¹⁰¹ This approach differs from the 2013 EOA, which defined three land use types—commercial, industrial, and institutional. The primary difference in the proposed updated categories is a separation of different types of commercial land into retail, office, and tourism commercial. Some of these land use types might have different site needs considerations, and these land use types better align with the City’s economic development goals, such as a focus on tourism-related employment. This was based on identifying commercial sub-types associated with the target industries in the Economic Development Strategy, to assess whether land needs

¹⁰¹ The generalized land use type categories are defined by the NAICS sectors listed in Exhibit 47.

might differ for these commercial sub-types. ECONW informed the PAC that the sub-types could ultimately be recombined at the end of the analysis if the differentiation didn't prove useful. Ultimately, the three commercial subtypes were recombined into a single commercial category, as the employment sectors didn't necessarily correlate to distinct land uses that would be differentiated through zoning. For example, the NAICS codes included in the tourism category included food and beverage, which are typically permitted in the same zones as retail commercial. Ultimately, the land uses almost exclusively related to destination tourism uses that weren't consistent with the employment density factors were instead addressed as other needed sites and that is addressed in more detail in the respective section in this chapter.

Exhibit 49 shows the expected share of employment by land-use type in 2021 and the forecast of employment growth by land-use type in 2041 in the McMinnville UGB, and Exhibit 50 shows employment growth for all growth increments. The PAC recommended the future share of land use types will align with both projections from the Oregon Employment Department (OED) for the Mid-Valley Area, as well as economic development goals and policies as stated in the *MAC-Town 2032 Economic Development Strategic Plan* and *Three Mile Lane Area Plan*.

OED projects that in the 2017 to 2027 period, the share of future employment in industrial sectors will increase; the share of retail commercial as well as government employment will decrease; and the share of office and commercial services and tourism services will increase.¹⁰² These trends closely align with McMinnville's future economic development goals, though the *MAC-Town 2032 Economic Development Strategic Plan* estimates growth in office employment, as well as an emphasis on tourism-related services, advanced manufacturing (i.e., industrial), and food and beverage manufacturing target industries.

The values highlighted in green in Exhibit 49 show the future share of total new employment for each land use type in 2041, based on the information summarized above. **The green highlighted percentages in the 2041 “% of Total” column are assumptions recommended by the PAC.**

Exhibit 49. Forecast of employment growth by land use type, McMinnville UGB, 2021–2041

Land Use Type	2021		2041		Change 2021 to 2041
	Employment	% of Total	Employment	% of Total	
Industrial	4,431	20%	6,099	21%	1,667
Retail Commercial	3,102	14%	3,485	12%	383
Office & Commercial Services	10,192	46%	13,650	47%	3,458
Tourism Services	2,216	10%	3,485	12%	1,269
Government	2,216	10%	2,323	8%	108
Total	22,157	100%	29,042	100%	6,885

Source: ECONorthwest

¹⁰² Oregon Employment Department Industry Employment Forecast 2017-2027, Mid-Valley Area (Linn, Marion, Polk, and Yamhill Counties). Published June 26, 2018.

Exhibit 50. Forecast of employment growth by land use type, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	New Employment Growth			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	417	834	1,667	3,582
Retail Commercial	96	192	383	1,477
Office & Commercial Services	864	1,729	3,458	7,742
Tourism Services	317	635	1,269	2,363
Government	27	54	108	837
Total	1,721	3,443	6,885	16,001

Source: ECONorthwest

Estimate of Demand for Commercial and Industrial Land

The next step in the employment forecast is to estimate the demand of commercial and industrial land.

The estimate of demand for commercial and industrial land included three components: (1) employment forecast and employment density assumptions, with deduction for employment that won't require vacant employment land, (2) recapture of existing retail leakage, and (3) other needed sites which are not accounted for in the average employment density factors; these are target industries and uses in the *MAC-Town 2032 Economic Development Strategic Plan*. In addition, employment for public/institutional uses was backed out of the employment forecast and land needs were calculated separately.

The employment forecast includes all new employment in the McMinnville UGB. Some of this employment, however, will not be located on vacant commercial or industrial land. Other lands that will accommodate new employment growth include residential land and redevelopment sites. Another factor in estimating the demand for commercial and industrial land is consideration for employment density, or employees per acre. Appendix B provides additional background information developed for the PAC to make recommendations for new employment on vacant commercial and industrial land, as well as employment density. Government employment was also backed out of the forecast because government land need was addressed as part of the public/institutional land need process.

The next section describes the approach for (1) estimating employment on vacant commercial and industrial land with considerations for employment on redevelopment sites, and (2) estimating employees per acre by land use type.¹⁰³

¹⁰³ Note: the government land use type is excluded from the remaining employment forecast calculations, as we account for government employment in calculations for other land needs. Deductions for private education were also made in the office and commercial services category, based on employment reported (IPEDS data) for Linfield College of 360 employees. Adjustments for future employment at Linfield assumed the share of Linfield employment would remain the same.

Employment that does not require vacant commercial and industrial land

This section addresses Step 6: Allocate Job Growth by Land Development Status

Some employment growth in McMinnville will not require vacant (or partially vacant) employment land over the planning period. This includes redevelopment of areas with existing employment, where redevelopment increases the intensity of employment uses (i.e., more employees are accommodated on the same amount of land). The 2013 EOA assumed that 17% of employment for each land use type would not require vacant commercial or industrial land.¹⁰⁴ **Based on the information presented in Appendix B, the PAC determined that a reasonable assumption would be 5% refill/redevelopment for both commercial and industrial employment.**

Exhibit 51 shows the estimate of employment on vacant commercial and industrial land by land use type for each scenario, using the 5% assumption for employment that will occur through redevelopment, refill, or on non-employment sites. The table (reading left to right) starts with the number of new employment growth calculated over the planning period; then calculates the amount of employment that does not require vacant employment land based on 5% of the new employment growth; and results in the amount of new employment growth on vacant industrial and commercial land. From this point in the analysis forward, the commercial land use types (i.e., retail commercial, office and commercial services, and tourism services) were combined as the land needs for these land use types overlap.

Exhibit 51. Estimate of employment on vacant land by land use type, McMinnville UGB, 2021–2041

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	83	1,584
Commercial	4,998	249	4,749
Total	6,665	332	6,333

Source: ECONorthwest Note: As described above, government employment is calculated separately and is not included in Exhibits 45-48.

Exhibit 52. Estimate of employment on vacant land by land use type, McMinnville UGB, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	Employment on Vacant Land			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	396	792	1,584	3,403
Commercial	1,187	2,373	4,749	10,756
Total	1,582	3,165	6,333	14,159

Source: ECONorthwest

¹⁰⁴ The 2013 EOA used a 17% assumption, based on a PAC recommendation. The 2001/03 EOA assumed 14-17%, depending on the land use type. This EOA updated used 5% based on empirical analysis that showed refill and redevelopment rates didn't achieve employment densities that would be associated with 17% refill/redevelopment on employment land.

Employment density

This section addresses Step 7: Apply Job Density Factors and Step 8: Estimate 20-Year Employment Land Demand.

This section shows the resulting demand for vacant (including partially vacant) land in McMinnville over the 20-year period, accounting for potential variations in employment density. The assumptions about employment density are based on the 2013 EOA, as stated in text excerpt below. Based on information provided in Appendix B, the PAC recommended using an employment density of 11 employees per acre for industrial employment and 23 employees per acre for commercial employment (i.e., retail commercial, office and commercial services, and tourism services). Further explanation of employment density and the conversion of net to gross acres is provided below.

- **Employment density.** Employees per acre is a measure of employment density based on the ratio of the number of employees per acre of employment land that is developed for employment uses. Employment densities factor in all employment on a site, whether full or part time or different shifts in a workday. Thus, employment at a given site may overrepresent the number of employees at a site at a specific time. For example, retail service locations often have many part-time employees who work different shifts. Despite the potential for overestimating the number of employees on site at a given time, the data do provide a reasonable estimate of total employment on a site and therefore total employees per acre, and this is reflected in the analysis of historic employment density, too.
- **Conversion from net-to-gross acres.** The data about employment density is in *net* acres, which does not include land for public right-of-way.¹⁰⁵ Future land need for employment should include land in tax lots needed for employment plus land needed for public right-of-way. One way to estimate the amount of land needed for employment, including public right-of-way, is to convert from *net* to *gross* acres based on assumptions about the amount of land needed for public right-of-way.¹⁰⁶ A net-to-gross conversion is expressed as a percentage of gross acres that are in public right-of-way.

Based on empirical evaluation of McMinnville’s existing net-to-gross ratios, ECONorthwest uses a net-to-gross conversion factor of 6% for industrial and 18% for commercial, retail, and tourism.

Using these assumptions, the forecasted growth of 6,333 new employees between 2021 and 2041 will result in the following demand for vacant (and partially vacant) employment land: 153

¹⁰⁵ The 2013 EOA does not describe a method for converting net to gross acres.

¹⁰⁶ OAR 660-024-0010(6) uses the following definition of net buildable acre. “Net Buildable Acre” consists of 43,560 square feet of residentially designated buildable land after excluding future rights-of-way for streets and roads. While the administrative rule does not include a definition of a gross buildable acre, using the definition above, a gross buildable acre will include areas used for rights-of-way for streets and roads. Areas used for rights-of-way are considered unbuildable.

gross acres of industrial land and 252 gross acres of commercial land (Exhibit 53). Exhibit 54 shows the demand for vacant land to accommodate employment growth in the 5-, 10-, 20-, and 46-year planning periods.

Exhibit 53. Demand for vacant land to accommodate employment growth, McMinnville UGB, 2021-2041

Land Use Type	New Emp. on Vacant Land	Employees per		Land Demand (Net Acres)	Land Demand (Gross Acres)
		Acre (Net Acres)			
Industrial	1,584	11		144	153
Commercial	4,749	23		206	252
Total	6,333			351	405

Source: ECONorthwest

Exhibit 54. Demand for vacant land to accommodate forecasted employment growth, McMinnville UGB, 2021-2026, 2021-2031, 2021-2041, and 2021-2067

Land Use Type	Land Demand (Gross Acres)			
	5-year (2021-2026)	10-year (2021-2031)	20-year (2021-2041)	46-year (2021-2067)
Industrial	38	77	153	329
Commercial	63	126	252	570
Total	101	202	405	899

Source: ECONorthwest

Estimated Land Need 2019-2021

The buildable lands inventory (BLI) shows employment land status as of January 2019, while the forecast of need for employment land begins in 2021. We estimated land needed for employment between 2019 and 2021 using the same assumptions as the other planning periods. McMinnville employment in 2019¹⁰⁷ was about 21,566 employees, resulting in an increase of 591 employees between 2019 and 2021. About 496 of these 591 employees will require vacant commercial or industrial land. Using data on vacant unconstrained land from Exhibit 43, Exhibit 55 shows that McMinnville has supply of 324 gross acres of industrial land and 97 gross acres of commercial land. Between 2019 and 2021, the McMinnville UGB has a demand for 11 gross acres of industrial land and 20 gross acres of commercial land. This results in a surplus of 313 gross acres of industrial and 77 gross acres of commercial land as of 2021. These values are used as the land supply in the land sufficiency calculations starting in 2021.

¹⁰⁷ 2019 total employment was extrapolated from the 2017 Quarterly Census of Employment and Wages, using the methods described in the “Employment Base for Projection” section. We assumed the 20-year growth rate of 1.36%.

Exhibit 55. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2019-2021

Land Use Type	Land Supply		Land Sufficiency (Deficit)
	(Suitable Gross Acres)	Land Demand (Gross Acres)	
Industrial	324	11	313
Commercial	97	20	77

Source: ECONorthwest

Retail Leakage

In 2018, the city of McMinnville initiated development of a plan for the Three Mile Lane Area Plan (3MLAP). The project updates the 1981 Three Mile Lane Overlay District (amended in 1994) and the 1996 Highway 18 Corridor Refinement Plan. The 3MLAP will integrate a wide range of land uses and a multi-modal transportation system that serves both local and state transportation needs and provides active connectivity within the plan area as well as to the City’s downtown core. Leland Consulting Group performed the market analysis for the project.

The project analyzed a market area that represents the area from which the most demand for residential, commercial, and industrial uses will originate, and where most of the competitive development is located. The market area (shown in Exhibit 6 and Exhibit 38) is roughly bounded by the Willamette River to the east, Tillamook State Forest to the west, and Polk County to the south—although the market does extend into Polk County, there are few residents or jobs located in this area—and the City of Yamhill to the north. The study includes a retail leakage analysis, with the express intent that the city would capture some of the retail spending that is occurring in the larger Salem, Portland, and I-5 corridor markets.¹⁰⁸

Leland characterizes retail leakage as follows:

“Retail sectors in which household spending is not fully captured are called “leakage” categories, while retail categories in which sales are higher than estimated household demand generated by existing residents are called “surplus” categories. A retail sales surplus indicates that a community pulls consumers and retail dollars in from outside the trade area, thereby serving as a regional market. Conversely, when local demand for a specific product is not being met within a trade area, consumers are going elsewhere to shop, creating retail leakage.”¹⁰⁹

The study reports overall demand for 529,000 square feet of retail space in the study area for a 10-year period (Table ES-3, pg 4). The study also shows a breakdown of the 10-year demand broken out by demand from household growth, leakage recapture, and replacement space (Figure 38, pg 51). Data provided by Leland show that the leakage

¹⁰⁸ Note: As discussed in Chapter 3, while retail environments are changing at a national level, the extent to which e-commerce will replace all types of retail is unclear and unlikely. The need for certain types of retail will persist both nationwide and in places like McMinnville.

¹⁰⁹ McMinnville Three Mile Lane Area Plan: Market Analysis, Leland Consulting Group, April 2019.

recapture component of the 10-year demand is 131,808 square feet. This is an element of retail land need that is not reflected in the employment forecast.

Exhibit 56 shows an estimate of land needed to accommodate recapture of retail leakage. The analysis builds from the Leland estimates and assumes 470 square feet per employee. The square feet per employee assumption comes from Metro’s Employment Density Study (pg 17). Dividing recapturable existing leakage by square feet per employee provides an estimate of the amount of employment generated by the space; dividing that by the PAC approved assumption of 23 employees per acre yields the land need assumption. The results show that McMinnville needs an additional 12.2 acres of land to accommodate recapture of retail leakage.

Exhibit 56. Demand for Regional Commercial and Office Space

Sector	Recapture-able Existing Leakage (s.f.)	SF/Emp	Employees (20 years)	Employees Per Acre (EPA)	Acres
Furniture & Home Furnishings	6,257	470	13	23	0.6
Electronics and Appliance	4,450	470	9	23	0.4
Building Material, Garden Equip	-	470	-	23	-
Food & Bev. (grocery)	0	470	-	23	-
Health & Personal Care	-	470	-	23	-
Clothing & Accessories	9,600	470	20	23	0.9
Sporting Gds, Hobby, Books, Music	6,076	470	13	23	0.6
General Merchandise	83,278	470	177	23	7.7
Misc. Store Retailers	-	470	-	23	-
Food & Drinking Places	21,611	470	46	23	2.0
Other (incl. cinema, prof./med office, banks)	538	470	1	23	0.0
Totals	131,808		280		12.2

Source: Demand estimates by Leland Consulting Group; sq ft per employee assumptions from the Metro Employment Density Study; EPA assumptions from EOA PAC

Land Needs Not Addressed in the Average Employment Densities (Other Needed Sites)

This section addresses Step 9: Estimate Additional Land Need Not Determined in Forecast

Statewide planning Goal 9 requires cities to “Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies.”¹¹⁰ McMinnville has identified several employment land needs that have other needed sites. These related to target industry sectors identified in the *MAC-Town 2032 Economic Development Strategic Plan*. These are addressed in the respective subsections below, describing these land needs and the factual basis for each need.

Other Needed Sites Calculated Separately from Average Employment Densities

The City’s Economic Development Strategic Plan provides the City’s economic development opportunities, vision, and strategy. The City need not be bound by history and past trends, but

¹¹⁰ <https://www.oregon.gov/lcd/OP/Documents/goal9.pdf>

can rather seek to achieve the community's economic vision, supported by data, and realistically achievable given competitive advantage, as supported by data and emerging trends.

Statewide Planning Goal 9 states that comprehensive plans for urban areas shall: "Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies." This indicates that cities have some degree of flexibility in determining land needs as long as (1) they are consistent with plan policies, and (2) are justifiable. The land needs described in this section are all identified in existing city plans, but are not considered in the employment forecast.

The needs analysis also needs to account for these other needed sites for uses anticipated as part of the Economic Development Strategy. Below are some examples of other needed sites in McMinnville and other Oregon communities:

- For example, when McMinnville's UGB was established in the early 1980s, it wasn't anticipated that there would be a need for a large site for the Evergreen Museum or water park. These facilities occupy approximately 70 acres of their sites. These have substantial economic benefits to the McMinnville economy. In 2018, they had over 88,000 visitors. They also require large sites, differ from traditional employment uses, don't fit neatly within an employment density assumptions, and they consume a significant amount of the land supply in the UGB.
- Another example of a needed site for tourism is the US Cellular Park in Medford. The park is 132 acres with 15 sports fields. The 2018 Annual Report shows that in 2018 it generated \$11.5 million estimated economic impact, surpassing \$100 million cumulative local economic impact since its inception in 2008, helping to sustain 110 jobs in the local economy based on the direct spending of visiting teams.¹¹¹
- The City of Redmond is expanding its UGB to add nearly 949 acres for several employment uses. This allows the Deschutes County Fair and Expo Center to build out and become more of a regional player (with an additional 120 acres), while providing a new home for the Oregon National Guard's Redmond Armory (approximately 40 acres). It also provides nearly 700 acres for large industrial projects.¹¹²
- The Allison Inn and Spa in Newberg takes advantage of place-based tourism. It is on a 35 acre site in the City of Newberg. It is situated adjacent to rural land with surrounding views of wine country and farmland. It includes accommodations, restaurant and bar, spa and meeting and event center. This could be considered an adaptation of one of the

¹¹¹ U.S. Cellular Community Park Annual Report. Medford Parks, Recreation & Facilities. 2018. <https://www.sportsmedford.com/Assets/48/2018%20USCCP%20Annual%20Report.pdf>

¹¹² "Fairground expansion, armory and more coming to SE Redmond." Stephen Hamway. The Bulletin. Feb 3, 2019. <https://www.bendbulletin.com/localstate/6884610-151/fairgrounds-expansion-armory-and-more-coming-to-se-redmond>

prototypes described in the agri-tourism plan described below, but adapted for an urban location interfacing with a rural setting, rather than located in a rural location.

- Over a decade ago, a County-wide plan was undertaken related to agri-tourism. It identified six prototype projects, each with specific assumptions about characteristics. These were predominantly rural prototypes, but the opportunities for these prototypes haven't been realized.¹¹³

The Economic Development Strategic Plan identifies 57 items that potentially have site-related needs. Based on further review and discussions, we assume the approximately 47 other items not included in the list of ten site needs below would be addressed through traditional sites needs within the standard site needs and average employment density calculations. Exhibit 57 summarizes the land needs for these other needed sites. (Appendix C. provides a detailed version of this table.)

¹¹³ *Yamhill County Agri-Business Economic and Community Development Plan Summary Report*. Barney & Worth, Inc. June 2009. https://www.co.yamhill.or.us/sites/default/files/Summary_Report_-_Yamhill_County_Agri-Business.pdf

Exhibit 57. Land needs identified in the MAC-Town 2032 Economic Development Strategic Plan (EDSP): Other needed sites not reflected in average employment density calculations

Use	Description or Example*	Land Need	Total Employment Adjustment (Source)	EDSP or Other Reference
1. Community Center/Recreation Facility	Update, improve, expand and add recreational facilities that serve the community's needs (Community Center and Aquatic Center).	10 acres	22 employees (Source: Parks Director)	3.2.2
2. Outdoor Stage/ Amphitheater	Britt, Jacksonville Cuthbert, Eugene Bi-Mart, Central Point Les Schwab, Bend	5 acres plus parking	30 employees (Source: Britt Festival - 2,200 seating capacity)	3.2.1.
3. See Ya Later Foundation – Champions Center	The Champions Center is planned as a youth and family recreational and educational complex.	28 acres (4 acres for buildings, 6 acres for parking, 12 acres for 6 athletic fields, 6 acres for associated facilities)	20 employees (Source: See Ya Later Foundation Proposal)	See Ya Later Foundation UGB Application
4. Arts and culture focused event center	Chehalem Cultural Center, Newberg)	3.5 acres	15 employees (Source: Chehalem Cultural Center)	3.3
5. Evergreen Aviation and Space Museum	Support existing facilities; based on facilities in master plan	27 acres	57 employees (Source: Evergreen Master Plan)	3.3
6. Wings and Waves	Opportunities for growth and expansion	Location-specific land need at existing partially vacant site	<i>Included in Evergreen Master Plan, see above</i>	6.3.
7. Conference Center:	40,000 sf conference space, accommodation, and parking:	5 acres	13 employees (Source: Feasibility Analysis)	6.4
8. Equestrian center with supporting commercial activity inside UGB	Would include facilities that cannot be developed on EFU land	20 acres in UGB, larger footprint outside	80 employees (Source: Comparable feasibility studies)	(6.3)
9. Food hub and public market	Focused on local craft foods & beverages	3.5 acres	13 employees (Source: USDA Regional Food Hub Resource Guide)	3.2.2.
10. Makerspace/innovation hub/ fabrication center	Supports local innovation & entrepreneurial ecosystem	2 acres	3 employees (Source: Talent Maker City)	6.3.
TOTAL		104 acres	253 employees 253 employees @ 23 emp/acre = 11 acres 104 acres – 11 acres = net increase of 93 acres	

*Additional examples are provided in the following narrative.

1. COMMUNITY CENTER/RECREATION FACILITY

Strategy 3.2.2 of the MAC-Town 2032 EDSP seeks to cultivate partnerships to develop and market McMinnville’s recreation amenities. A specific action in that section is to add recreational facilities that serve the community’s needs including a Community Center and Aquatic Center.

The McMinnville Parks Department is in the process of completing a feasibility analysis for a facility and is currently estimating demand of 10 acres. Further information is expected to be available in February 2020.

This is consistent with other examples reviewed by ECONorthwest. ECONorthwest reviewed characteristics of comparable community centers. These include two facilities run by the Salvation Army (Kroc centers in Salem and Coeur d’Alene), and three city-managed facilities in Eugene, Portland, and Federal Way Washington. Exhibit 58 provides a summary of the facilities.

Exhibit 58. Community Center Characteristics

Facility	Facility Size (sq ft)	Site Size (acres)	Description
Salem Kroc Center	91,500	22.0	LEED certified with a waterpark (including a Jr. Olympic competition pool, water slide, lazy river, hot tub, and splash pad), Fitness Center, Gymnasium, Game Room, Art Studio, Library/Media Center, Amphitheater, Chapel/Performing Arts Center, 4000 ft ² of Event Space
Coeur d'Alene Kroc Center	132,000	12.0	Competition and leisure pools, health and wellness center, gym and climbing wall, game room, and classrooms
East Portland Community Center	45,000	5.7	Full-size gymnasium with retractable bleachers Transverse bouldering wall Fitness center with cardiovascular and circuit strength equipment Exercise studio with sprung wood floor and mirrors Multi-purpose, and poolside rooms Outdoor courtyard Indoor 4-lane Pool Indoor zero-depth entry leisure pool with current channel, waterslide, splashdown
Federal Way Community Center	72,000	10.0	Aquatics center, three gyms, fitness center, climbing pinnacle and Splash Café
Eugene Amazon Community Center	n/a	12.0	Outdoor pool, two community centers with many amenities, parking

Based on information from the Parks Department, and consistent with review of comparable facilities, the land need for this use is assumed to be 10 acres.

2. OUTDOOR STAGE/AMPHITHEATER

Strategy 3.2.1 of the MAC-Town 2032 EDSP seeks to update City Plans to evaluate and prioritize investments in recreation infrastructure. The strategy specifically identifies the desire to “add an outdoor stage or amphitheater to one of McMinnville’s existing parks.” The following list provides capacity and site sizes for amphitheaters in other Oregon cities.

- Les Schwab Amphitheater, Bend ~8,000 capacity ~5 acres plus parking (parking co-located with other uses)
- Bi-Mart Amphitheater, Central Point: ~6,000+ total capacity (~1985 fixed seats plus lawn), (parking co-located with other uses); ~5+ acres, plus parking & other support areas
- Britt Festival, Jacksonville: 2,200 total capacity (1,000 fixed seating plus lawn), parking co-located with other uses); Approximately 4 acres plus parking, (includes main stage, small stage, concession buildings, seating, staging area)
- Cuthbert Amphitheater, Eugene: 5,000 total capacity; parking co-located with Alton Baker Park; Approximately 4.3 acres without patron parking (includes main stage, seating, concession areas, and performer/equipment parking).

Based on review of comparable facilities, the land need for this use is assumed to be 5 acres. Assume shared parking, otherwise additional land will be needed for dedicated parking.

Note: This is calculated separate from the See Ya Later Foundation Champion Center. While that facility proposed an amphitheater. That site plan identified an amphitheater, but the concept is a different facility than what is identified in the Economic Development Strategic Plan. The Champion center would rely on use of two athletic fields for area comparable to above facilities ranging from 2,200-8,000 capacity (plus parking).

3. SEE YA LATER FOUNDATION-CHAMPIONS CENTER

In 2015, the See Ya Later Foundation (SYLF) proposed a UGB amendment for a sports complex which was not further pursued at that location given access constraints. The Foundation is still moving forward with the concept and envisions a 165,000 sf indoor recreational and educational building with the following amenities:

- Six athletic fields
- Sport fields, court gyms, fitness equipment
- Art, music, technology, and mentoring
- Outdoor amphitheater and regulation sports courts (for large-scale events, drawing visitors and dollars to McMinnville year-round)
- Meeting rooms and facilities for use by non-profits and social service organizations
- Non-denominational prayer room
- Great hall for events, commercial kitchen, coffee shop, variety of meeting facilities
- Parking (shared for uses)

To accommodate these facilities, SYLF requires a 28-acre site that meets specific suitability requirements and is accessible to the school-aged children it is intended to serve. A year-round site on the west side of McMinnville is preferred - recognizing that Joe Dancer Park is closed

from November to March, and the west side is rapidly growing with two additional planned schools.

Based on the 2015 application, we assume a land need of 28 useable acres (4 acres for buildings, 6 acres for parking, 12 acres for 6 athletic fields, 6 acres for associated facilities (walkways, landscaping, bleachers, campus open space, and driveways)).

Note: The ESDP identifies needs for regional athletic events and an indoor sports complex. These uses are assumed as part of a single site complex as represented in the Se Ya Later Foundation Champions Center described above. Therefore, these are not calculated separately. Other examples of these types of facilities of various scale and scope include the following:

- Facility for regional athletic events: 132 acres (US Cellular Park, Medford), 15 sports fields: 3 full-size baseball, 7 softball/baseball, 5 soccer/football
- Separate indoor sports complex: 5-8 acres

4. ARTS AND CULTURE FOCUSED EVENT CENTER

Strategy 3.3 (Leverage arts and culture amenities) of the MAC-Town 2032 EDSP identifies the desire for an arts and culture focused center. Specifically, the plan states “Initiate a conversation between local artists, arts organizations, philanthropies and other parties to identify the potential for an arts and culture-focused event center in McMinnville.” The strategy also includes the need for a community art space “Evaluate the feasibility of a public private partnership to create a community art space or collaborative studio and cooperative gallery.” Following is a summary of similar cultural centers:

- Chehalem Cultural Center, Newberg – is located in a historic building and houses a fine arts gallery and exhibition hall, three multipurpose arts studio classrooms, a state-of-the-art clay studio, a recording studio with four music practice studios, meeting space, and a 5,200 square foot grand ballroom for public and private events.

Based on review of comparable facilities, the land need for this use is assumed to be 3.5 acres.

5. OPPORTUNITIES TO SUPPORT EVERGREEN AVIATION AND SPACE MUSEUM

This opportunity is identified as part of Strategy 3.3 – Leverage arts and culture amenities. Specifically, the project is to establish periodic, formal dialogue with the Evergreen Aviation and Space Museum to anticipate their needs and identify opportunities to provide support.

This expansion is consistent with the adopted Evergreen Master Plan and would build out about 27 additional buildable acres of the property (with constrained areas left intact –wetlands, ravine, etc.) The master plan also includes an adventure course and associated features that extend would outside the UGB. The use of the site is limited by the Planned Development Ordinance to the master plan unless the PD Ordinance is amended.

This opportunity assumes expansion onto ownership of partially vacant land of 27 acres. This deduction is included as part of the other needed sites since a portion of the site (27 acres) was inventoried as vacant in the buildable lands inventory.

6. WINGS AND WAVES OPPORTUNITIES FOR GROWTH AND EXPANSION

This opportunity is related to Strategy 3.3 and is part of McMinnville's overall tourism strategy. The Waterpark was bought by The Falls Event Center in 2017, and is now run as a separate organization.

This opportunity assumes expansion onto ownership of partially vacant land.

7. CONFERENCE SPACE

This opportunity relates to Strategy 6.4 – Market and promote McMinnville. The plan includes a project to “Work with visit McMinnville and local hoteliers to identify gaps in available conference space and to establish a plan to expand McMinnville's offerings for small and large conferences.” Towards that end, Visit McMinnville retained Johnson Consulting to complete a market analysis for conference facilities. The January 2018 report, titled *McMinnville Conference Center and Destination Analysis*, identifies need for a 40,000 sq ft conference space not including accommodations and parking. We looked at the following comparable facilities:

- Washington County Event Center: 89,000 sf; ~8 acres with parking
- Seaside: 25,000 sf, 10 meeting rooms; 4 acres with parking
- Pendleton: 28,000 sf, 9 meeting rooms; 12.5 acres with parking
- Blair County Convention Center, PA. 2 levels, ~50,000 sf; 11 acres with parking
- Blue Water Convention Center, MI: ~40,000 sf; 12 acres

Based on review of comparable facilities, the land need for this use is assumed to be 5 acres.

8. EQUESTRIAN CENTER

In 2012, developer JW Millegan proposed a major equestrian center in Yamhill County. The concept was not further pursued, due in part to restrictions on EFU lands. As proposed, the facility would require approximately 325 acre and would include a gallop track, polo fields, steeplechase facilities, plus resort, RV park, distillery, brewpub, and cobblestone plazas. In effect, this would be a rural/urban interface tourism use with supporting commercial activity inside UGB.

Due to land use restrictions, elements such as resort, RV park, distillery, brewpub, would need to be sited within the UGB at a location interfacing with rural lands.

Other equestrian facilities in the region include:

- Hunter Creek Equestrian Park, 14441 SW Wilsonville Rd, Wilsonville, (120 ac site)
- Wilsonville Equestrian Center, 24040 SW 8nd Avenue, Tualatin
- Swan Training/Whip 'n Spur, 16091 SW Wilsonville Rd

- Arbor Grove Equestrian Center, 7359 Hwy 219 NE, Woodburn

An example of an RV Park near McMinnville includes:

- Willamette Wine Country RV Park and the Vintages are 191 sites on 14.5 acres

Based on the facility concept, and review of comparable facilities, the portion of the land need within the UGB for this use is assumed to be 20 acres.

9. CRAFT FOOD AND BEVERAGE FOOD HUB/FARMERS MARKET

McMinnville wants to develop an integrated food hub and year-round farmers market. Farmers markets are physical retail marketplaces intended to sell foods directly by farmers to consumers. Food hubs offer a combination of aggregation, distribution, and marketing services at an affordable price. Food hubs make it possible for many producers to gain entry into new larger-volume markets that boost their income and provide them with opportunities for scaling up production. Combining food hubs and farmers markets creates opportunities to better integrate local food value chains. Examples of farmers markets and food hubs include:

- Olympia Farmers Market, Olympia WA - supports local sustainable agriculture by connecting the public with local farmers, artisans, and other producers in an economically viable marketplace, has over 100 vendors and an estimated 400,000 visitors per year; 4.7 acres
- Bellingham Farmers Market, Bellingham WA – promotes and encourages the development of local, small scale agriculture and ensure a market balance for small, local growers and has over 100 vendors and is co-located at a transit station in downtown Bellingham; 1.5 acres
- Fallon Food Hub Co-op, Fallon NV – has the mission of educate residents about the benefits of eating seasonally and healthfully in order to create a thriving and expanding local food scene resulting in increased opportunities for area producers; 2.2 acres
- Catskills Food Hub, Sullivan County NY – a non-profit organization working to strengthen local agriculture, increase access to fresh food, and improve health outcomes for Sullivan County and the region; 2.7 acres
- Puget Sound Food Hub, Mt. Vernon WA – supports the relationship between regional farmers and their customers, enabling a values-based supply chain for food safety and transparency; 3.2 acres

Based on review of comparable facilities, the land need for this use is assumed to be 3.5 acres.

10. MAKERSPACE/INNOVATION HUB/ FABRICATION CENTER

Most industrial land demand is already reflected in the employment forecast. McMinnville wants to develop additional strategies to bolster the local maker community and the entrepreneurial ecosystems. Makerspace and fabrication laboratories are strategies that communities are pursuing. Makerspaces are community-operated, often nonprofit, workspaces

where people with common interests, such as computers, machining, technology, science, digital art, or electronic art, can meet, socialize and collaborate. CraterWorks Makerspace, located in Central Point, also includes a commercial kitchen and market space. It is about 2 acres in size.

Based on review of comparable facilities, the land need for this use is assumed to be 2 acres.

Site Characteristics and Needed Sites

ORAR 660-009-0015(2) requires the EOA to “identify the number of sites by type reasonably expected to be needed to accommodate the expected [20-year] employment growth based on the site characteristics typical of expected uses.” The Goal 9 rule does not specify how jurisdictions conduct and organize this analysis.

The rule, ORAR 660-009-0015(2), states that “[i]ndustrial or other employment uses with compatible site characteristics may be grouped together into common site categories.” The rule suggests, but does not require, that the City “examine existing firms in the planning area to identify the types of sites that may be needed.” For example, site types can be described by: (1) plan designation (e.g., heavy or light industrial), (2) general size categories that are defined locally (e.g., small, medium, or large sites), or (3) industry or use (e.g., manufacturing sites or distribution sites). For purposes of the EOA, McMinnville groups its future employment uses into three general categories based on land use types: (1) commercial (includes retail commercial, office & commercial services, and tourism services)¹¹⁴; (2) industrial; and (3) sites needed to meet specific economic development objectives (e.g., other land needs not addressed in the employment forecast as discussed above).

In short, in addition to estimating the acreage needed to accommodate current and future employment, it is necessary for the city to determine if it has sites with characteristics suitable for the development to address needs and opportunities. This includes site size, topography, access, utilities, and other characteristics such as location and proximity to other uses and amenities.

As a first step, ECONorthwest analyzed the size distribution of developed employment sites in McMinnville by land use type. Exhibit 59 shows the results. The majority of commercial lots are small – 88% of commercial lots are less than 1 acre, and 42% of the commercial land (in acres) is in lots less than 1 acre. No developed commercial lots are larger than 20 acres. (Some shopping centers include multiple tax lots).

¹¹⁴ At early stages of the EOA, McMinnville broke commercial out into separate land use categories, but found that many overlap and do not have distinct site needs from other commercial categories by NAICS sector.

Industrial sites show a different pattern. Seven industrial sites (about 2 percent of all industrial sites) are greater than 10 acres but account for 25% of all industrial land in acres. While McMinnville has 122 industrial sites less than 1 acre, those sites account for only 7% of developed industrial land (in acres). Some industrial users occupy multiple buildings and/or tax lots.

Exhibit 59. Size distribution of developed employment sites by land use type, McMinnville UGB, 2019

Land Use Type	Developed acres size									Total
	<0.50 acre	0.50-0.99 acres	1.00-1.99 acres	2.00-4.99 acres	5.00-9.99 acres	10.00- 19.99 acres	20.00- 25.00 acres	25.01- 49.99 acres	50.00+ acres	
Commercial										
Acres	96	54	57	90	26	34	-	-	-	357
Percent of Acres	27%	15%	16%	25%	7%	9%	0%	0%	0%	100%
Tax Lots	509	80	41	30	4	3	-	-	-	667
Percent of Tax Lots	76%	12%	6%	4%	1%	0%	0%	0%	0%	100%
Industrial										
Acres	12	19	43	87	91	61	25	-	79	417
Percent of Acres	3%	4%	10%	21%	22%	15%	6%	0%	19%	100%
Tax Lots	96	26	32	29	13	5	1	-	1	203
Percent of Tax Lots	47%	13%	16%	14%	6%	2%	0%	0%	0%	100%

In addition to basic logistical considerations, there are workforce considerations for locating within a community. For example, in the Three Mile Lane study, it was found that employers located to the area because there were sites that had land needed for expansion; however, employees preferred to be in amenity-rich locations. Employers have had to adjust business practices to accommodate employees in these locations absent the presence of amenities, such as those which were available in prior locations before relocating to accommodate space needs. This largely illustrates the need for the city’s growth management strategy of balanced land uses that provide for a nearby mix of uses and opportunities to reduce vehicle miles travelled.

For certain development types, there is a standardized taxonomy and these types have specific site characteristic needs. The City’s economic development vision and strategy may deviate from some of these typical prototypes in order to promote an authentic place-based experience, but the real estate principles must still function properly. Exhibit 60 and Exhibit 61 show taxonomies for industrial and commercial categories. The site characteristics for commercial and industrial uses shown in the exhibits equate to characteristics that are both “necessary” and “typical” for the target industries identified in the City’s MAC-Town 2032 Economic Development Strategic Plan.

It should be noted that certain development types need larger sites that must be planned and located all at one time, even if future phases within the development build out over time. Therefore, those sites need to be accounted for up-front, rather than incrementally. Other land uses have needs that don’t fit into these broad categories but have other programmatic needs that define the site needs. Examples of these other needed sites apply to uses such as convention/ conference space, regional athletic facilities, etc. For those facilities identified in the Economic Development Strategy that have special sites needs that aren’t sufficiently accounted for in the land needs calculated by the employment forecast and employment density, site characteristics have been separately described below.

Exhibit 60. Shopping Center Taxonomy, ICSC



U.S. Shopping-Center Classification and Typical Characteristics*								
Type of Shopping Center	Concept	Typical GLA Range (Sq. Ft.)	Acres	# of Anchors	% Anchor GLA	Typical Number of Tenants	Typical Type of Anchors	Trade Area Size
General-Purpose Centers								
Super-Regional Mall	Similar in concept to regional malls, but offering more variety and assortment.	800,000+	80-120	3+	50-70%	N/A	Full-line department store, mass merchant, discount department store, fashion apparel store, mini-anchor, cineplex or other large-scale entertainment attraction, and food-and-beverage service cluster	5-25 miles
Regional Mall	General merchandise or fashion-oriented offerings. Typically, enclosed with inward-facing stores connected by a common walkway. Parking surrounds the outside perimeter.	400,000-800,000	40-100	2+	50-70%	40-80 stores	Full-line department store, mass merchant, discount department store, fashion apparel store, mini-anchor, cineplex or other large-scale entertainment attraction, and food-and-beverage service cluster	5-15 miles
Community Center ("Large Neighborhood Center")	General merchandise or convenience-oriented offerings. Wider range of apparel and other soft goods offerings than neighborhood centers. The center is usually configured in a straight line as a strip, or may be laid out in an L or U shape, depending on the site and design.	125,000-400,000	10-40	2+	40-80%	15-40 stores	Discount store, supermarket, drug, large-specialty discount (toys, books, electronics, home improvement/furnishings, or sporting goods, etc.)	3-8 miles
Neighborhood Center	Convenience-oriented.	30,000-125,000	3-5	1+	30-50%	5-20 stores	Supermarket	3 miles
Strip/Convenience	Attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the storefronts, but a strip center does not have enclosed walkways linking the stores. A strip center may be configured in a straight line, or have an "L" or "U" shape. A convenience center is among the smallest of the centers, whose tenants provide a narrow mix of goods and personal services to a very limited trade area.	< 30,000	< 3	Anchorless or a small convenience store anchor.	N/A	N/A	Convenience store, such as a mini-mall.	< 1 mile
Specialized-Purpose Centers								
Power Center	Category-dominant anchors, including discount department stores, off-price stores, wholesale clubs, with only a few small tenants.	250,000-600,000	25-60	3+	70-90%	N/A	Category killers, such as home improvement, discount department, warehouse club, and off-price stores.	5-10 miles
Lifestyle	Upscale national-chain specialty stores with dining and entertainment in an outdoor setting.	150,000-500,000	10-40	0-2	0-50%	N/A	Large-format upscale specialty	8-12 miles
Factory Outlet	Manufacturers' and retailers' outlet stores selling brand-name goods at a discount.	50,000-400,000	10-50	N/A	N/A	N/A	Manufacturers' and retailers' outlets	25-75 miles
Theme/Festival	Leisure, tourist, retail and service-oriented offerings with entertainment as a unifying theme. Often in urban areas, they may be adapted from older—sometimes historic—buildings, and part of a mixed-use project.	80,000-250,000	5-20	Unspecified	N/A	N/A	Restaurants, entertainment	25-75 miles
Limited-Purpose Property								
Airport Retail	Consolidation of retail stores located within a commercial airport.	75,000-300,000	N/A	N/A	N/A	N/A	No anchors; retail includes specialty retail and restaurants	N/A

*Disclaimer: While every effort is made to ensure the accuracy and reliability of the information contained in this report, ICSC does not guarantee and is not responsible for the accuracy, completeness or reliability of the information contained in this report. Use of such information is voluntary, and reliance on it should only be undertaken after an independent review of its accuracy, completeness, efficiency, and timeliness. Criteria used in the definitions above are intended to be only typical of general features, rather than covering all situations.

Exhibit 61. Industrial Development Profile Matrix, 2015

STATE OF OREGON - Infrastructure Finance Authority
Industrial Development Competitiveness Matrix



PROFILE	Production Manufacturing		Value-Added Manufacturing and Assembly		Light / Flex Industrial			Warehousing & Distribution		Specialized			
	A	B	C	D	E	F	G	I	H	J	K	L	
	Heavy Industrial / Manufacturing	High-Tech / Clean-Tech Manufacturing	Food Processing	Advanced Manufacturing & Assembly	General Manufacturing	Industrial Business Park and R&D Campus	Business / Admin Services	Regional Warehouse / Distribution	Local Warehouse / Distribution	UAV Manufacturing / Research	Data Center	Rural Industrial	
1 GENERAL REQUIREMENTS	Use is permitted outright, located in UGB or equivalent and outside flood plain; and site (NCDA) does not contain contaminants, wetlands, protected species, or cultural resources or has mitigation plan(s) that can be implemented in 180 days or less.												
2 TOTAL SITE SIZE**	Competitive Acreage*	10 - 100+	5 - 100+	5 - 25+	5 - 25+	5 - 15+	20 - 100+	5 - 15+	20 - 100+	10 - 25+	10 - 25+	10 - 25+	5 - 25+
3 COMPETITIVE SLOPE:	Maximum Slope	0 to 5%	0 to 5%	0 to 5%	0 to 7%	0 to 5%	0 to 7%	0 to 12%	0 to 5%	0 to 5%	0 to 7%	0 to 7%	0 to 5%
4 TRANSPORTATION													
5 TRIP GENERATION:	Average Daily Trips per Acre	40 to 60 (ADT / acre)	40 to 60 (ADT / acre)	50 to 60 (ADT / acre)	40 to 60 (ADT / acre)	40 to 50 (ADT / acre)	60 to 150 (ADT / acre)	170 to 180 (ADT / acre)	40 to 80 (ADT / acre)	40 to 80 (ADT / acre)	40 to 80 (ADT / acre)	20 to 30 (ADT / acre)	40 to 50 (ADT / acre)
6 MILES TO INTERSTATE OR OTHER PRINCIPAL ARTERIAL:	Miles	w/ in 10	w/ in 10	w/ in 30	w/ in 15	w/ in 20	N/A	N/A	w/ in 5 (only interstate or equivalent)	w/ in 5 (only interstate or equivalent)	N/A	w/ in 30	N/A
7 RAILROAD ACCESS:	Dependency	Preferred	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Avoid	N/A
8 PROXIMITY TO MARINE PORT:	Dependency	Preferred	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Not Required	N/A
9 PROXIMITY TO REGIONAL COMMERCIAL AIRPORT:	Dependency	Preferred	Competitive	Preferred	Competitive	Preferred	Required	Preferred	Preferred	Preferred	Preferred	Competitive	N/A
	Distance (Miles)	w/ in 60	w/ in 60	w/ in 60	w/ in 30	w/ in 60	w/ in 30	w/ in 60	w/ in 60	w/ in 60	w/ in 30	w/ in 60	N/A
10 PROXIMITY TO INTERNATIONAL AIRPORT:	Dependency	Preferred	Competitive	Preferred	Competitive	Preferred	Competitive	Preferred	Preferred	Preferred	Competitive	Preferred	N/A
	Distance (Miles)	w/ in 300	w/ in 300	w/ in 300	w/ in 100	w/ in 300	w/ in 100	w/ in 300	w/ in 300	w/ in 300	w/ in 100	w/ in 300	N/A
11 UTILITIES													
11 WATER:	Min. Line Size (Inches/Dmtr)	8" - 12"	12" - 16"	12" - 16"	8" - 12"	6" - 10"	8" - 12"	4" - 6"	4" - 8"	4" - 6"	4" - 8"	16"	4" - 8"
	Min. Fire Line Size (Inches/Dmtr)	10" - 12"	12" - 18"	10" - 12"	10" - 12"	8" - 10"	8" - 12"	6" - 10"	10" - 12"	6" - 8"	6" - 10"	10" - 12"	6" (or alternate source)
	High Pressure Water Dependency	Preferred	Required	Required	Preferred	Not Required	Preferred	Not Required	Not Required	Not Required	Not Required	Required	Not Required
	Flow (Gallons per Day per Acre)	1600 (GPD / Acre)	5200 (GPD / Acre)	1150 (GPD / Acre)	2700 (GPD / Acre)	1850 (GPD / Acre)	2450 (GPD / Acre)	1600 (GPD / Acre)	500 (GPD / Acre)	500 (GPD / Acre)	1600 (GPD / Acre)	50-200 (Gallons per MWH) †	1200 (GPD / Acre)
11 SEWER:	Min. Service Line Size (Inches/Dmtr)	6" - 8"	12" - 18"	10" - 12"	10" - 12"	6" - 8"	10" - 12"	6" - 8"	4"	4"	6"	8"-10"	4" - 6" (or on-site source)
	Flow (Gallons per Day per Acre)	1500 (GPD / Acre)	4700 (GPD / Acre)	2600 (GPD / Acre)	2500 (GPD / Acre)	1700 (GPD / Acre)	2000 (GPD / Acre)	1600 (GPD / Acre)	500 (GPD / Acre)	500 (GPD / Acre)	1300 (GPD / Acre)	1000 (GPD / Acre) ‡	1000 (GPD / Acre)
11 NATURAL GAS:	Preferred Min. Service Line Size (Inches/Dmtr)	4" - 6"	6"	4"	6"	4"	6"	2"	2"	2"	2"	4"	N/A
	On Site	Competitive	Competitive	Preferred	Competitive	Competitive	Competitive	Preferred	Preferred	Preferred	Preferred	Preferred	Preferred
11 ELECTRICITY:	Minimum Service Demand	2 MW	4-6 MW	2-4 MW	1 MW	0.5 MW	0.5 MW	0.5 MW	1 MW	1 MW	0.5 MW	5-25 MW	1 MW
	Close Proximity to Substation	Competitive	Competitive	Not Required	Competitive	Preferred	Competitive	Preferred	Not Required	Not Required	Not Required	Required, could be on site	Not Required
	Redundancy Dependency	Required	Preferred	Not Required	Required	Not Required	Competitive	Required	Not Required	Not Required	Not Required	Required	Not Required
11 TELECOMMUNICATIONS:	Major Communications Dependency	Preferred	Required	Preferred	Required	Required	Required	Required	Preferred	Preferred	Required	Required	Preferred
	Route Diversity Dependency	Not Required	Required	Not Required	Required	Not Required	Preferred	Required	Not Required	Not Required	Not Required	Required	Not Required
	Fiber Optic Dependency	Preferred	Required	Preferred	Required	Preferred	Required	Required	Preferred	Preferred	Required	Required	Not Required
11 SPECIAL CONSIDERATIONS:	<p>Adequate distance from sensitive land uses (residential, parks, large retail centers) necessary. High throughput of materials. Large yard spaces and/or buffering required. Often transportation related requiring marine/rail links.</p> <p>Acreage allotment includes expansion space (often an exercisable option). Very high utility demands in one or more areas common. Sensitive to vibration from nearby uses.</p> <p>May require high volume supply of water and sanitary sewer treatment. Often needs substantial storage/yard space for input storage. Onsite water pre-treatment needed in many instances.</p> <p>Surrounding environment of great concern: vibration, noise, air quality, etc.). Increased setbacks may be required. Onsite utility service areas. Avoid sites close to wastewater treatment plants, landfills, sewage lagoons, and similar land uses. Lower demands for water and sewer treatment than Production High-Tech Manufacturing.</p> <p>Adequate distance from sensitive land uses (residential, parks) necessary. Moderate demand for water and sewer. Higher demand for electricity, gas, and telecom.</p> <p>High diversity of facilities within business parks. R&D facilities benefit from close proximity to higher education facilities. Moderate demand on all infrastructure systems.</p> <p>Relatively higher parking ratios may be necessary. Will be very sensitive to labor force and the location of other similar centers in the region. High reliance on telecom infrastructure.</p> <p>Transportation routing and proximity to/from major highways is crucial. Expansion options required. Truck staging requirements mandatory. Minimal route obstructions between the site and interstate highway such as rail crossings, drawbridges, school zones, or similar obstacles.</p> <p>Transportation infrastructure such as roads and bridges to/from major highways is most competitive factor.</p> <p>Must be located within or near FAA regulated UAV testing sites. Moderate utility demands. Low reliance on transportation infrastructure.</p> <p>May require high volume/supply of water and sanitary sewer treatment.</p> <p>Larger sites may be needed. The 25 acre site requirement represents the more typical site. Power delivery, water supply, and security are critical. Surrounding environment (vibration, air quality, etc.) is crucial.</p> <p>Located in more remote locations in the state. Usually without direct access (within 50 miles) of Interstate or City of more than 50,000 people.</p>												

Mackenzie: Business Oregon

Terms:	
More Critical	'Required' factors are seen as mandatory in a vast majority of cases and have become industry standards
↑	'Competitive' significantly increases marketability and is highly recommended by Business Oregon. May also be linked to financing in order to enhance the potential reuse of the asset in case of default.
Less Critical	'Preferred' increases the feasibility of the subject property and its future reuse. Other factors may, however, prove more critical.
	* Competitive Acreage: Acreage that would meet the site-selection requirements of the majority of industries in this sector.
	**Total Site: Building footprint, including buffers, setbacks, parking, mitigation, and expansion space
	† Data Center Water Requirements: Water requirement is reported as gallons per MWH to more closely align with the Data Center industry standard reporting of Water Usage Effectiveness (WUE).
	‡ Data Center Sewer Requirements: Sewer requirement is reported as 200% of the domestic usage at the Data Center facility. Water and sewer requirements for Data Centers are highly variable based on new technologies and should be reviewed on a case-by-case basis for specific development requirements.



Current Revision Date: 6/23/2015

To meet the requirements of OAR 660-009-0015(2) to identify the number of needed sites by type, we analyzed the existing distribution of developed sites by size (Exhibit 59) and applied it to overall land need for the 2021-2041 period. Exhibit 62 summarizes needed sites by size class. Exhibit 63 allocates needed sites to target sizes within those size class ranges consistent with the methodology in the Industrial Sites Information memorandum distributed at the February 27, 2020 PAC meeting.¹¹⁵ This was based on the range and distribution of site sizes for larger industrial sites described in the MEDP letter (Appendix D. Site Need Letters). These tables also include the estimates for the smaller site sizes of 0.5-2.0 acres discussed in the Employment Sites memo, consistent with the tables labeled “Need 2” in that memo, which was supported by the PAC. Exhibit 62 and Exhibit 63 now also incorporate smaller site sizes less than 0.5 acres, as described in the buildable lands inventory methodology.

Exhibit 62. Revised Employment Site Size Classes and Assignment of Needed Sites

Original Size Classes and Assignments			Revised Size Classes and Assignments		
Original Size Classes	Needed Sites	Ac Range	Revised Size Classes	Needed Sites	Ac Range
NA <i>(By definition in OAR 660 Division 9, undeveloped sites less than ½ acre are not defined as vacant sites)</i>	NA	NA	<0.5 acre	23	0-12
0.5-0.99 ac	10	5-10	0.5-0.99 ac	10	5-10
1.00-1.99	12	12-24	1.00-1.99	12	12-24
2.00-4.99	4	8-20	2.00-4.99	4	8-20
5.00-9.99	3	15-30	5.00-9.99	3	15-30
10.00-19.99	10	100-200	10.00-19.99	10	100-200
20.00-49.99	8	160-400	20.00-25.00	7	140-175
			25.01-49.99	1	25-50
50.00+	0	0	50.00+	0	0
Total	47 sites	300-684 ac	Total	70 sites	305-521 ac

Needed Industrial Sites Provide for at Least an Adequate Supply

Goal 9 and ORS 197.712(2)(c) specify that Comprehensive Plans for urban areas shall: ...“Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and commercial uses consistent with plan policies.”

The employment forecast and employment density factors identified a need for 153 industrial acres. The needed sites identified above in Exhibit 63, appropriately located, would provide for at least an adequate supply of sites of suitable sizes for a variety of industrial uses consistent with plan policies, as required by Goal 9. To be competitive, this would assure there would be a

¹¹⁵ https://www.mcminnvilleoregon.gov/sites/default/files/fileattachments/planning/page/1675/7-industrial_sites_narrative_summ_2-26-2020_letterhead.pdf

supply of available of sites with a variety of sizes and characteristics to meet a variety of needs at any given time during the planning period.

Exhibit 63. Needed sites, competitive supply and choice consistent with IFA criteria

Site Size Class	Needed Sites By Class	Ac Range for Needed Sites	Needed Sites By Target Size	Ac for Needed Sites
<0.5	23	0-12	23@0.48 ac	11.0
0.5-0.99 ac	10	5-10	5@0.5 ac 5@ 1ac	2.5 5.0
1.00-1.99	12	12-24	6@1 ac 6@2 ac	6.0 12.0
2.00-4.99	4	8-20	2@2 ac 2@4 ac	4.0 8.0
5.00-9.99	3	15-30	3@5 ac	15.0
10.00-19.99	10	100-200	5@10 ac 5@15 ac	50.0 75.0
20.00-25.00	7	140-175	4@20 ac 3@25 ac	80.0 75.0
25.01-49.99	1	25-50	1@40ac	40.0
50.00+	0	0	0	0
Total	70 sites	305-521 ac	70 sites	384 ac

Note: MIP/MEDP Input re: Size Class Distribution – Size Assigned. Appendix D. Site Need Letters provides letters from MIP and MEDP stating needed site sizes.

Exhibit 64 provides a detailed summary of the needed sites between 5 and 50 acres listed in Exhibit 63. The sites listed in this table are identified based on industries listed in the IFA matrix (Exhibit 61) and the target sectors identified in McMinnville’s 2019 Economic Development Strategic Plan. The results of Exhibit 63 and Exhibit 64 show that McMinnville needs 384 acres for industrial land over the 20-year period.

Exhibit 64. Needed industrial and traded sector employment sites

Infrastructure Finance Authority (IFA) Industrial Development Competitive-ness Matrix	2019 EDSP Target Sectors 2013 EOA Cluster Targets	Rail Access Per IFA?	Needed Sites	Needed Range for McMinnville	Needed Site Sizes	Size Class				
						5-9.9	10-14.9	15-19.9	20-25	25.1-50

Production Manufacturing

4:

A. Heavy Industrial / Manufacturing (10-100+ ac)	EDSP: Traditional Ind.& Advanced Manuf.	A. Preferred	2	10-25 ac	(1) 15ac, (1) 25ac			1	1
B. High Tech/Clean Tech Manufacturing (5-100+ ac)	2013 EOA: Advanced Manufacturing	B. Preferred	2	5-25 ac	(1) 10ac, (1) 25ac		1		1

Value-Added Manufacturing & Assembly

4:

C. Food Processing (5-25+ ac)	EDSP: Craft Beverages and Food Systems	C. Preferred	2	5-25 ac	(1) 5ac, (1) 10ac	1	1		
D. Advanced Manufacturing and Assembly (5-25+ ac)	EDSP: Traditional Ind. & Advanced Manuf.	D. Not Required	2	5-25 ac	(1) 15ac, (1) 20ac			1	1

Infrastructure Finance Authority (IFA) Industrial Development Competitive-ness Matrix	2019 EDSP Target Sectors 2013 EOA Cluster Targets	Rail Access Per IFA?	Needed Sites	Needed Range for McMinnville	Needed Site Sizes	Size Class				
						5-9.9	10-14.9	15-19.9	20-25	25.1-50

Light/Flex Industrial

6:

E. General Manufacturing (5-15+ ac)	EDSP: Technology and Entrepreneurship	E. Preferred	3	5-15 ac	(1) 5ac, (1) 10ac, (1) 15ac	1	1	1		
F. Indust. Business Park and R&D Campus (20-100+ ac)	EDSP: Education, Medicine and Other Sciences	F. Preferred	2	5-15 ac	(1) 40ac (Innovation Campus)	1	1			
G. Business / Admin Services (5-15+ ac)	2013 EOA: Healthcare/Traded Sector Services	G. Not Required			(1) 5ac, (1) 10ac					1

Warehousing & Distribution

5:

H. Regional Warehouse / Distribution (20-100+ ac)	EDSP: Craft Beverages and Food Systems	H. Preferred	2	20-25 ac	(1) 20ac, (1) 25ac					2
I. Local Warehouse / Distribution (10-25+ ac)	EDSP: Craft Beverages and Food Systems	I. Preferred	3	10-25 ac	(1) 10ac, (1) 15ac, (1) 20ac		1	1	1	

Infrastructure Finance Authority (IFA) Industrial Development Competitive-ness Matrix	2019 EDSP Target Sectors 2013 EOA Cluster Targets	Rail Access Per IFA?	Needed Sites	Needed Range for McMinnville	Needed Site Sizes	Size Class				
						5-9.9	10-14.9	15-19.9	20-25	25.1-50
Specialized			2:							
J. UAV Manufacturing / Research (10-25+ ac)	EDSP: Traditional Industry and Advanced Manuf.	J. Not Required	1	10-25 ac	(1) 15ac			1		
K. Data Center (10-25+ ac)	EDSP: Technology and Entrepreneurship	K. Avoid	1	10-25 ac	(1) 20ac				1	
L. Rural Industrial (5-25+ ac)		L. N/A	N/A	5-25 ac	N/A					
Total:			21 sites of 5-40 acres		SUM: 21 sites 5ac-40ac (335 ac.)	3	5	5	7	1
					(Rail Preferred for 14 sites)					

*RP=Rail Preferred

Land Sufficiency

This section addresses Step 10: Compare Land Demand to Supply

Exhibit 65 shows commercial and industrial land sufficiency within the McMinnville UGB. It shows:

- **Vacant or partially vacant unconstrained land** from Exhibit 55 within the UGB. Exhibit 65 shows that McMinnville will have 313 gross acres of industrial land, and 77 gross acres of commercial land in 2021.
- **Demand for commercial and industrial land** from Exhibit 53, which shows McMinnville will need a total of 153 gross acres for industrial uses and 252 gross acres for commercial uses over the 2021-2041 period based on portion of demand determined through the forecast.
- **Retail Leakage** Additional needs, addressed previously in this Chapter, include retail leakage that is current demand that predates the employment forecast associated with new population growth (12-acre demand over the 20-year period)
- **Demand for commercial land needs with other needed sites** not adequately accounted for in the average employment density calculations. Forecast commercial land includes land use types of retail commercial, office and commercial services, and tourism services. These uses for other needed sites for target sectors are identified in the Economic Development Strategic Plan (104-acre demand over the 20-year period), a net difference of 93 additional acres after adjusting for associated employment.
- **Needed site sizes** from Exhibit 63 shows that McMinnville has an overall need for 384 acres of industrial land in site sizes between less than 0.5 acres and up to 50 acres in size.

Exhibit 65 shows that McMinnville has:

- A 70-acre deficit of industrial land in 2041
- A 280-acre deficit of commercial land in 2041.

Exhibit 65. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2021-2041

Land Use Type	Land Supply (Suitable Gross Acres)	Demand (Gross Acres)	Land Sufficiency (Deficit)
Industrial	313	384	(70)
Commercial	77	357	(280)
<i>Forecast</i>		252	
<i>Retail leakage</i>		12	
<i>Other needed sites</i>		93	

Source: ECONorthwest

Summary of Land Sufficiency for Employment Land in McMinnville

This section summarizes the analysis completed in Chapter 5 and the findings related to land sufficiency for employment land in McMinnville.

The current EOA update bring the 2013 document to the current 20-year planning period of 2021-2041, incorporating new trend and forecast data, and ensuring the City's land use planning documents provide the land use foundation to support the City's newly adopted economic development strategy, and ensure the Comprehensive Plan supports that strategy. It also considers a longer 46-year planning period. Since the City's economic development strategy is articulated in the new EDSP, this EOA update supports and references that work, but the scope didn't duplicate the work that was completed in the EDSP.

Demand

McMinnville will need about 741 gross acres (384 industrial and 357 commercial) for employment for the 2021 to 2041 period and 954 gross acres (384 industrial and 570 commercial) for the 2021 to 2067 period (Exhibit 66).

Demand was calculated in following components:

- By developing an employment forecast and assigning employment density factors to determine associated land needs, Employment forecasts indicate that McMinnville will add 6,885 jobs between 2021 and 2041 and 16,001 jobs between 2021 and 2067. *For this component of the demand, McMinnville will need at least 405 gross acres (153 industrial and 252 commercial) for employment for the 2021 to 2041 period and 899 gross acres (329 industrial and 570 commercial) for the 2021 to 2067 period (Exhibit 54).*
- By removing the following employment from the employment forecast, and instead estimating land needs for these employers based on interviews with the respective entities: local government, K-12, and higher education. *These are discussed in the public and institutional land needs section of the Urbanization Summary report, and are not discussed in the land sufficiency analysis for commercial and industrial employment.*
- The City assumed 5% of new employment would be accommodated on sites that don't require new vacant land, through infill, redevelopment, and locations that don't require new employment land.
- By identifying the existing retail leakage identified in a market analysis, which identifies existing deficits in the base year which are not otherwise accounted for in the forecast of future employment from 2021-2041. *McMinnville will need about 12.2 acres to address existing retail leakage.*
- By estimating other needed sites which are not accounted for in the average density assumptions. The sites for these uses are unique and not accounted for in the standard employment density factors. These are target industries and uses in the MAC-Town 2032 Economic Development Strategic Plan. *McMinnville will need 104 acres for other*

needed sites on commercial (e.g., land needs not accounted for in the employment projections) in the 2021 to 2041 period. A net increase of 93 acres when adjusting the employment forecast to reflect these unique site needs and adjustments to average density assumptions for these sites and uses.

- Calculation of additional needed sites on industrial land, based on target industries identified in the EDSP, resulted in *overall demand for 384 acres of industrial land.*

Supply

In 2019, within the UGB, McMinnville has 421 buildable acres of employment land, with 370 buildable acres in vacant lots and 50 buildable acres in partially-vacant lots. This includes 97 buildable acres of commercial land and 324 buildable acres of industrial land. By 2021, the forecast assumes there will have been demand for 31 gross acres of employment land: 11 gross acres of industrial land and 20 gross acres of commercial land. That leaves a 2021 supply of 390 buildable acres of employment land: 313 buildable acres of industrial land and 77 buildable acres of commercial land

- **Commercial.** Of the 97 buildable acres of commercial land, about 63 acres are in vacant lots, and 33 acres are in partially-vacant lots. About 27 acres (approximately 30% of the buildable commercial land) is on the Evergreen property, which is subject to a Planned Development that limits uses to tourism-related uses consistent with the master plan. There are only about two dozen tax lots with buildable commercial acreage, and only some of these contiguous. There are about a half dozen sites or contiguous properties that have buildable acreage over five acres, accounting for about 72% of the buildable acres.
- **Industrial.** Of the 324 buildable acres of industrial land, about 307 acres are in vacant lots, and 17 acres are in partially-vacant lots. About 55% of the supply (177 acres) is in two tax lots over 50 acres, about 88 and 90 acres. One site is just under 50 buildable acres (15% of the supply), and the remaining sites are below 15 buildable acres.

Sufficiency

Exhibit 66 shows the capacity of unconstrained vacant land and the demand for employment land over the 5-, 10-, 20-, and 46-year planning periods, as well as the pre-2021 period.

Exhibit 66. Comparison of the capacity of unconstrained vacant land with employment land demand by land use type, McMinnville UGB, 2019–2021, 2021–2026, 2021–2031, 2021–2041, and 2021–2067

Land Use Type	2019-2021			5-year (2021-2026)			10-year (2021-2031)			20-year (2021-2041)			46-year (2021-2067)		
	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)	Land Supply	Land Demand	Land Sufficiency (Deficit)
Industrial	324	11	313	313	38	275	313	77	237	313	384	(70)	313	384	(70)
Commercial	97	20	77	77	63	14	77	126	(49)	77	357	(280)	77	570	(494)

Source: ECONorthwest.

The next chapter provides a discussion of McMinnville’s existing Comprehensive Plan goals and policies related to economic development. It suggests updates to policies that may not align with the findings of this EOA or recent updates to supporting planning work including the MAC-Town 2032 Economic Development Strategic Plan.

6. Comprehensive Plan Policies

OAR 660-009-0020 outlines requirements for industrial and other economic development policies.

Local comprehensive plans are to provide a commitment to provide a competitive short-term supply together with a commitment to provide adequate sites and facilities. With this EOA, also identified are fulfillment of community economic development objectives.

Economic Development Goals and Policies

As noted at the outset of this EOA update report, the 2019 MAC-Town Economic Development Strategic Plan states the City of McMinnville's mission related to economic development:

“McMinnville provides economic opportunity for all residents through sustainable growth across a balanced array of traditional and innovative industry sectors, from steel manufacturing to technology. Economic growth is collaborative, and inclusive of individuals from diverse backgrounds. Businesses leverage local and regional talent pipelines while attracting new employees and residents who value McMinnville's high quality of life. Our strong downtown serves residents and visitors alike, featuring unique shops and world-class restaurants that offer locally-produced food products and globally-renowned wine. As we evolve, we prize our small-town roots and we maintain McMinnville's character.”

The currently adopted Comprehensive Plan also includes more detailed goal statements, and some goals include specific policies. This EOA update provides suggested changes to goals and policies that may not align with the city's current vision for economic development. The suggested changes are indicated with items to **remove** or items to consider **adding**.

Goal IV 1: To encourage the continued growth and diversification of McMinnville's economy in order to enhance the general well-being of the community and provide employment opportunities for its citizens.

Goal IV 2: To encourage the continued growth of McMinnville as the commercial center of Yamhill County in order to provide employment opportunities, goods, and services for the city and county residents.

Policy:

- 21.00 Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the City. Such uses shall locate according to the goals and policies in the comprehensive plan.
- 21.01 The City shall periodically update its economic opportunities analysis to ensure that it has within its urban growth boundary (UGB) a 20-year supply of lands designated for commercial and industrial uses. The City shall provide an adequate

number of suitable, serviceable sites in appropriate locations within its UGB. If it should find that it does not have an adequate supply of lands designated for commercial or industrial use it shall take corrective actions which may include, but are not limited to, redesignation of lands for such purposes, or amending the UGB to include lands appropriate for industrial or commercial use. (Ord.4796, October 14, 2003)

- 21.02 The City shall encourage and support the start up, expansion or relocation of high-wage businesses to McMinnville.
 - 1. The City shall coordinate economic efforts with the Greater McMinnville Area Chamber of Commerce, McMinnville Industrial Promotions, McMinnville Downtown Association, Yamhill County, Oregon Economic and Community Development Department, and other appropriate groups.
 - 2. Economic development efforts shall identify specific high-wage target industries and ensure that adequately sized, serviced, and located sites exist within the McMinnville urban area for such industries. (Ord.4796, October 14, 2003)
- 21.03 The City shall support existing businesses and industries and the establishment of locally owned, managed, or controlled small businesses. (Ord.4796, October 14, 2003)
- 21.04 The City shall make infrastructure investments that support the economic development strategy a high priority, in order to attract high-wage employment. (Ord.4796, October 14, 2003)
- 21.05 Commercial uses and services which are not presently available to McMinnville residents will be encouraged to locate in the city. Such uses shall locate according to the goals and policies in the comprehensive plan. (Ord.4796, October 14, 2003)

Goal IV 3: To ensure commercial development that maximizes efficiency of land use through utilization of existing commercially designated lands, through appropriately locating future neighborhood and community serving commercial lands and discouraging strip development.

General Policies:

- 22.00 The maximum and most efficient use of existing commercially designated lands will be encouraged as will the revitalization and reuse of existing commercial properties.
- 23.00 Areas which could in the future serve as commercial sites shall be protected from encroachment by incompatible uses.
- 24.00 The cluster development of commercial uses shall be encouraged rather than auto-oriented strip development. (Ord.4796, October 14, 2003)

Locational Policies:

- 24.50 The location, type, and amount of commercial activity within the urban growth boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord.4796, October 14, 2003)

- 25.00 Commercial uses will be located in areas where conflicts with adjacent land uses can be minimized and where city services commensurate with the scale of development are or can be made available prior to development.
- 26.00 The size of, scale of, and market for commercial uses shall guide their locations. Large-scale, regional shopping facilities, and heavy traffic-generating uses shall be located on arterials or in the central business district, and shall be located where sufficient land for internal traffic circulation systems is available (if warranted) and where adequate parking and service areas can be constructed.
- 27.00 Neighborhood commercial uses will be allowed in residential areas. These commercial uses will consist only of neighborhood oriented businesses and will be located on collector or arterial streets. More intensive, large commercial uses will not be considered compatible with or be allowed in neighborhood commercial centers.
- 28.00 A commercial planned development should be encouraged in the proximity of the intersection of Hill Road and West Second Street. Such a development should service the needs of people in western McMinnville. The development should be anchored by a grocery store.

Design Policies:

- 29.00 New direct access to arterials by large-scale commercial developments shall be granted only after consideration is given to the land uses and traffic patterns in the area of development as well as at the specific site. Internal circulation roads, acceleration/deceleration lanes, common access collection points, signalization, and other traffic improvements shall be required wherever necessary, through the use of planned development overlays.
- 30.00 Access locations for commercial developments shall be placed so that excessive traffic will not be routed through residential neighborhoods and the traffic-carrying capacity of all adjacent streets will not be exceeded.
- 31.00 Commercial developments shall be designed in a manner which minimizes bicycle/pedestrian conflicts and provides pedestrian connections to adjacent residential development through pathways, grid street systems, or other appropriate mechanisms. (Ord.4796, October 14, 2003)
- 32.00 Where necessary, landscaping and/or other visual and sound barriers shall be required to screen commercial activities from residential areas.
- 33.00 Encourage efficient use of land for parking; small parking lots and/or parking lots that are broken up with landscaping and pervious surfaces for water quality filtration areas. Large parking lots shall be minimized where possible. All parking lots shall be interspersed with landscaping islands to provide a visual break and to provide energy savings by lowering the air temperature outside commercial structures on hot days, thereby lessening the need for inside cooling. (Ord.4796, October 14, 2003)
- 34.00 The City of McMinnville shall develop and maintain guidelines concerning the size, placement, and type of signs in commercial areas.

- 35.00 The City of McMinnville shall encourage the development of a sign system that directs motorists to parking areas.

Goal IV 4: To promote the downtown as a cultural, administrative service, and retail center of McMinnville.

Downtown Development Policies:

- 36.00 The City of McMinnville shall encourage a land use pattern that:
 - 1. Integrates residential, commercial, and governmental activities in and around the core of the city;
 - 2. Provides expansion room for commercial establishments and allows dense residential development;
 - 3. Provides efficient use of land for adequate parking areas;
 - 4. Encourages vertical mixed commercial and residential uses; and,
 - 5. Provides for a safe and convenient auto-pedestrian traffic circulation pattern.
(Ord.4796, October 14, 2003)
- 37.00 The City of McMinnville shall strongly support, through technical and financial assistance, the efforts of the McMinnville Downtown Steering Committee to implement those elements of Phase II of the “Downtown Improvement Plan” that are found proper, necessary, and feasible by the City. (Ord.4796, October 14, 2003)
- 38.00 The City of McMinnville shall encourage the renovation and rehabilitation of buildings in the downtown area, especially those of historical significance or unique design.
- 39.00 The City of McMinnville shall encourage and allow the development of pocket parks, landscaping, and other natural amenities to provide a visual contrast between streets and parking lots and buildings to enhance the general appearance of the downtown.
- 40.00 The City of McMinnville shall encourage and develop a policy of cooperation with federal, state, and local governments and agencies regarding the location of public administrative and service facilities in the downtown area and further encourage these same agencies to develop off-street parking opportunities and transportation alternatives for their employees.
- 41.00 The City of McMinnville shall encourage the expansion of retail and other commercial enterprises east of the railroad tracks and north and south of Third Street consistent with the adopted “Downtown Improvement Plan.” (Ord.4796, October 14, 2003)
- 42.00 The City of McMinnville shall continue to redesignate streets and traffic patterns in and around the downtown area to facilitate the movement of automobile traffic and provide for the safety and convenience of pedestrians.

- 43.00 The City of McMinnville shall allow the closing and/or vacating of streets to provide additional areas for off-street parking where such closure will not affect the ability of the police and fire departments, and public utilities to provide their designated service functions or where such closures will not negatively affect the overall traffic circulation in the downtown area.
- 44.00 The City of McMinnville shall encourage, but not require, private businesses downtown to provide off-street parking and on-site traffic circulation for their employees and customers.
- 45.00 The City of McMinnville shall study the feasibility of developing bicycle and pedestrian paths and/or lanes between residential areas and the activity centers in the downtown. (Ord.4961, January 8, 2013)
- 46.00 The City shall work to implement the recommendations of the adopted “McMinnville Downtown Improvement Plan.”
- 46.01 The City shall, through its Landscape Review Committee, develop a list of street trees acceptable for planting within the public rights-of-way, parks and open spaces, and downtown. In addition, the committee shall develop standards for the planting of these trees, particularly within the downtown area, such that sidewalk and tree root conflicts are minimized. This effort should be coordinated with McMinnville Water and Light in an effort to minimize conflicts with utility lines.
- 46.02 The City shall, as funding permits and generally in the following order, periodically inventory trees within its public rights-of-way, parks and open spaces, and downtown area in order to assess the overall health of the city’s urban forest and to determine those specific trees that may require maintenance, or removal and replacement. As a goal, the City seeks to maintain a diverse urban forest in terms of age and species.
- 46.03 The City shall take steps to minimize hardships to property owners situated adjacent to street trees that may have been found to be the cause of, but not limited to, the cracking or raising of a public sidewalk, or interfering with sewer lines that serve his/her property. In such cases, the City shall install root barriers, if practicable, or remove the offending tree(s). (Ord. 4816, December 14, 2004; Ord.4796, October 14, 2003)

Proposals:

- 6.00 A planned development overlay should be placed on the large cluster commercial development areas and the entrances to the City to allow for review of site design, on-site and off-site circulation, parking, and landscaping. The areas to be overlaid by this designation shall be noted on the zoning map and/or comprehensive plan map.
- 7.00 The City of McMinnville should study the feasibility of designating areas fronting Third Street east of the railroad tracks for retail commercial only, and designated areas on the fringes of the downtown as office residential.

- 8.00 The City of McMinnville should encourage the development of a commercial planned development center in the southwestern portion of the city large enough in scale to serve the needs of the area's population. The center should be in proximity of the intersection of Old Sheridan Road, U.S. Highway 99W, and Oregon Highway 18.

Goal IV 5: To continue the growth and diversification of McMinnville's industrial base through the provision of an adequate amount of properly designated lands.

Goal IV 6: To insure industrial development that maximizes efficiency of land uses, that is appropriately located in relation to surrounding land uses, and that meets necessary environmental standards.

General Policies:

- 47.00 Industries that locate in the community shall meet federal, state, and local environmental standards. These standards shall be given full weight in evaluating the desirability of the industry. Criteria for evaluation shall include, but not be limited by the effect the industry would have on:
 - 1. The natural environment, including air and water quality, natural drainage ways, and soil properties and other physical characteristics of the land including topography.
 - 2. The human environment, including the amount of noise and traffic generated and the ability of the housing industry to provide sufficient dwelling units with at least an adequate level of required urban services.
 - 3. The physical facilities of the community, including the ability of sanitary and storm sewer systems, water supply and distribution system, energy supply distribution systems, police and fire, and schools to provide designated services.
- 48.00 The City of McMinnville shall encourage the development of new industries and expansion of existing industries that provide jobs for the local (McMinnville and Yamhill County) labor pools.

Locational Policies:

- 49.00 The City of McMinnville shall use its zoning and other regulatory methods to prevent encroachment into industrial areas by incompatible land uses.
- 49.01 The City shall designate an adequate supply of suitable sites to meet identified needs for a variety of different parcel sizes at locations which have direct access to an arterial or collector street without having to pass through residential neighborhoods. (Ord. 4961, January 8, 2013)
- 49.02 The location, type, and amount of industrial activity within the Urban Growth Boundary shall be based on community needs as identified in the Economic Opportunities Analysis. (Ord. 4961, January 8, 2013)

- 49.03 In designating new industrial properties, and in redesignating properties to industrial zoning from other designations, the City shall work to provide employment opportunities in locations that are reasonably accessible to McMinnville residents, while minimizing the need to drive through existing or planned residential neighborhoods. (Ord. 4961, January 8, 2013)
- 50.00 The City of McMinnville shall encourage industrial uses to locate adjacent to the airport and south of Three Mile Lane, adjacent to the existing Riverside Drive industrial area, and in existing industrial areas through the proper designation of lands on the comprehensive plan and zoning maps. Comprehensive plan and/or zoning map changes to industrial designations in other areas may be granted if all the applicable goals and policies of the plan can be met.
 - *The City should consider updating this policy to reflect findings of the Three Mile Lane Area Plan, which discusses potential commercial uses in this area.*
- 51.00 The City of McMinnville shall encourage the location of airport-related industrial uses only on the industrial land which is adjacent to the airport. Those lands so reserved shall be designated in the planned development overlay covering this area.
 - *The City should consider updating this policy to reflect updated goals for the area near the airport.*
- ~~▪ 52.00 The City of McMinnville shall create a new "limited light industrial" zone which shall be placed on the industrial areas on the south side of Three Mile Lane in those areas where residential development is expected on the north side of the road. The new zone will allow only those types of industrial uses that will not conflict with the residential uses.~~
- ~~▪ 53.00 The City of McMinnville shall encourage the phased development of industrial land so that a moderate rate of growth occurs. A moderate rate of growth will be considered that rate which enables the City to provide urban services in a timely, orderly, and economic fashion, and which allows the private sector to provide for the needs of the new residents.~~
- 54.00 The City of McMinnville shall establish industrial planned development ordinances which shall be placed over the future industrial areas designated on the McMinnville Comprehensive Plan Map, the industrial reserve area, and certain existing industrially designated areas within the city limits. The overlay shall also be applied to any areas which are in the future designated for future industrial use through an amendment to the comprehensive plan map. The overlays shall provide standards to control the nuisance and negative environmental effects of industries. These controls shall cover, but not be limited to, the following areas:
 - 1. Landscaping and screening
 - 2. Noise suppression
 - 3. Light and heat suppression
 - 4. Pollution control for air, water, and land

- 5. Energy impacts
- 6. Traffic impacts
- 55.00 Deleted as per Ord. 4796, October 14, 2003.
- 56.00 Deleted as per Ord. 4796, October 14, 2003.
- 57.00 Agricultural activities shall be encouraged on industrially designated lands until such time as the lands are utilized for industrial purposes.

Appendix A. Buildable Lands Inventory

ECONorthwest prepared a Goal 10 compliant Economic Opportunities Analysis (EOA) for the City of McMinnville to assess whether the city has sufficient land within its Urban Growth Boundary (UGB) to accommodate population and employment growth forecast for the 20-year period between 2021 and 2041, as well as 5-, 10-, and 46-year planning periods. A key component of this study is the buildable lands inventory (BLI).

The legal requirements that govern the BLI for the City of McMinnville are defined in Statewide Planning Goal 10, OAR 660-009-0005, and OAR 660-009-0015(3). This Appendix summarizes the methods ECONorthwest used to conduct employment buildable lands inventory.

Study Area

The Commercial and Industrial BLI for McMinnville includes all commercial and industrial land within the McMinnville UGB. From a practical perspective, this means that all lands within tax lots identified by the Yamhill County Assessment and Taxation Office that fall within a commercial or industrial plan designation were inventoried. Note that tax lots do not generally include road or railroad rights-of-way or water. ECONorthwest used a July 2018 tax lot shapefile (the same data used for the residential BLI) from Yamhill County for the analysis, as well as previous information used for the 2013 EOA. The inventory then builds from the tax lot-level database to estimates of buildable land by plan designation.

Methods for Inventory of Commercial and Industrial Lands

For commercial and industrial land, the general structure is similar to the residential lands process with a few differences. The buildable lands inventory uses methods and definitions that are consistent with OAR 660-009 and OAR 660-024. Following are the administrative rules that provide guidance on the commercial and industrial BLI.

OAR 660-009-0005:

(1) "Developed Land" means non-vacant land that is likely to be redeveloped during the planning period.

(2) "Development Constraints" means factors that temporarily or permanently limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

(11) "Site Characteristics" means the attributes of a site necessary for a particular industrial or other employment use to operate. Site characteristics include, but are not limited to, a minimum acreage or site configuration including shape and topography, visibility, specific types or levels of public facilities, services or energy infrastructure, or proximity to a particular transportation or freight

facility such as rail, marine ports and airports, multimodal freight or transshipment facilities, and major transportation routes.

(12) "Suitable" means serviceable land designated for industrial or other employment use that provides, or can be expected to provide the appropriate site characteristics for the proposed use.

(13) "Total Land Supply" means the supply of land estimated to be adequate to accommodate industrial and other employment uses for a 20-year planning period. Total land supply includes the short-term supply of land as well as the remaining supply of lands considered suitable and serviceable for the industrial or other employment uses identified in a comprehensive plan. Total land supply includes both vacant and developed land.

(14) "Vacant Land" means a lot or parcel:

(a) Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or

(b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements.

Unlike with residential lands, the rules for employment lands include the concept of "suitability" which can be affected by factors other than the physical attributes of land. (See OAR 660-009-0005 (11) and (12) above.) The proposed BLI methods do not fully address the suitability factors, rather, they more narrowly assess whether a parcel is buildable based solely on attributes of the land. ECONorthwest had additional discussions with City staff about the assumptions embedded in the BLI as well as whether to apply additional suitability factors to employment lands, and if so, what factors to use.

Inventory Steps

The steps in the inventory of commercial and industrial buildable lands are:

1. Generate UGB "land base"
2. Classify lands by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

Step 1: Generate UGB "land base"

The commercial and industrial inventory used all of the tax lots in the McMinnville UGB with the appropriate plan designations. Specific designations that were used include:

- Commercial
- Industrial

Step 2: Classify lands

In this step, ECONorthwest classified each tax lot with a plan designation of Commercial or Industrial (based on the lot’s status as of January 2019) into one of five mutually exclusive categories based on development status:

- Developed land
- Vacant land
- Partially vacant land
- Public or exempt land

ECONorthwest initially identified buildable land and classify development status using a rule-based methodology. The rules are described below.

Development Status	Definition	Statutory Authority
Vacant Land	A tax lot: (a) Equal to or larger than one half-acre not currently containing permanent buildings or improvements; or (b) Equal to or larger than five acres where less than one half-acre is occupied by permanent buildings or improvements For the purpose of criteria (a) above, lands with improvement values of \$0 were be considered vacant.	OAR 660-009-005(14)
Vacant Small Lot	Tax lot less than one half-acre without buildings or improvements.	No statutory definition. Included based on PAC recommendation at February 27, 2020 meeting.
Partially Vacant Land	Partially vacant tax lots are those between one and five acres occupied by a use that could still be further developed based on the zoning. This determination is based on a visual assessment and City staff verification.	No statutory definition
Public or Exempt Land	Lands in public or semi-public ownership are considered unavailable for commercial or industrial development. This includes lands in Federal, State, County, or City ownership as well as lands owned by churches and other semi-public organizations and properties with conservation easements. Public lands are identified using the Yamhill County Assessment property tax exemption codes.	No statutory definition

Development Status	Definition	Statutory Authority
Developed Land	<p>OAR 660-009-005(1) defines developed land as “Non-vacant land that is likely to be redeveloped during the planning period.”</p> <p>Lands not classified as vacant, partially-vacant, undevelopable, or public or exempt are considered developed.</p>	OAR 660-009-005(1)

Step 3: Identify constraints

The commercial and industrial inventory uses development constraints consistent with guidance in OAR 660-009-0005(2). Most of the development constraints are the same as those used for residential lands. (The exception is steep slopes, which are defined as 15% or greater for employment lands and 25% or greater for residential lands.) Note that the previous EOA in 2013 used the 25% threshold for steep slopes. In the 2020 update, the PAC recommended using 15% to better reflect needs for development of employment land.

Constraint	Statutory Authority	Threshold	File name
Goal 5 Natural Resource Constraints			
Regulated Wetlands	OAR 660-009-0005(2)	Within National Wetlands Inventory	NWI
Natural Hazard Constraints			
Floodways	OAR 660-009-0005(2)	Lands within FEMA FIRM identified floodway	Floodplains_and_Floodways
100 Year Floodplain	OAR 660-009-0005(2)	Lands within FEMA FIRM 100-year floodplain	Floodplains_and_Floodways
Steep Slopes	OAR 660-009-0005(2)	Slopes greater than 15%	TBD

These areas were treated as prohibitive constraints (unbuildable). All constraints were merged into a single constraint file, which was then used to identify the area of each tax lot that is constrained. These areas were deducted from lands that were identified as vacant or partially vacant.

Step 4: Verify inventory results

As with the residential BLI, ECONorthwest used a multi-step verification process. This included review of aerial imagery, discussion and verification with City staff, and review of 2013 EOA results.

Step 5: Tabulate and map results

The results of the commercial BLI are presented in tabular and map format in Chapter 5.

Appendix B. Employment on Other Land and Employment Density

This appendix presents research and findings that ECONorthwest completed to provide rationale for employment density and “refill” and redevelopment assumptions for the 2020 update of the City of McMinnville’s EOA. It presents empirical analysis of existing employment densities in McMinnville and information on assumptions used for EOAs in comparison cities noted in *Exhibit 1*.

Exhibit 1. Cities used for comparison to the City of McMinnville by population and county

City	Population (2018 PSU Estimate)	County
Ashland	20,815	Jackson
Newberg	23,795	Yamhill
Redmond	29,190	Deschutes
Grants Pass	37,285	Josephine
Albany	53,145	Linn & Benton
Corvallis	59,280	Benton
Bend	89,505	Deschutes

In addition, with the 2013 EOA, the City also previously collected comparative data from other cities and the 2001/03 EOA for employment density and “refill” and redevelopment factors. That is summarized in Figure 40 of the 2013 EOA, which is also attached at the end of this document. It also includes guidelines from DLCD’s Goal 9 Guidebook. The City elected to add additional comparable cities to the analysis as three of the five cities in Figure 40 are metro cities with considerably different economic development opportunities and strategies.

Employment on Other (Non-Vacant) Land

ECONorthwest compiled information from the comparison cities on assumptions used in each city’s EOA for employment that doesn’t require vacant commercial or industrial land. (This corresponds to step 6 in the EOA summary matrix.) The 2013 McMinnville EOA used an overall assumption for employment on non-vacant land of 17%. Exhibit 2 summarizes assumptions used in other Oregon comparison cities.

Exhibit 2. Employment on other land assumptions for comparison cities

City	Emp. on Other Land	Rationale/Approach	Date
Ashland	20%	Empirical analysis of capacity on redevelopable lands.	2007
Newberg	5% (retail only)	Empirical analysis. (See Figure 40 on pg. 85 of 2013 McMinnville EOA)	2006
Redmond	10%	Reasonable judgement. (pg. 5-29).	2005
Grants Pass	10%	Reasonable judgement based on comparison areas. (pg. 8-46)	2007
Albany	0%	Redevelopment was accounted for in the BLI, so they did not account for it again in the forecast. (pg. 11)	2005
Corvallis	Industrial: 11% Retail: 12% Office: 29%	Reasonable judgement based on available buildable land. (pg. 4-56)	2016
Bend		Note: Bend used a site-based approach for estimating land need. We do not recommend this approach.	2016

DLCD’s Goal 9 workbook presented guidelines of 85-90% growth on vacant land, based on 10-15% refill and redevelopment cited as a rule of thumb.

The effect of applying refill and redevelopment rates to existing developed land is to implicitly increase the employment density on those lands. Employment density is discussed further in the next section, but must be evaluated together with assumptions about refill and redevelopment. As discussed in the next section, the observed density of employment in commercial and industrial plan designations is currently about 10 employees/net acre in industrial plan designations (down slightly from the 2013 EOA) and 23 employees/net acre in commercial plan designations (up slightly from the 2013 EOA). Exhibits 3A-3C show the effective densities resulting from applying 17%, 10%, and 5% of new employment to developed commercial and industrial sites.

For industrial employment, this ranges from absorbing between 96 to 325 additional employees from present through 2041, and increasing to absorb between 191 to 650 additional employees from present through 2067 on *currently* developed properties. This would increase the employment density for these sites from 10 employees/acre to between 11 to 12 employees/acre.

For commercial development, this ranges from absorbing between 295 to 1,003 additional employees from present through 2041, and increasing to absorb between 619 to 2,103 additional employees from present through 2067 on *currently* developed properties. This would increase the employment density for these sites from 23 employees/acre to between 25 to 29 employees per acre.

Exhibit 3A. Effective Employment Densities with 17% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites						
				Current Calc Emp Density	17% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 17% of emp to 2041	17% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 17% of emp to 2067
Industrial	3,422	4,485	428	10	325	4,810	11	650	5,135	12
Commercial	6,245	8,184	357	23	1,003	9,187	26	2,103	10,287	29

Exhibit 3B. Effective Employment Densities with 10% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites						
				Current Calc Emp Density	10% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 10% of emp to 2041	10% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 10% of emp to 2067
Industrial	3,422	4,485	428	10	191	4,676	11	383	4,868	11
Commercial	6,245	8,184	357	23	590	8,774	25	1,237	9,421	26

Exhibit 3C. Effective Employment Densities with 5% Refill/Redevelopment Assumption on Current Developed Commercial and Industrial Sites

Plan Designation	Covered Employment by Plan Des.	Total Emp. Calc. by Plan Des.	Net Unconstrained Developed Acres in Plan Designation	Effective Employment per Net Acre on Current Developed, Non-Vacant Sites						
				Current Calc Emp Density	5% of Add'l Emp to 2041	Tot Emp Exist Sites by Plan Des. In 2041	Emp. Density Exist Sites with 5% of emp to 2041	5% of Add'l Emp to 2067	Tot Emp Exist Sites by Plan Des. In 2067	Emp. Density Exist Sites with 5% of emp to 2067
Industrial	3,422	4,485	428	10	96	4,581	11	191	4,676	11
Commercial	6,245	8,184	357	23	295	8,479	24	619	8,803	25

Both the industrial and commercial employment densities have remained nearly the same over time: from the 2001/03 EOA, the empirical calculations in the 2013 EOA, and the empirical calculations in the current analysis. Industrial densities have decreased slightly from about 11 employees/acre to about 10 employees/acre. Commercial densities have increased slightly from about 22 employees/acre to about 23 employees/acre.

The 2001/03 EOA used variable assumptions for refill/redevelopment, with 17% for industrial, 15% for commercial, and 13% for institutional, while the 2013 EOA increased these all to 17%.

Average employment densities don't appear to have increased consistent with those rates. Actual changes compared to assumptions about refill/redevelopment of the existing developed sites may be the result of:

- Refill/redevelopment has not occurred, or has occurred at lower rates than assumed in McMinnville's prior EOAs
- Employment densities of existing businesses may have declined, through reduction of employees or through expansion of facilities without commensurate increases in employment densities
- Increases in employment density in some cases may have been offset by reductions in employment density in other cases

Potential reasons may include:

- Increases in automation, where operations occupy the same space, but with fewer employees
- More new businesses/new land use of types with the same or lower employment densities than previous business' employment densities
 - Potential increases in area devoted to storage, cold storage, warehousing, and distribution, some of which may increase together with surrounding agricultural uses.
 - Potential increases in area devoted to indoor grow operations, potentially further increasing from the growth of industrial hemp production.¹¹⁶

The dynamics of new job creation should also be considered in evaluating refill and redevelopment.

- How strongly is job growth correlated with the size or age of a business? How much job growth is created through newer start-ups vs. long-term growth of more established businesses? How many smaller entrepreneurial businesses intend to grow to be larger businesses vs. remain smaller?
- While there may be capacity to add employees within established space for existing businesses, new businesses may need their own facilities that can't be located within the facilities of other businesses. Some existing businesses may retain partially vacant sites in the event they need to expand. Some businesses will require ownership of their land and facilities rather than leasing space on existing developed sites.

An assumption of 5% industrial refill/redevelopment would result in an increase in employment density from about 10 emp/ac to about 11 emp/ac on existing developed sites. This is generally consistent with McMinnville's historic trends.

¹¹⁶ <https://www.forbes.com/sites/andrebourque/2019/01/31/how-hemp-is-moving-oregon-marijuana-to-an-indoor-grow-crop/#10ff80b960ed>

The empirical calculated density for commercial sites in the 2013 EOA was 22 emp/acre, but an aspirational policy of 26 emp/acre was adopted. Any of the three scenarios calculated above (5%, 10%, or 17%) for refill/redevelopment on *currently* developed sites would result in an increase in density on these sites that would exceed currently observed densities, ranging from 24 to 26 emp/acre by 2041. Carrying over the 17% assumption from the 2013 EOA would mean an assumed employment density of 29 emp/acre on these sites by 2067, compared to the current 23 emp/acre, and exceeding even the aspirational overall assumption of 26 emp/acre used in the 2013 EOA. An assumption of 5% commercial refill/redevelopment would result in an increase in employment density from 23 emp/ac to 25 emp/ac on these sites in 2067.

Recommended approach and assumptions

This update could simply carry forward the 17% refill/redevelopment assumption from the 2013 EOA for all categories, but the analysis of empirical data, calculations of effective density, and comparisons with other cities and the DLCDC Goal 9 Guidebook suggest that assumption is high, and that McMinnville hasn't achieved this historically. Further, even if that level of refill/redevelopment had been achieved historically, carrying over an assumption for each planning period would have a compounding effect of assuming unlimited, successively higher capacity of the same existing developed sites to absorb more employment each time. This would push the employment density for those developed lands up each planning cycle, where infill and redevelopment would have already theoretically occurred and increased in each previous planning cycle.

A reasonable assumption would be 5% refill/redevelopment for both commercial and industrial employment, which is what we would recommend. This would result in an increase in employment density on currently developed sites, still exceeding the empirical employment densities from the 2013 EOA.

The assumed 17% refill/redevelopment rate from the 2013 EOA would be an aspirational assumption that exceeds the empirical densities and exceeds the aspirational density from the 2013 EOA. It is an estimate that we don't anticipate will be achieved, and is higher than most comparisons. The 2001/03 EOA refill/redevelopment assumption of 17% for industrial and 15% for commercial is another aspirational assumption that hasn't been observed historically.

The tables below show the result of the 5%, 10%, and 17% refill/redevelopment assumptions for comparison for the 2021-2041 period.

The government land use type is excluded from the remaining employment forecast calculations, as we account for government employment in calculations for other land needs.

Exhibit 4a. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (17% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	283	1,384
Retail Commercial	383	65	318
Office & Commercial Services	3,346	569	2,777
Tourism Services	1,269	216	1,053
Total	6,665	1,133	5,532

Exhibit 4b. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (10% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	167	1,500
Retail Commercial	383	38	345
Office & Commercial Services	3,346	335	3,011
Tourism Services	1,269	127	1,142
Total	6,665	667	5,998

Exhibit 4c. Estimate of new employment that will require vacant land, McMinnville UGB, 2021 to 2041 (5% Assumption)

Land Use Type	New Employment Growth	Emp. on Other Land	New Emp. on Vacant Land
Industrial	1,667	83	1,584
Retail Commercial	383	19	364
Office & Commercial Services	3,346	167	3,179
Tourism Services	1,269	63	1,206
Total	6,665	332	6,333

Employment Density

ECONorthwest completed an empirical analysis of the overall employment density in commercial and industrial areas, as well as in sample areas for the following land use types included in the employment forecast—industrial, office commercial, and retail commercial.¹¹⁷ The 2013 McMinnville EOA used the following assumptions for employment density:

- **Industrial:** 11 employees per acre
- **Commercial:** 26 employees per acre

The 2013 EOA included an empirical analysis of employment density. The 11 employee/acre industrial density was the empirical calculated density. The empirical commercial employment density was 22 employees per acre. The 26 employee/acre density was an aspirational, policy-based assumption.

In the PAC materials provided for the meeting on September 5, 2019, we completed a sensitivity analysis for employment density based on the 2013 EOA assumptions. The analysis shows the effect of a 10% increase and 10% decrease of the 2013 employment density assumptions and the range of resulting needed acreage. The PAC requested further research based on existing employment density in McMinnville. The results of that analysis are provided in this section.

Overall employment density for existing employment in McMinnville

The analysis of overall employment density for commercial and industrial areas included lots identified as “developed” in the buildable lands inventory (BLI) and summarized the employment per acre on these sites by plan designation (commercial or industrial land only). Land in wetlands was removed from the acreage calculation to better account for land used for employment. We calculated employment density, expressed here as total employees per acre, by dividing the number of employees on developed sites in commercial and industrial plan designations by the acreage (less wetlands) of those developed sites. The results of this calculation were:

- **Industrial:** 10 employees per acre
- **Commercial:** 23 employees per acre

Exhibit 5 shows the results of applying these employment density assumptions for the remaining land use types.

¹¹⁷ The other land use types—tourism services and government—were excluded from the sample area analysis. The PAC will be discussing site characteristics. The sites needed for tourism services are typically similar to the needs for retail commercial. Thus, it is reasonable to assume the same employment density for both tourism services and retail commercial. Government employment will not require vacant commercial and industrial land, so we did not analyze employment density for this land use type.

Exhibit 5a. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 17% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,467	10	147	156
Retail Commercial	337	23	15	18
Office & Commercial Services	2,945	23	128	156
Tourism Services	1,117	23	49	59
Total	5,866		338	389

Exhibit 5b. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 10% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,500	10	150	160
Retail Commercial	345	23	15	18
Office & Commercial Services	3,011	23	131	160
Tourism Services	1,142	23	50	61
Total	5,998		346	398

Exhibit 5c. Estimate of future land demand for new employment (plan designation approach), McMinnville UGB, 2021 to 2041, after 5% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	10	158	169
Retail Commercial	364	23	16	19
Office & Commercial Services	3,179	23	138	169
Tourism Services	1,206	23	52	64
Total	6,333		365	420

While this approach provides a reasonable indication of employment densities in McMinnville, the mix of types of employment on sites may affect the overall result (i.e., not all employment in industrial areas is classified as industrial employment). However, these results align with comparable areas and previous guidelines for calculating employment density, and are therefore reasonable assumptions for the purposes of the EOA.

Sample area employment density for existing employment in McMinnville

ECONorthwest also analyzed sample areas representative of employment in McMinnville by land use type. City staff assisted in choosing these areas for further analysis based on local knowledge as well as requirements for data confidentiality. Again, we calculated the employment density by dividing the number of total employees in each sample area by the total acreage of the sample area site. The results by land use type were:

- **Industrial:** 11 employees per acre
- **Office commercial:** 29 employees per acre
- **Retail commercial:** 19 employees per acre

Similar to the first approach to calculate overall employment density, a sample area approach also has limitations. Sample areas, by definition, do not provide information on employment density across McMinnville. However, these areas were chosen based on a representation of typical employment areas in McMinnville. Limitations in data availability, reporting, and confidentiality also present limitations in results.

The results of both approaches align with results from other studies in comparable cities, as well as the guidelines in DLCD's *Industrial and Other Employment Lands Analysis—Basic Guidebook*, which states:

“Typical employment densities per net acre range from 8 - 12 jobs for industrial; 14 - 20 jobs for commercial; and 6 - 10 jobs for institutional/other jobs.”

The next section provides background information on employment density assumptions used in cities that are comparable to McMinnville.

Exhibit 6 shows the results of applying these employment density assumptions for the remaining land use types.

Exhibit 6a. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 17% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,384	11	126	134
Retail Commercial	318	19	17	20
Office & Commercial Services	2,777	29	96	117
Tourism Services	1,053	19	55	68
Total	5,532		294	339

Exhibit 6b. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 10% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,500	11	136	145
Retail Commercial	345	19	18	22
Office & Commercial Services	3,011	29	104	127
Tourism Services	1,142	19	60	73
Total	5,998		319	367

Exhibit 6c. Estimate of future land demand for new employment (sample area approach), McMinnville UGB, 2021 to 2041, after 5% deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	11	144	153
Retail Commercial	364	19	19	23
Office & Commercial Services	3,179	29	110	134
Tourism Services	1,206	19	63	77
Total	6,333		336	388

Employment density comparison

City of McMinnville staff provided ECONorthwest with a list of cities typically used for comparison purposes. The cities and their population are listed in Exhibit 7.

Exhibit 7. Cities used for comparison to the City of McMinnville by population and county

City	Population (2018 PSU Estimate)	County
Ashland	20,815	Jackson
Newberg	23,795	Yamhill
Redmond	29,190	Deschutes
Grants Pass	37,285	Josephine
Albany	53,145	Linn & Benton
Corvallis	59,280	Benton
Bend	89,505	Deschutes

Each city listed above has completed an EOA between 2005 and 2016. Methodologies for each EOA varied, and information related to employment density assumptions was not consistently reported. The assumptions document in each EOA are listed in Exhibit 8, along with a description of the rationale or approach used for arriving at the employment density numbers, if available. These approaches generally fell into two categories, either (1) a reasonable judgement based on comparable cities or (2) an empirical analysis of existing employment density or other metric.

Exhibit 8. Employment densities for comparison cities

City	Employment Density (employees per acre)			Rationale/Approach	Date
	Industrial	Commercial	Retail		
Ashland	12	17	–	Reasonable judgement/comparison (pg. C-6)	2007
Newberg	11	21	21	Empirical analysis (pg. 84 McMinnville 2013 EOA)	2010
Redmond	5 (low) – 12 (high)	12 (low) – 20 (high)	–	Empirical analysis/comparison (pg. 5-29)	2005
Grants Pass	10	17	17	Reasonable judgement/comparison (pg. 8-47)	
Albany	12	–	20	Reasonable judgement/comparison (pg. 11)	2007
Corvallis	10	35	25	Empirical analysis (pg. 4-60)	2016
Bend	–	–	–	<i>Note: Bend did not use an EPA approach for the 2016 EOA.</i>	2016

Recommended assumptions and approach

The results of the empirical analysis are within reasonable ranges for employment densities. Exhibit 9 shows the recommended approach of 11 employees per acre for industrial and 23 employees per acre for all other land use types. It would also be possible to use the commercial density as a total control for the commercial subcategories and allocate a proportion of the total acreage to each subcategory based on the share from the sampled employment densities if preferred, but we believe this method is reasonable.

Exhibit 9. Estimate of future land demand for new employment (recommended approach), McMinnville UGB, 2021 to 2041, after 5% refill/redevelopment deduction

Land Use Type	New Emp. on Vacant Land	Employees per Acre (Net Acres)	Land Demand (Net Acres)	Land Demand (Gross Acres)
Industrial	1,584	11	144	153
Retail Commercial	364	23	16	19
Office & Commercial Services	3,179	23	138	169
Tourism Services	1,206	23	52	64
Total	6,333		351	405

These calculations do not include the government land needs, which are calculated separately.

During discussion of site characteristics, a portion of the commercial uses will be split out and assigned to neighborhood-serving commercial and services to be located in neighborhood areas.

Figure 40. Comparative Employment Density & Redevelopment Factors

Reference	Employment Density (Jobs per Acre)	% of Job Growth on Vacant Employment Land
2001 McMinnville EOA	11 industrial 22 commercial 35 institutional	83% industrial 85% commercial 87% institutional (based on factors including 1-5% requires no non-res built space or land, 5-7% on existing developed land, and 5% vacancy rate)
DLCD Goal 9 Guidebook (2005)	8-12 industrial 14-20 commercial 6-10 institutional & other (demand for net acres; also noted is that each acre can accommodate 10-15 jobs for general commercial and office-park industrial, 20 for offices in non-metro downtowns & suburban settings)	85-90% job growth on vacant land (based on 10-15% use of vacant or redeveloped buildings cited as general rule of thumb)
Salem-Keizer Metro Area Regional EOA 2012-2032 (May 2011)	Forecast densities @: 20 light industrial (above 12-15 current) 36 general office (reflecting current average with range from 27 in retail areas to 73 in Salem central business area) Retail/personal service uses forecast not by jobs per acre (but @ 0.30 FAR)	95% industrial 83% general office (based on assumption that 5% of industrial and 17% of office new employment will locate in existing space or sites not requiring new land; EOA also notes that "there is no study that quantifies how much employment is commonly accommodated in existing built space over a 20-year period in a city.")
Albany EOA Update (2007)	12 industrial 20 commercial retail/services 10 government	100% job growth on vacant land (was at 90% with 2000 EOA @ 10% refill rate but adjusted to 0% rate as the updated 2007 BLI already accounted for infill and redevelopment on supply side of analysis)
Newberg EOA (2010)	11 industrial (including 10% increase in density as efficiency measure) 21 commercial retail & office (overall average with office calculated @ 40% FAR & avg 201 sf/job; retail estimated @ 14.8 net buildable acres per 1,000 new households)	See density for industrial Office appears to assume 100% development on vacant land Retail assumes 95% use of vacant land (with 5% assumed for infill & redevelopment)
City of Beaverton Final Draft EOA (2010)	18 general industrial 10 warehouse 23 flex/business park 58 office 30 retail 38 institutional (@ Metro method of jobs/bldg sf & FAR for densities)	94.2% industrial 92.7% commercial (calculated for excess vacancy above 6% target normalized rate with excess figures at 5.8% industrial, 7.3% commercial)
Metro Urban Growth Report (2009)	6 general industrial & warehouse 23 flex/business park 46 office 27 retail 27 institutional (Calculated using jobs/bldg sf & FAR for densities; @ low end of spectrum for outer ring suburbs)	80-90% general industrial, warehouse & flex/business park (10-20% refill) 70% office (30% refill) 40-70% retail (or 30-60% refill with most (generally @ lower end of refill rates) 60-65% institutional (or 35-40% refill) (Range for outer ring suburbs, 2015-30 time period)

Sources: From documents prepared by ECONorthwest, Johnson-Gardner and E. D. Hovee & Company, LLC.

Appendix C. Other Site Needs

Use	Description or Example*	Land Need	EDSP Reference or Other Reference	Employment/Acreage Adjustment	Notes
1. Community Center/ Recreation Facility	Update, improve, expand and add recreational facilities that serve the community's needs including a Community Center and Aquatic Center.	10 acres	3.2.2	<p>22 Employees net increase for additional programs</p> <p>(In addition to assuming no net change with transfer of existing FTE from old to new location).</p> <p>Source: <i>Parks Director</i></p>	<p>The description in the EDSP wasn't explicit regarding a public or private facility. Therefore, for purposes of the EOA, this wasn't initially assigned to public land. The City's feasibility analysis work is now underway, and this is calculated as a public facility.</p> <p>The Parks LOS of 14 acres/1000 population is for neighborhood parks, community parks, and greenways, and doesn't include this type of special use facility.</p> <p>For City of McMinnville non-park needs, the assumption was 7 additional acres for 2021-2041, including 4.5 acres for fire stations, plus 0.26 acres per 1,000 population. There is a need for 10 acres for a community center and aquatic center, which alone would exceed the total additional need already identified for the 20-year period, unless it could be sited on land already owned by the City. The feasibility analysis has not yet progressed to the siting criteria / site selection phase, so there hasn't been a determination about location.</p> <p>Therefore, at this time, the proposal retains an assumption of an additional 10 acre land need. If it is later determined the facility can be sited on property already owned by the city, then the additional 10 acres could be removed from this category, and accordingly, no further deduction of employment would be made for calculating the land need associated with the use, as it wouldn't be separately classified as an 'other needed site.'</p>

2. Outdoor Stage/ Amphitheater	Examples: Britt, Jacksonville Cuthbert, Eugene Bi-Mart, Central Point Les Schwab, Bend	5 acres plus parking (Assume parking is co-located and shared with other use)	3.2.1	15 Full Time, 45 Seasonal, (60 total payroll June-September). 30 Employees. Tot Adj for Annual Average. <i>Source: Britt Festival (2,200 seating capacity)</i>	If an amphitheater is to serve a tourism-driving economic development function that would attract artists on a tour circuit, it would need to be sized to meet the minimum criteria for seating capacity necessary to reflect the realities of ticket sales. Of the four such examples evaluated for facility size, Britt was at the low end of seating capacity, at 2,200. Several of these are located in public parks and operated by separate operators. The location within a park helps allow for shared parking facilities. Therefore, the size estimate is just for the amphitheater, and not for the additional land needed for venue parking.
3. See Ya Later Foundation – Champions Center (or equivalent facility)	The Champions Center is planned as a youth and family recreational and educational complex.	28 acres (4 acres for buildings, 6 acres for parking, 12 acres for 6 athletic fields, 6 acres for associated facilities)	See Ya Later Foundation Proposal, (6.3)	14 Full Time, 12 Seasonal Part Time (6 Total After Adjusting for Annual Average), 20 Employees plus Volunteer Base <i>Source: See Ya Later Foundation Proposal</i>	The See Ya Later Foundation estimates a need for 28 acres for recreational facilities. Co-locating facilities as part of a complex would provide opportunities for shared parking. (The specific organization is referenced here, since this is not hypothetical).
4. Arts and culture focused event center	Example: Chehalem Cultural Center, Newberg	3.5 acres	3.3	7 Full Time + 2 FTE estimated as 8 Part-Time = 15 Employees <i>Source: Chehalem Cultural Center</i>	This item combines items which are separately identified in the EDSP (community art space, collaborative studio, cooperative gallery, arts and culture-focused event center).
5. Evergreen Aviation and Space Museum	Support existing facilities Based on facilities in master plan for site	27 acres	(3.3)	Master Plan Facilities: Adventure Park (50 person capacity): 6 Lodge (96 rooms) 45 Other: Admin Building, Restoration Building, <u>Support Building.</u> <u>Student Housing): 6</u> Sum: 57 Employees	In the EDSP, a single strategy discusses assisting efforts of uses including Evergreen and the Yamhill County Heritage Museum. However, since the EOA effort is focused on the UGB, the language used in the EOA related to this item has been revised to discuss only the Evergreen property which is in the UGB, to clarify the land-use aspects of this item pertaining to the UGB focus on Evergreen and not the Heritage Museum, which is not in the UGB. The employment estimate relates to the master plan for the property.

6. Wings and Waves	Opportunities for growth and expansion	Location-specific land need at existing partially vacant site. See above.	6.3	See above.	For purposes land needs discussion, this is discussed in the context of the overall larger Evergreen properties, without separately discussing site needs separately for Evergreen and Wings & Waves. Therefore, the needs discussed for “Evergreen” above are inclusive of the property for Wings & Waves.
7. Conference Center	40,000 sf conference space, accommodation, and parking:	5 acres	6.4	13 Employees <i>Source: Feasibility Analysis</i>	
8. Equestrian center with supporting commercial activity inside UGB	Would include rural/urban interface facilities, with those uses inside the UGB that cannot be developed on EFU land outside the UGB	20 acres in UGB, larger footprint outside UGB	(6.3)	Rural/Urban interface portion on 20 ac within UGB: Resort: 24 RV Park: 4 Distillery: 12 Brewpub: 40 <u>Open Plaza Areas: 0</u> Sum: 80 Employees	Employment from feasibility studies centers range from 32 to 70 employees, average of about 0.1 employees per acre. Sources: “Towards the Creation of a Horse Park in the Commonwealth of Massachusetts: A Feasibility Study” and “Maryland Horse Park and Agricultural Education Center Feasibility Study”
9. Food hub and public market	Focused on local craft foods & beverages	3.5 acres	3.2.2	13 Employees <i>Source: USDA “Regional Food Hub Resource Guide”</i>	The referenced resource guide indicates that the average number of employees created by a food hub is 13 employees.
10. Makerspace/ innovation hub/ fabrication center	Supports local innovation & entrepreneurial ecosystem	2 acres	6.3	3 Employees + Contracted Services <i>Source: Talent Maker City</i>	Talent Maker City is a nonprofit organization that operates a makerspace in Talent, Oregon, in the heart of their downtown. They have two full-time employees and one part-time employee. They also contract with independent contractors, including retired teachers and specialists in their fields to conduct classes and workshops.

TOTAL

104 acres
(total)

**Average Annual
Employment:**
Community Center: 22
(net)
Amphitheater: 30
See Ya Later Foundation
or Equivalent: 20
Arts & Culture Center:
15
Evergreen + Wings &
Waves: 57
Conference Center: 13
Equestrian Center
(portion inside UGB): 80
Food Hub: 13
Makerspace: 3
Sum: 253 Employees

253 Employees @ 23
emp/acre= 11 acres

104 acres - 11 acres =
net increase of 93 acres
for other needed sites,
over acres calculated
from average
employees/acre

Appendix D. Site Need Letters

Please accept these comments regarding the City of McMinnville's Economic Opportunity Analysis and the estimated future industrial land needs. MEDP has had the good fortune to work with many economic development partners over the years as we work to further our mission of advancing strategies that respond to the needs of McMinnville's traded-sector businesses. We do this through four economic development strategies guided by the City's MAC Town 2032 Economic Development Strategic Plan: 1) Business Retention & Expansion, 2) Business Attraction, 3) Workforce Development, and 4) Innovation Development.

Without available, buildable industrial lands the strategic plan cannot be fully realized. The historical job growth and the projected job growth of 27% over the next 20 years will struggle to take place without planning for necessary industrial land.

The current estimates state McMinnville will need 153 acres of buildable industrial lands by 2041 and 329 buildable acres by 2067. Currently, we have 323 acres of identified industrial land. The reality of those numbers is that 177 of those acres are on two sites. The highest and best use and market realities for these sites with Highway 18 frontage may make these sites impractical to retain as large industrial sites that would be available for industrial use. The potential unavailability of these sites for industrial use would place us well behind the projected need.

While acres available and acres needed may be close to matching up, the fact is there are few perfect sites. An available site may meet a company's minimum requirements, but it's location, shape, slope, or infrastructure may not work. So, they will look for another similar sized site in a different location (hopefully) within the community. McMinnville has lost out on potential opportunities due to lack of rail-served sites, proximity to a major metro area, access to a major airport, or location close enough to an Interstate. It is critical we don't lose out on projects due to a lack of available sites for our targeted industries.

In order to address our targeted industry's needs of high-tech/clean-tech manufacturing, value-added manufacturing, UAV manufacturing, business park, innovation campus, and local and regional headquarters, we will need varying sizes of sites with various requirements. The minimum lot size for these sectors should be 5 acres with a span of up to 25 acres.

Rail served sites continue to be a requirement for some companies interested in a McMinnville location. An additional 5 sites of 5-25 acres would be a good use of rail-served industrial property.

Also, with over 80 manufacturers in McMinnville, we will need sites for existing companies that are growing out of 0.5 – 5-acre sites into larger sites of 10 -20 acres. An additional 5 sites would accommodate additional existing business expansions.

Potential developments associated with targeted sectors include the creation of a mixed-used Innovation Center that would require 20-40 acres, depending on density, and an Airpark allowing for local, regional headquarter space. This could require 3-5 sites of 5-25 acres, and an additional 10 sites between 2-25 acres for companies wanting access to the airport, or access to an Innovation Center.

The types of companies in the targeted sectors are meant to continually diversify the local economy and never rely heavily on a single business, or industry. The ability to have various site sizes and locations to choose from can assist with potential job growth. Available sites are like options that attract opportunity. Without multiple options of readily buildable industrial lands, you risk the loss of new business growth.

Sincerely,

Scott G. Cooper, CECD
Executive Director
McMinnville Economic Development Partnership

McMinnville Industrial Promotions, Inc.

P.O. Box 328
McMinnville, Oregon 97128

To Whom It May Concern:

McMinnville Industrial Promotions, Inc. ("MIP") appreciates the opportunity to present its written comments related to the City of McMinnville's Economic Opportunities Analysis and Urbanization Report (Phase 2) as coordinated with the City's MAC-Town 2032 Economic Development Strategic Plan. MIP specifically addresses its remarks regarding future industrial land needs and sufficiency of the City's Urban Growth Boundary to ensure a reasonable estimate of industrial land inventory necessary to support good jobs and amenities in the future that create a high quality of life for McMinnville residents.

MIP advocates for a robust industrial lands inventory that accomplishes the City's Strategic Plan priorities by providing enough flexibility to foster an attractive business climate, positioning McMinnville's businesses for modern development and investment, and utilizing the City's strengths to encourage a sustainable economy for future generations.

MIP was incorporated in 1953 in response to the closure of two large manufacturers in the area, a devastating loss at the time of approximately 350 jobs. Also facing a slowdown in the timber industry, a local group of business and professional leaders pledged their own money to attract new businesses to McMinnville and diversify its economic base. In 1955, the corporation was expanded to a community corporation, and ultimately it progressed to a for-profit corporation a year later. Regardless of its structure, MIP has never lost sight of its initial mission and special corporate purpose- to foster, encourage, promote, and improve the industrial, commercial, and physical development of the City of McMinnville. MIP seeks to support the continuation of present businesses, but also attract new industries that strengthen the community as a whole, provide long term economic stability to the area, and which provide living wage opportunities to residents. Over the last 67 years, MIP has invested and assisted in growing industrial businesses. Notable accomplishments of MIP include being the first industrial development company in the Pacific Northwest to qualify for Small Business Administration funds, which was recognized when nine different industrial projects broke ground in McMinnville in 1969. In addition, MIP formed a unique partnership with the City of McMinnville to acquire and develop the major industrial park infrastructure in 1983. MIP has and continues to play a unique role in business and industrial real estate development in the City.

There is no denying that McMinnville is uniquely situated. While the City is disadvantaged due to its relatively far location from a major metropolitan area and its airport (PDX) (approximately 60 miles away), it has developed into an economic hub nonetheless. The availability of ample water and electricity at a low price continues to make the City attractive for businesses to locate to a more rural area and provides occupational opportunities to McMinnville and the surrounding communities. Encouraging vibrant and diverse businesses has created economic collaboration and resiliency, which should be prioritized and maintained if McMinnville is to continue to be an economic engine in Yamhill County. As such, MIP is a proponent of protecting currently industrially zoned properties and supports the future planning for expansion of the industrial zone.

The availability of shovel-ready industrial employment lands is critical to expanding and attracting businesses that provide high-wage jobs. The City has forecasted that employment in the industrial area will grow by approximately 27% over the next 20 years. In that analysis, it is determined that approximately 153 buildable acres are needed to account for and service this growth by 2041, and upwards of 329 buildable acres are needed by year 2067. Currently, 323 acres are part of the overall identified inventory.

The foregoing indicates that McMinnville has just barely enough gross industrial lands inventory for its needs over the next 40 years. However, simply looking at the gross numbers provides an inaccurate and incomplete picture of the location and suitability of the currently zoned industrial sites and does not account for the various development costs associated with many of those acres. 177 of those buildable acres are concentrated in two large tax lots located on the Three Mile Lane corridor, 89.6 and 87.5 acres respectively. There are significant and very costly barriers to the development of this land. First and foremost, ODOT has been fiercely protective of preserving the Hwy 18 McMinnville bypass, and costs of developing the public improvements to accommodate ODOT's requirements would be substantial (and not possible for most buyers). Other hurdles to overcome include actual acquisition of the property, time for site readiness, site planning, and additional infrastructure and improvement changes. The costs associated with the 177 acres has impeded industrial development of this property and will likely continue for the foreseeable future.

Also, due to the fact that the majority of growth and development in the industrial sector has occurred, and continues to occur, on parcels between 0.5 and 10 acres in McMinnville (and on 25 acres or less statewide), having more than half of the industrially zoned lands tied up on two parcels has made it impractical for business placement or relocation to the Three Mile Lane area. As such, growth is constrained with available parcels located in the industrial park unless a second industrial area is constructed with the needed infrastructure, which is unlikely at this time.

Finally, it is also very possible that owners or developers of either or both of these large parcels will ultimately seek rezoning to respond to the current severe deficit of lands available for residential development or commercial requirements located within the Urban Growth Boundary.

As such, only 146 acres are reasonably and realistically available for development in the core industrial area. If the type and character of available sites are taken into consideration, McMinnville actually has a large deficit of available and buildable industrial lands that will not meet its needs even in the next 20 years. With this, McMinnville risks local businesses leaving, or the encroachment of industry into other neighborhoods, resulting in safety and other nuisance concerns.

It has been the collective experience of MIP's leadership that the majority of companies looking to locate here in McMinnville need small parcels (0.5-5 acres in size) for development. In fact, MIP has partitioned many of its larger holdings for sale to businesses looking to build on smaller parcels. MIP has seen this type of development crucial to its mission. Industries in close proximity cultivate a vibrant manufacturing sector by offering differentiated as well as supportive services and products. Additionally, a mixture of locally owned businesses allow for the community to weather ups and downs throughout the business cycle, and not be dependent on a few large employers. If readily and economically developable industrial lands hit a ceiling, McMinnville is in danger of losing businesses that would otherwise integrate into and diversify the economic base. Not only would business opportunities be stifled, but would also consequentially result in lost or lower wage jobs.

Recently, MIP has negotiated transactions that proposed developing between 20-30 acres of property. While there is not a tremendous immediate need for sites between 10-30 acres, MIP sees the importance for these options to be included as part of the overall land inventory to accommodate and attract various future developments. After reviewing the State of Oregon Industrial Development Competitive Matrix, it is clear that to be competitive in all fields of manufacturing (including high tech), light industrial uses, warehousing and distribution, and other specialized uses, the most common requested site size is between 5-25 acres. As such, in order to stay competitive with the rest of the state, McMinnville will need to have a variety of industrial sites that are readily and economically developable.

McMinnville needs a sufficient industrial land inventory with a larger variety of different-sized parcels to continue to cultivate business growth and infrastructure development. This can only be done by steadfastly preserving the current zoning of industrial properties, and by the City expanding its Urban Growth Boundary to increase industrial acreage.

Further, if the City considers rezoning the Three Mile Lane parcels for a use that could justify the significant costs of infrastructure, the City must first increase the number of readily buildable industrial lands in its Urban Growth Boundary to accommodate industrial needs over the next 40 years, ensuring there is no net loss of lands available for industrial uses.

Thank you for your consideration.

Respectfully Submitted,



Doug Hurl, President

Appendix E. Public and Institutional Land Need



City of McMinnville
 Planning Department
 231 NE Fifth Street
 McMinnville, OR 97128
 (503) 434-7311

www.mcminnvilleoregon.gov

MEMORANDUM

DATE: November 13, 2019
TO: Economic Opportunities Analysis PAC and Public Lands Work Group
FROM: Tom Schauer, Senior Planner
SUBJECT: Public & Institutional Lands - *Update*

This memo provides updated information about land needs presented in a previous memo dated October 9, 2019. It summarizes the public and institutional land needs that aren't addressed through the employment forecast. Staff is seeking a recommendation from the Workgroup for the remaining identified needs which are presented in this memo as "updated" or "new" and summarized in Figure 1. The Workgroup's recommendation will be provided to the Project Advisory Committee, and would complete the Workgroup's work.

Summary – **New**

Public and institutional land needs calculated separately from the employment forecast are summarized in **Figure 1** below, and more detailed information follows.

Figure 1. Estimated Public and Institutional Land Needs

Organization/Sector	Add'l Land Need By 2021	Add'l Land Need 2021-2041 (ac)	Add'l Land Need 2041-2067 (ac)	SUM Through 2067 (ac)	Method/Notes
City of McMinnville (non-parks), 1	0	7	4	11	4.5 ac for fire stations plus 0.26 ac/1,000 pop
City of McMinnville (parks), 2	27	365	214	606	Parks Master Plan LOS
McMinnville Water & Light	0	21	0	21	Interview, See Narrative
Chemeketa Community College	0	0	0	0	Interview, See Narrative
Linfield College	0	0	0	0	Interview, See Narrative
McMinnville School District	0	10	30	40	Interview/Memo, See Narrative
Yamhill County	0	6	8	13	Interview, 0.5 ac/1,000 pop
State of Oregon	0	1	1	2	0.08 ac/1,000 pop
Federal Government	0	2	2	4	0.14 ac/1,000 pop
Churches	6	32	44	83	2.88 ac/1,000 pop
Other	0	0	0	0	
SUM	33	444	303	780	

Note 1: Site needs for fire stations are included in 2021-2041 calculation

Note 2: Needs for 2021-2041 include current deficit

General: Figures above don't reflect additional needs if direction of growth absorbs additional sites outside UGB needed/required for services

Background

Certain land uses don't lend themselves to forecasting land needs by use of an employment forecast and employment density assumptions. At a previous meeting, information was presented about public and institutional organizations and lands. Preliminary data was presented about calculations using a ratio of acreage per 1,000 population that can be used to forecast site needs. However, this method isn't always applicable to each of these entities. Following the September 5, 2019 PAC Meeting #2, staff held meetings with representatives of public and institutional organizations to discuss land needs

and methods. This memo summarizes the results of the meetings and summarizes some information discussed at the last PAC meeting.

City of McMinnville – Updated

- **General, Misc. City Departments: (Administration, Office, Police, Public Works, Fleet, Library, Recreation Buildings, etc.).**
 - Planning staff met from representatives from respective City departments to discuss land needed by the City of McMinnville. Currently, there is no formally adopted plan outlining space needs and plans for existing and future building/facility needs for the planning periods.
 - The City Manager indicated that a ratio of current acreage per 1,000 population would likely over-estimate the City’s future land needs. Given existing facilities and site arrangements, there are opportunities to consolidate facilities, redevelop/expand onto existing city sites, use land more efficiently, grow into more recent expansions that retain capacity, etc.
 - With a forecast population of about 48,000 in 2014 and 63,000 in 2067, it is not expected that the City would grow to a size that would necessitate substantial branch facilities or satellite locations during the planning period (such as a library branch etc.).
 - The City Manager and Engineering Staff suggested that base year acres/1,000 population data from cities of approximately 48,000 population and 63,000 population corresponding to the future panning horizon year population for McMinnville might help inform ratios associated with McMinnville’s future land needs.
 - **Update.** Data for cities of approximately 48,000 and 63,000 population was analyzed for comparison. **Figure 2** shows a summary of data for comparison cities – including cities for which data was not available. As noted above, the City Manager and Engineering Staff suggested that a straight-line ratio of acres per 1,000 population might overestimate needs. Therefore, staff used only the portion of City lands with facilities exclusive of the airport, floodplain, and utility sites for estimating additional City land needs. (Parks were calculated separately). Approximately 18 acres of the 83.1 City acres is non-utility facilities. Only that portion was used for calculating future needs. That portion had a 0.51 ac/1000 population ratio. Since it was assumed a straight-line extension would overestimate needs, staff used half of that ratio (0.25 ac/1000 population), and the specific information for fire station sites noted below was added to that estimate.

Figure 2. Ratio Information Available from Other Cities

City	Ratio (acres per 1,000 pop)
Redmond 2005 (total)	110 ac/1000 (calculated) 10 ac/1000 (assumed need)
McMinnville 2019 (less parks, airport, floodplain)	2.38/1000
McMinnville, 2019 (less parks, airport, floodplain, utility sites)	0.51/1000
Corvallis	No additional land need identified, didn't list ratio
Albany	Not readily available
Springfield	Not readily available
Medford (less parks)	1.5/1000

Memorandum

Date: November 13, 2019

Re: Public and Institutional Land Needs - Update

Page 3

- **Fire:**
 - The Fire Department anticipates transition from a single downtown station to three satellite stations at approximately 1.5 acres each: (1) Baker Creek/Hill Road area, (2) Airport area, (3) Northeast area. The estimated need would be about **4.5 acres for three substations**. There could be opportunities to co-locate police substations at sites. There is potential that they could be co-located on sites with other uses. The NE station may be within the current UGB or may be further to the northeast. There is potential for the current station to be re-used for other municipal or other uses.
- **Police:**
 - **No specific plans for new facilities.** Their needs can be accounted for as part of the overall City need using the same methods.
- **Airport:**
 - **No additional land needs identified.**
- **Sewer:**
 - **Treatment: No additional land needs anticipated.** The City owns 5 tax lots with approximately 70 acres east of the UGB where the sewer treatment plant is sited. No additional land need is anticipated. There is capacity to expand the treatment plan on the existing site. If there is a UGB expansion to east which includes this area, these properties won't be available for buildable land for other uses.
 - **Collection System: No significant additional land demand is assumed outside of the public right-of-way, so no calculation has been added or assumed for this de minimus need.** Minimal needs for future pump stations may be needed for new development. Site needs for small pump stations are similar to or smaller than a residential lot. The land needs for these facilities are relatively small and no additional acres are proposed. Depending on direction of growth, there could be needs for larger pumping facilities.
- **Parks:**
 - The Comprehensive Plan includes the following policies:
 - **159.00.** The City of McMinnville's Parks, Recreation, and Open Space Master Plan shall serve to identify future needs of the community, available resources, funding alternatives, and priority projects
 - **163.05.** The City of McMinnville shall locate future community and neighborhood parks above the boundary of the 100-year floodplain
 - **170.05.** For purposes of projecting future park and open space needs, the standards as contained in the adopted McMinnville Parks, Recreation, and Open Space Master Plan shall be used
 - The Master Plan level of service (LOS) standard is 14 acres/1,000 persons.
 - The 2017 UGB population was 34,293.
 - The City has approximately 273 acres of developed park land and 76 acres of undeveloped park land, totaling about 349 acres (**See attached**).

Memorandum

Date: November 13, 2019

Re: Public and Institutional Land Needs - Update

Page 4

- The 2017 need was approximately 480 acres; there's a deficit of approximately 207 acres of developed park land.
- Need for 665 total acres by 2041 (an additional need of 185 ac, or total of 392 ac with the current deficit)
- Need for 879 total acres by 2067 (an additional need of 399 ac, or total of 606 ac with the current deficit. **Note:** *This was listed as 660 acres in the previous memo, which was a typographical error*).
- Absent joint use agreements with other entities for public use of facilities consistent with the needs identified in the Park Master Plan, park sites and recreational facilities that aren't city-owned aren't assumed to meet the LOS for developed park needs. If there are separate standards for open space, that may be evaluated.

Note: *The committee made a recommendation on park needs at the October meeting. Following the last meeting, Mark Davis submitted a memo and asked that it be distributed to the committee. The memo is attached for the record. **Attachment 2***

- **Other (stormwater):** While no specific need was identified, there was a sense that stormwater detention and water quality standards would likely increase the amount of land that will need to be dedicated for on-site stormwater management (detention and treatment) as best practices seek to manage stormwater close to "where the rain hits the ground" to reduce peaking of down stream flows and conveyance of sediment and/or contaminants in runoff. These sites may be privately or publicly owned and maintained, but should be accounted for.
- **Other (transit related):** There was a sense that, as the community grows and the transit system expands and matures, it expected that there will be a more robust transit system with some additional land needs.

Planning Staff met with representatives of the following organizations regarding their future land needs.

McMinnville Water & Light (MWL):

Estimated need of 21-24 acres for the 20- and 46-year periods, plus additional location/development specific needs

- **General:** It is estimated that in addition to sites already owned by MWL, they will need approximately 21 additional acres for power and water, and may have additional needs that are dependent on specific growth characteristics and developments. Some users require an on-site substation that requires a site and land. If growth occurs to the west further upslope into the west hills, that might include the 3-acre reservoir site needed to serve water pressure Zone 2, and could necessitate an additional reservoir/site if growth continues far enough upslope to result in a Zone 3 service area.
- The additional 21-acre need includes 16 acres for a treatment plant and pumping facilities which could co-locate with a power substation in the easterly portion of the UGB; an additional 2 acres in the easterly UGB area for power, and an additional 3 acres in the westerly UGB for additional storage for fire flow.

Yamhill County - Updated

- Currently, there is no formally adopted plan outlining space needs and plans for existing and future building/facility needs for the planning periods.
- The acreage per 1,000 population estimate is a reasonable method, first deducting the fairgrounds property before calculating the ratios. The Fairgrounds is approximately 36 acres of a 44-acre site.
- Current county-owned sites don't allow for much incremental on-site expansion, so additional capacity would likely require redevelopment or expansion onto additional land.
- Transit may have a need for expanded bus parking/storage area that doesn't require new structures
- Locational analysis: The County Parks Master Plan identifies potential lands for parks at key locations in proximity to McMinnville near confluence areas shown on vision map in the Master Plan)
- **Update.** The County owns approximately 44 acres in the UGB, including the Fairgrounds. The 36-acre Fairgrounds site includes other uses including County Public Works, which occupies about 7 acres. Therefore, approximately 29 acres of County-owned land was deducted for the Fairgrounds before calculating the ratio of acres per 1,000 population, leaving 16 acres remaining, which is approximately 0.5 acre/1000 population.

Chemeketa Community College

No new land needs. Chemeketa Community College sold the property they previously owned, the former campus site, on Hill Road. Their McMinnville campus on Norton Lane houses their facilities as well as commercial and office tenants. For planning purposes, Chemeketa doesn't anticipate new land needs beyond their current ownership, and doesn't anticipate displacement of tenants.

Linfield College

No new land needs. Linfield College doesn't anticipate new land needs beyond current their ownership during the planning period. They recently sold a portion of the property to MV Advancements. For planning purposes, the City should not assume non-college use or sale of further property during the planning period.

McMinnville School District - Updated

In addition to existing schools, the School District owns three reserve sites for future schools. Below is a summary of needs in addition to existing schools and reserve sites. In addition to these sites, the School District estimates it will need 40 additional acres for future school sites, with 10 of those additional acres needed between 2021 and 2041, and 30 of those acres needed between 2041 and 2067. **See Attachment 1.**

2021-2041

- The need is for one additional 10-acre early learning center site.

2041-2067

- The need includes one additional 12-acre elementary school site.
- The need includes an additional 18 acres for a new high school, in addition to the 42-acre site on Hill Road, whether that site could be added to for a total of 60 acres or whether that site would be sold and a new 60-acre site acquired.

Memorandum
 Date: November 13, 2019
 Re: Public and Institutional Land Needs - Update

Page 6

Other Land Needs - Updated

Other public and semi-public land needs presented in **Figure 1** which aren't part of the employment forecast were calculated using the ratios in **Figure 3**.

Figure 3. Other Existing Ratios for McMinnville, 2019

Public/Semi-Public Use	Tax Lots	Acres	Acres/1000 persons	Percent of Acres
State	4	2.92	0.08	0%
State	4	2.92	0.08	0%
Federal	5	4.96	0.14	0%
Federal	5	4.96	0.14	0%
Religious/Cemetary	76	104.23	2.98	6%
Church	64	100.53	2.88	6%

MCMINNVILLE PARKS SYSTEM

DRAFT

COMMUNITY PARKS		ACRES
City Park		16.79
	R4420AD 09800	15.51
	R4420AD 05101	0.56
	R4420AD 06900	0.13
	R4420AD 07000	0.13
	R4420AD 07100	0.07
	R4420AD 07200	0.08
	R4420AD 07300	0.11
	R4420AD 07400	0.19
Joe Dancer Park		107.62
	R4422 02300	79.52
	R4421 00400*	23.90
	R4422 WATER*	4.20
Discovery Meadows Park		20.97
	R4429 00300	17.07
	R4429BB 02600	3.90
Kiwanis Marine Park		4.63
	R4421 00800	1.30
	R4421DB 04200	2.79
	E4421DB ROADS*	0.54
Riverside Dog Park		3.80
	R4421 00100*	3.80
Wortman Park		21.66
	R4416AD00100	21.66
COMMUNITY PARKS TOTAL		175.47

*Notes partial taxlot

MINI-PARKS/PLAYLOTS		ACRES
Bend-o-River		0.33
	R4422CD 00128	0.33
Chegwyn Farms Park		3.94
	R4409CD 00100*	3.94
Greenbriar		0.23
	R4417BC 00100	0.23
Heather Hollow		3.22
	R4429BC 00100	3.22
Jay Pearson Park		2.94
	R4418 00202*	2.94
Kingwood		0.58
	R4422DD06000	0.58
North Evans		0.34
	R4416BC03300	0.34
Taylor		0.31
	R4420DC04900	0.31
Thompson		2.28
	R4428BA04300	2.28
Village Mill		0.49
	R4428BA00111	0.22
	R4428BA00105	0.27
West Hills Park		7.77
	R452400803	7.77
MINI-PARKS/PLAYLOTS TOTAL		22.43

*Notes partial taxlot

TOTAL DEVELOPED PARK LANDS	272.81
-----------------------------------	---------------

LINEAR/TRAIL PARKS		ACRES
Airport Park		18.82
	R442600203*	2.74
	R4426 ROADS*	0.62
	R442600500*	1.28
	R442600201*	14.18
Ash Meadows		1.29
	R4420CC00239	1.29
BPA Pathway		2.84
	R4419AD02100	0.98
	R4419AC00200	0.08
	R4419AC00101	0.30
	R441901200*	0.32
	R4419AA11700	0.35
	R4419AA11800	0.45
	R4418DC04100	0.36
BPA II Pathway		4.23
	R4418DC00100	0.83
	R4418DC04400	0.14
	R4418DC07100	0.32
	R4418DC06600	0.32
	R4418DB12200	0.66
	R4418DB12000	1.04
	R441800202*	0.63
	R4418AD10800	0.29
Goucher St. Pathway		1.95
	R4420CC ROADS*	1.01
	R4420CC NONTL	0.02
	R4420CB ROADS*	0.92
James Addition		1.54
	R4420CC00124	1.27
	R4419DD00390	0.27
Jandina		2.25
	R4419DD02790	2.25
Jandina III		2.78
	R4419DA13200	1.99
	R4419DA13300	0.79
Roma Sitton		1.69
	R4418AD10900	1.69
Tice Rotary		33.82
	R441700101	32.82
	R441700100	1.00
Westvale		3.70
	R4419DB02400	3.70
LINEAR/TRAIL PARKS TOTAL		74.91

OPEN SPACE/UNDEVELOPED		ACRES
Angella		2.21
	R4428BD02100	2.21
Ashwood/Derby		0.29
	R4420DB02401	0.29
Barber Property		11.76
	R442901201	11.76
Bennett		0.19
	R4416AA05800	0.19
Brookview		0.72
	R4420BA00500	0.72
Carlson		1.53
	R4420DB00300	1.53
Creekside Cozine		3.69
	R4430DD00200	3.69
Creekside #3 Cozine		15.31
	R4430DC03500	15.31
Crestwood		2.08
	R4420BA00300	1.10
	R4420BA00301	0.60
	R4420BA ROADS*	0.38
Davis St. Fill		1.57
	R4421CC00900	0.91
	R4421CC02601	0.66

*Notes partial taxlot

TOTAL UNDEVELOPED PARK LANDS	75.76
-------------------------------------	--------------

TOTAL PARK LANDS	348.57
-------------------------	---------------

OPEN SPACE/UNDEVELOPED		ACRES
Elmwood		3.07
	R4420DB00200	1.79
	R4420DA04300	1.28
Fir Ridge		0.69
	R4420AC02600	0.69
Irvine St.		6.68
	R4421CA03200	4.00
	R4421CA03901	0.66
	R4421CA03401	1.63
	R4421CA ROADS*	0.39
Jay Pearson-East		1.16
	R4418 00202*	1.16
Meadowridge		0.69
	R4420BA00409	0.69
Quarry		11.54
	R4419AD00700	11.54
Tall Oaks		12.58
	R442903200	9.60
	R4429BA14190	1.55
	R442900108	1.43



McMinnville School District No. 40

800 NE Lafayette Avenue McMinnville, Oregon 97128 Phone: (503) 565-4000 Fax: (503) 565-4030

MEMO

DATE: November 14, 2019
 TO: City of McMinnville Public Lands Work Group
 From: Susan Escure, McMinnville School District Finance Director
 Subject: Land Needs Assessment - Public Schools

Introduction

Currently the District does not have an adopted plan for school facility needs for the periods going out the 50 years needed by the urbanization study. The District is in the process of updating our Long-Range Facilities Plan which will not be formally adopted until next year. In 2017, The District contracted with Flo Analytics to prepare a 5 year and 10 year enrollment forecast with a more in depth study of enrollment within our elementary boundaries. This study provided information for our most recent boundary changes adopted for the 2019-20 school year. The following land needs assessment is based upon a combination of the demographer report, our internal enrollment projections and decisions made as part of our 2016 capital bond project.

Flo Analytics Enrollment Forecast

Our demographer's forecast was limited to 10 years. However, it did take into account planned developments within the District. The District is projected to capture 84.4% of the District population of all school-age children. Overall average student yield factors applied to new housing development are 0.45 students/Single Family Unit and 0.20 students per Multi-family Unit. The following is a summary of their 5-year and 10-year forecast:

October 1	2017	2022	2027
Elementary	3,047	2,969	3,103
Middle School	1,541	1,587	1,550
High School	2,176	2,347	2,159
Total	6,764	6,902	6,813
% increase over 2017		2.0%	.7%

Internal Projections

The District uses a 3 year or 8 year average cohort survival rate to forecast increases in enrollment for grades 1-12. The increase in these grades are due to in-migration and enrollment of students from private schools and home school as they age. This cohort survival rate across all grades = 2% increase in enrollment annually. Kindergarten enrollment is based on a historic average capture rate of 40% of the county births five years prior. For 2025 and after, the kindergarten enrollment increase is projected at 1%. Student enrollment counts are attendance-based not residence-based. Enrollment includes intra-district transfers from neighboring districts. Additionally, the enrollment projection includes attendance of all District students, not just those located within the City of McMinnville.

Land Needs Assessment - Public Schools (continued)

October 1 Enrollment Projection	2017	2019	2021	2041	2067
Elementary	3,047	2,885	2,883	3,281	4,252
Middle School	1,541	1,686	1,596	1,650	2,138
High School	2,176	2,130	2,251	2,263	2,934
Total	6,764	6,701	6,730	7,194	9,324
(Decrease) Increase over 2017		(63)	(34)	430	2,560
% (decrease) increase over 2017		(0.9%)	(0.5%)	6.4%	37.8%
Average Annual Growth Rate		(0.5%)	(0.1%)	0.3%	0.8%

Capacity

The following capacity estimates are based on current class size and programs. If future funding allows the District to substantially decrease class size or increase programs, these capacities would be less. Additionally, classroom modulars are used at some school sites and they are included in the calculation of our current capacity. The District foresees the need to add on to the current school sites to increase classroom space for additional programs and replacement of classroom modular before adding schools for enrollment growth, especially at the elementary level.

Property held for future school sites:

Hill Road & Cottonwood Drive	11 acres	Future Elementary Site
McDonald Lane, next to Grandhaven	26 acres	Future Middle School Site
Hill Road property	42 acres	Future High School Site

Elementary School Capacity

Elementary schools are configured for grades K through 5 with a capacity of 600 each. Currently there are six elementary schools which totals a maximum capacity of 3,600. For purposes of this land needs assessment, we are assuming a per school capacity ranging from 550 to 600 to account for pre-school and/or additional program needs.

Elementary school sites are on average 10 to 12 acres. The District currently holds property at Cottonwood and Hill Road for a future elementary site. The District would need to purchase one more 8-10 acre site by end of 2067 according to this projection.

Middle School Capacity

We currently have two middle schools with a maximum capacity of 900 each configured for grades 6-8 for a total capacity of 1,800. There is a wave of larger cohort classes in middle school currently, however, future cohorts entering middle school are expected to decrease and remain lower until 2041 – 2067.

The desired middle school is approximately 20 acres. The District currently holds 26 acres on McDonald Lane adjacent to Grandhaven Elementary for a future middle school site. No additional acreage is needed for a middle school site before 2067.

Land Needs Assessment - Public Schools (continued)

High School Capacity

Our current high school configuration after the 2019 Addition has a maximum capacity of 2,800 students. Approximately 160 students are served off site at the alternative program at Cook School and the online program at Adams Campus. Based on this projection, the high school would not reach maximum capacity until 2060-65.

In 2015, the Long Range Facilities Task Force recommended to the School Board to continue the High School Master Plan proposed in 2006 to the voters which included a plan to rebuild the high school at the current site over three phases. The first phase was completed in 2010, the second phase was just completed in 2019 with the addition of a Career Technical Center. Although many constituents desire two small high school versus one large high school, current school funding does not cover the cost of operating two high schools. (Operating costs include costs such as: utilities, maintenance, administration and support staff). The high school enrollment would need to grow to almost 3,000 in order for the District to afford the operation costs of two comprehensive high schools (1,500 each).

During this planning period, the committee also looked at building a new high school at the Hill Road location and repurposing the current high school property. The committee decided against this for several reasons: 1) the District would need to ask voters for a significant increase over the current school capital bond rate, 2) the Hill Road site is only large enough for a high school of 2,300-2,500, which could be outgrown before the District could afford a second high school, and 3) the Committee felt that the District should continue with the plan that the voters had already approved in 2006.

The District currently holds 42 acres on Hill Road as a future high school site. A larger site of closer to 60 acres may be more desirable in order to include additional space for career technical programs. In addition, satellite sites may be needed for increased professional technical classes such as home construction or HVAC certification.

Summary

Based on our enrollment projections as described, the District projects the need for the following additional school buildings during the periods 2021-41 and 2041-2067.

Number of Schools	Current	2021-2041	2041-2067
Elementary & Early Learning Center	6	+1	+ 2
Middle School	2	0	+ 1
High School	1	0	+ 1
Total	9	+1	+ 4

After taking into account current property held for future use, the District projects the following land needs:

- An additional site of 10 – 12 acres for an Elementary School.
- A larger 60 acre high school site for a second high school.
- An additional 8-10 acre site for an Early Learning Center.

Memo

Date: October 28, 2019

To: Public/Semi-Public Lands Work Group

From: Mark Davis

Subject: Park Land Needs

McMinnville is in the process of projecting its future land needs. These plans must have an adequate factual basis. The projections must be supported by evidence that establishes some likelihood that the projections will be realized and that the plans will be implemented.

At the last meeting I raised objections to the proposed addition of 392 acres of land for City parks over the next 20 years because there was no plan for funding or implementation. The acreage calculation is based on a recommendation in the outdated Parks Plan that the City should have 14 acres of parks per thousand residents, a number we failed to reach by 1999, so in addition to building parks for new residents we were supposed to have built additional parks over the last 20 years to erase this deficit. Due to the chaotic nature of the discussion that followed my comments and the fact that not all members of the Work Group were present, I would like to clarify the points I was trying to make at that time.

The Parks Plan: The McMinnville Parks, Recreation and Open Space Master Plan (commonly referred to as the Parks Plan) was adopted in 1999. It explicitly covered a 20-year period that ended in 2019 and therefore cannot be relied upon to justify land needs through either 2041 or 2067. At the public gathering that preceded its adoption, where citizens were asked to brainstorm their ideas for the Parks Plan and put dots next to the ones they liked, several persons asked, “How is this going to be paid for?” We were repeatedly told that we did not need to worry about cost because the City Council had the job of figuring out how to pay for it. As a result the so-called “plan” reads more like a “wish list.” It carried an estimated price tag in 1999 dollars of over \$52 million. The actual park funding over the past 20 years came from a \$9 million bond measure and a relatively small amount of SDC dollars.

What Got Built: Since 1999, the city added only about 50 acres of parks.¹ About 10,000 persons were added to the City’s population in the last 20 years. Per the Parks Plan 14 acres per

¹ The 1999 Plan showed 273.66 acres of existing parks in Tables A-1 and A-2. The total acreage today as shown on the staff memo dated 10/10/19 is 348.57 acres, suggesting that we added about 75 acres in parks. However, it appears that some corrections were made to the 1999 data, as City Park then was 13 acres but today is shown as 16.79 acres, and Joe Dancer Park was formerly 85.38 acres but now counts as 107.62 acres. Correcting for these changes implies about 50 acres were added, and when we look at what was actually developed (Discovery Meadows, Riverside Dog Park, Chegwyn Farms, Heather Hollow, Jay Pearson, Thompson and West Hills), those new parks total about 45 acres, suggesting 50 acres is about right.

thousand standard, we should have added 140 acres of parks. We achieved only about one-third of the goal, to say nothing of making up the deficit because we were far under the 14 acres/1000 for the existing residents and were proposing to make up that deficit also. So, when we look at the 392 acres proposed this time, only about 180 acres is for the projected population increase. The balance is to make up a purported deficit that grows every year. Based on the evidence of what actually happened in the past 20 years, there is no reasonable basis to expect that the additional 392 acres the city proposes to urbanize will actually develop as parks over the planning period.

How the Schools Fit In: Table A-3 in the Parks Plan is a Facility Inventory: School Facilities. The Plan repeatedly calls for creating joint use agreements with the School District to share lands, thus reducing the need for the City to develop more park land. The School District representative at our meeting acknowledged that they do not lock their facilities and accept public use of the school grounds when school activities are not ongoing. This is not a complete solution to the clear need for more park land, but even without a formal joint use agreement (a high priority 20 years ago that never got done) it is obvious that some portion of school grounds will be used for park-type activities, much like it has for the past 50 years. This needs to be accounted for in the city's projection.

The Comp Plan Policies: All three of the Comprehensive Plan Policies cited in the 10/10/19 staff memo regarding the need for park land were adopted after I made similar objections to the unrealistic park land projections in the last UGB expansion attempt. At this point declaring a Parks Plan that has expired and was not implemented as the basis for an even bigger ask for park land makes no logical sense. Further, policy 163.05 excluding waterways that may flood from any community or neighborhood park would preclude including a creek in the park like we now have at City Park and Wortman Park. Is it really good park planning policy to keep all water features out of our bigger parks? Sure, we don't want our bathrooms and permanent park facilities to get flooded, but having a mixture of natural features surely makes a park more inviting.

Financial Reality: At present the City is considering building a new combined Aquatic/Community Center at a price tag that could exceed \$50 million based on a recent consultant's report to the City Council. The reason the Council is considering the new facility is that making repairs to the existing pool and community center buildings cost almost as much as a new facility. So, regardless of how this process works out over the next few years, the Parks and Recreation Department is looking at tens of millions of expenditures on facilities. Looking at the estimates in the Parks Plan and adjusting them for current costs suggests that adding 392 acres of parks is going to cost over \$100 million.

McMinnville voters are responsive to reasonable requests for public facilities and voted for a 20-year, \$9 million parks bond that has financed most of the improvements in park lands we have seen since 2000. Based on the Council conversation it appears that when the parks bond expires

in 2021 the City will be considering using that bonding capacity for the new Aquatic/Community Center. If so, where is the money going to come from to develop 392 acres of parks, to say nothing of paying for the ongoing maintenance of that much land?

City Responsibility: This park land figure is the one area in the upcoming UGB expansion proposal that the City actually controls. We can make our best estimate of how many housing units, commercial buildings and industrial sites we need over 20 years, but there is no way to know how the private sector will respond. On parks the people finally approving the UGB expansion (i.e. the City Council) are also the body that will authorize the development of all City parks, presumably after getting public approval of a bond measure. Our history with the expired Parks Plan does not suggest that passing the buck to the future will result in the parks getting built. We need a realistic plan for funding also.

Conclusion: I am not opposed to adding lands for parks. I support that goal. However, it takes more than simply increasing the number of acres of land inside the UGB or pointing to an aspirational standard. It takes a real plan that describes the types of parks to be built including their cost and the sources of funding to get that many acres of park land developed. I do oppose an unrealistic increase in overall land need based on a purely aspirational projection of park land that lacks any historical evidence.

I also want to make clear that my statements are not a criticism of Susan Muir, Jay Pearson or any of the hardworking park staff members. I am confident that were the financial resources made available to develop more parks that our Parks and Recreation Department would eagerly expand our inventory of parks.



McMinnville Urbanization Report:

Housing Needs Analysis and Economic Opportunities Analysis

TABLE OF CONTENTS

- Urbanization Report: Summary.....3**
- Introduction.....4**
- Buildable Lands Inventory.....5**
- Housing Needs Analysis.....7**
- McMinnville’s Population and Households.....8**
- McMinnville’s Housing Market.....11**
- Housing Affordability.....13**
- Factors Affecting Housing Need.....17**
- Development Capacity.....19**
- Accommodating Needed Housing.....20**
- Key Findings and Conclusions.....22**
- Housing Policy Recommendations.....23**
- Economic Opportunities Analysis.....24**
- Factors Affecting Economic Growth.....25**
- Employment in McMinnville.....27**
- Competitive Advantages and Target Industries.28**
- Forecast of Employment Growth and Land Sufficiency.....29**
- Public Institutional Land Needs.....30**
- Acknowledgments.....31**



MCMINNVILLE URBANIZATION REPORT: SUMMARY

The City of McMinnville is in the process of reviewing future land needs and sufficiency of its Urban Growth Boundary (UGB) to meet those needs for a 20-year planning period beginning in 2021, the earliest date by which the City would have a program in place to meet the identified needs.

This evaluation process requires several technical studies. These include:

- a housing needs assessment (HNA) and residential buildable land inventory,
- a Goal 9 compliant Economic Opportunities Analysis (EOA) and an employment buildable lands inventory, and
- an assessment of public and institutional land needs (e.g., parks, schools, etc).

These analyses allow the City of McMinnville to assess whether there is sufficient land within the Urban Growth Boundary (UGB) to accommodate land needs for the 20-year period between 2021-2041. The purpose of the Urbanization Report is to (1) evaluate growth forecasts; (2) inventory how much buildable land the City has; (3) identify housing needs; (4) identify economic development strategies; and (5) determine how much land the City will need to accommodate growth between 2021-2041.

McMinnville is growing. The official population forecast projects that McMinnville will grow at 1.36% annually adding 11,260 new residents during the 2021-2041 period. This translates into a need for 4,657 new housing units.



McMinnville’s has a serious deficit of housing on both sides of the affordability spectrum — low income and high income, which suggests a need for a wider range of housing types for renters and homeowners. About 36% of McMinnville’s households are cost burdened (paying more than 30% of their income on housing), including a cost-burden rate of 52% for renter households. Without diversification of housing types, lack of affordability will continue to be a problem — possibly growing in the future if incomes continue to grow at a slower rate than housing costs.

McMinnville’s UGB will not accommodate all of McMinnville’s housing needs. Over the planning period through 2041, McMinnville has a deficit of capacity for 3,053 dwelling units, which means the City has an approximate deficit of about 576 gross residential acres through 2041. To accommodate employment growth McMinnville will need about 741 gross acres for employment for the 2021 to 2041 period (384 industrial acres and 357 commercial acres). Finally, McMinnville will need an additional 473 acres in the 2021 to 2041 period for public and institutional uses (e.g., parks, schools, infrastructure, churches, etc.)

MCMINNVILLE NEEDS 1,399 ACRES TO ACCOMMODATE GROWTH THROUGH 2041

The land needs analysis indicates the City will need an additional 576 acres for housing through 2041. The City also needs about 280 acres for commercial employment and 70 acres for industrial employment through 2041.

LAND USE TYPE	SURPLUS (DEFICIT)	
	IN 2041	IN 2067
Residential	(576)	(1,481)
Public or Institutional	(473)	(780)
Industrial	(70)	(70)
Commercial	(280)	(494)
Total	(1,399)	(2,825)

Source: ECONorthwest

INTRODUCTION



The City of McMinnville is in the process of analyzing whether it has enough land to accommodate future growth. McMinnville last reviewed its Urban Growth Boundary (UGB) in 2007-08. The UGB is the line that determines the outer extent of urban growth in McMinnville. McMinnville is growing — between 2000 and 2019 the city grew by 28% adding 7,431 new residents. Growth is forecast to continue — McMinnville is projected to grow to 47,498 in 2041 — a 29% increase over the 2019 population.

This report is the culmination of several years of work. It summarizes the results of two longer technical reports and a series of memoranda that evaluation different elements of land need and supply in McMinnville:



■ **City of McMinnville Housing Needs Analysis (HNA)** presents the full results of the housing needs analysis (HNA) for McMinnville and is intended to comply with statewide planning Goal 10 (housing) and Oregon Administrative Rule (OAR) 660-008. It includes an inventory of buildable residential lands in McMinnville and an estimated of new housing units needed to accommodate forecast population growth.

■ **City of McMinnville Housing Strategy**, presents recommendations and implementation actions intended to result in policy changes that provide opportunities for development of housing to meet McMinnville’s identified housing needs.

■ **McMinnville Economic Opportunities Analysis (EOA)** Update, includes a buildable lands inventory of commercial and industrial lands within the Urban Growth Boundary (UGB), an analysis of commercial and industrial land needs for the next 20 years (and longer), and a determination of sufficiency of whether the buildable lands in the UGB will meet the 20-year identified needs.

■ **Public and Institutional Land Needs**, estimates other land needs that are not addressed in the HNA and EOA documents. This includes parks, schools, churches, cemeteries and other public and Institutional land needs.



City staff and ECONorthwest staff worked with the Housing Needs Analysis Project Advisory Committee (HNAPAC) to review the results of the Housing Needs Analysis and develop the Housing Policy and Actions and the Economic Opportunities Assessment Project Advisory Committee (EOAPAC) to review the results of the Economic Opportunities Analysis and public/institutional land needs.

This report is organized by the following sections:

- **Buildable Lands Inventory**
- **Housing Needs Analysis**
- **Economic Opportunities Analysis**
- **Public and Institutional Land Needs**

BUILDABLE LANDS INVENTORY

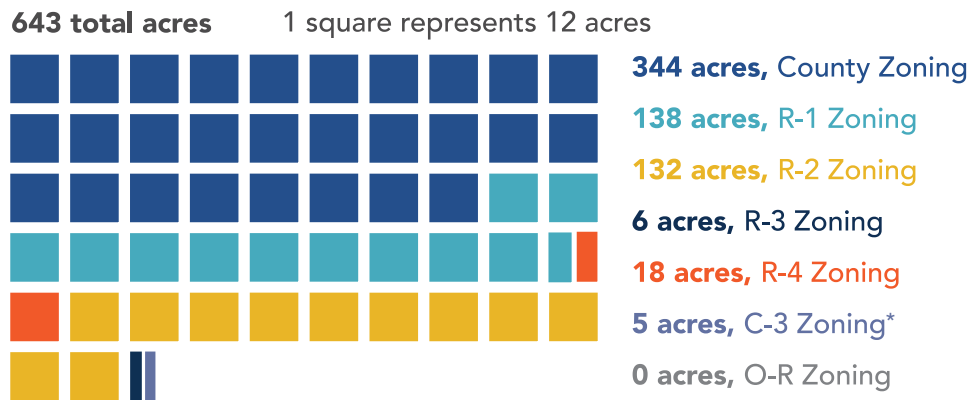
Overview

The buildable lands inventory (BLI) provides a basis for analysis of development capacity on residential, commercial, and industrial land in the City of McMinnville. Legal requirements govern the development of the BLI. The Housing Needs Analysis and Economic Opportunities Analysis provide detailed methods, definitions, and results from the BLIs for residential, commercial, and industrial land.

Residential Buildable Land

McMinnville has 643 acres of residential land that is vacant or partially vacant. The majority of McMinnville’s buildable land (344 acres) is county-zoned land, which is not available for urban densities until they annex. In addition, some of McMinnville’s buildable land (133 acres) is in Water Zone 2, most of which is not likely to be served with water for 10 years (about 2030).

MCMINNVILLE’S BUILDABLE VACANT AND PARTIALLY VACANT RESIDENTIAL LAND, BY ZONING DISTRICT, 2019

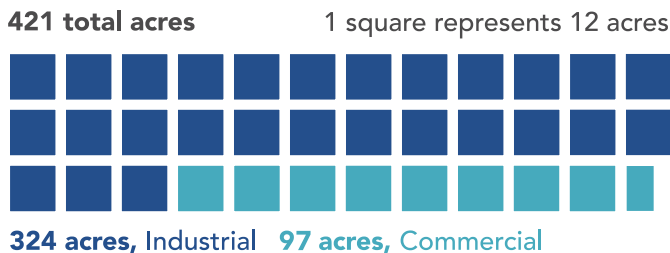


*C-3 buildable acres are assigned to employment uses

Commercial and Industrial Buildable Land

McMinnville has 421 acres of vacant and partially vacant land in commercial and industrial comprehensive plan designations. Of this land, 324 acres of McMinnville’s vacant land is in industrial designations and about 97 vacant acres is in commercial designations.

MCMINNVILLE’S BUILDABLE VACANT & PARTIALLY VACANT COMMERCIAL & INDUSTRIAL LAND, BY ZONING DISTRICT, 2019



Definitions

Buildable Land:

Unconstrained vacant and partially-vacant land designated for residential, commercial, or industrial development.

Vacant Land:

Unconstrained suitable land designated for residential, commercial, or industrial development.

Partially Vacant Land:

Unconstrained suitable land with enough land to could support additional residential, commercial, or industrial development under the existing zoning standards.

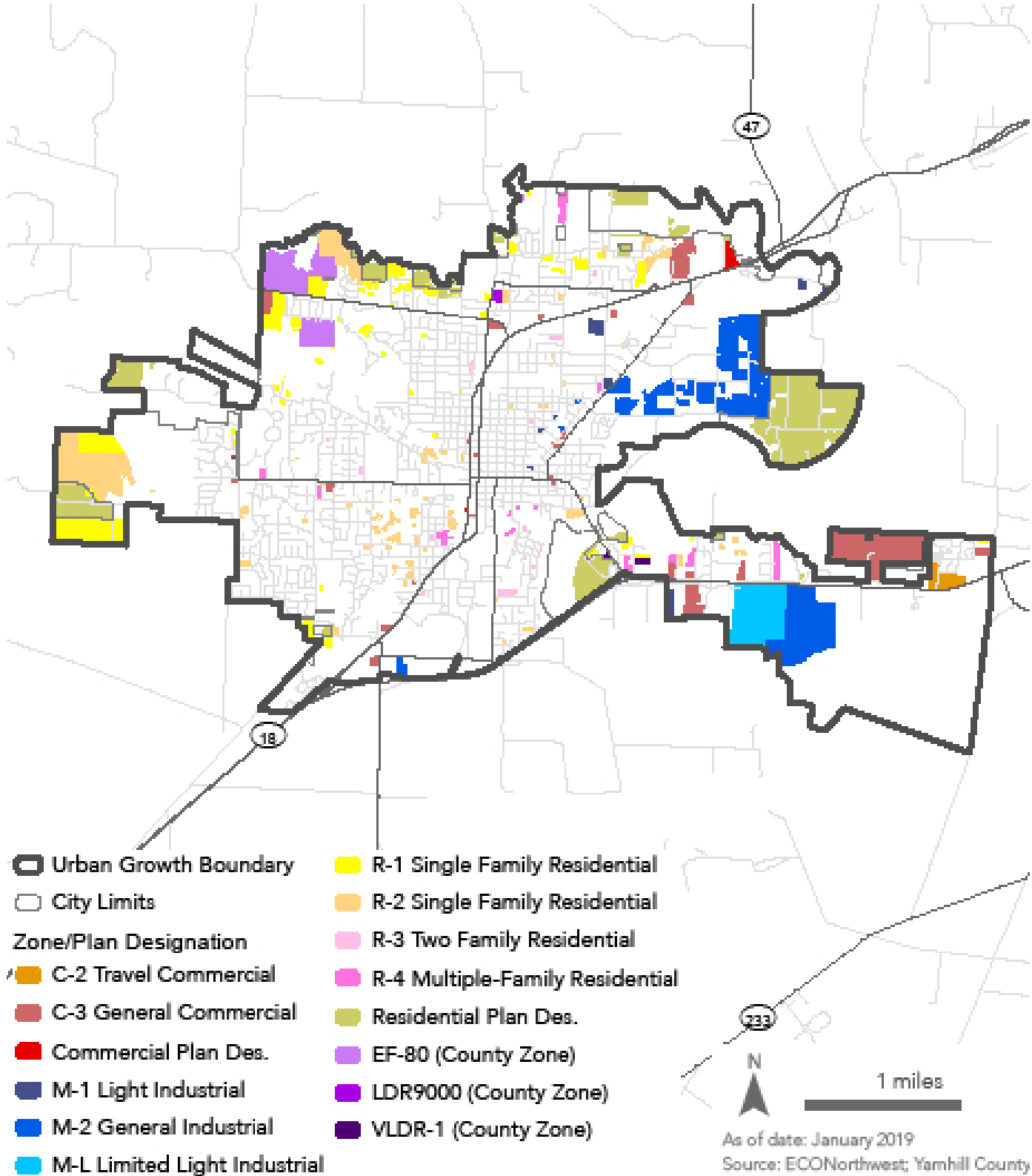
Constrained land:

Land that is not available for development based upon one or more factors such as environmental protections, such as flood plain or wetlands.

BUILDABLE LANDS INVENTORY

McMinnville Buildable Lands Inventory

Vacant and Partially Vacant Residential, Commercial, and Industrial Land by Zone (or Plan Designation)



Housing Needs Analysis

McMinnville is in the process of updating its Housing Element of its Comprehensive Plan and zoning code. McMinnville has changed substantially over the last three decades. The community welcomed nearly 7,431 new residents from 2000 to 2019 and continues to be a growing city. In 2019, McMinnville had a population of 33,930 people. While the community makes up about one-third of Yamhill County's total population, McMinnville has grown at a much faster rate than the County.

As the region (including McMinnville) continues to grow, housing affordability is becoming a growing concern to residents. Some people in the community are finding it difficult to access housing that is affordable and also meets their family's needs.

As McMinnville grows, the City needs to take stock of how much land is available to accommodate new homes and reevaluate the City's development policies. The City needs to look at what types of housing (single family homes, townhomes, apartments, etc.) to encourage in different areas of town. The City also needs to evaluate whether its existing development policies, like the zoning code, provide opportunity for development of a range of housing types that are affordable to people who live and want to live in McMinnville.

The Housing Needs Analysis provides information about the factors that may affect residential development in McMinnville over the next 5, 10, 20, and 46 years, including housing market changes, demographics, and other factors. The Housing Needs Analysis (HNA) provides a factual basis for an evaluation and revision to the Housing Element in McMinnville's Comprehensive Plan, to ensure that McMinnville meets the essential requirements of statewide planning Goal 10: to provide opportunities for development of housing that meets the needs of households of all income levels and to ensure the city has a 20-year supply of buildable residential land.

This summary report presents the results of two longer reports:

- **McMinnville Housing Needs Analysis 2021 to 2041** presents the full results of the housing needs analysis (HNA) for McMinnville and is intended to comply with statewide planning Goal 10 (housing) and Oregon Administrative Rule (OAR) 660-008. In addition to the 20-year forecast period, the analysis looked at housing and land needs over a 5-, 10-, and 46-year planning horizon.
- **McMinnville Housing Policy and Actions** presents recommendations for a revision to McMinnville's Comprehensive Plan Housing Element and implementation actions intended to result in policy changes that provide opportunities for development of housing to meet McMinnville's identified housing needs.

City and ECONorthwest staff worked with the Housing Needs Analysis Project Advisory Committee (HNAPAC) to review the results of the Housing Needs Analysis and develop the Housing Strategy. The PAC met seven times between July 2018 and June 2019. Other public outreach included an open house and a stakeholder focus group.



McMinnville is growing

The community welcomed nearly 7,431 new residents between 2000 and 2019.

As McMinnville grows, the City needs to take stock of how much land is available to accommodate new homes.

MCMINNVILLE'S POPULATION AND HOUSEHOLDS



McMinnville's population has historically grown faster than both the county and state.

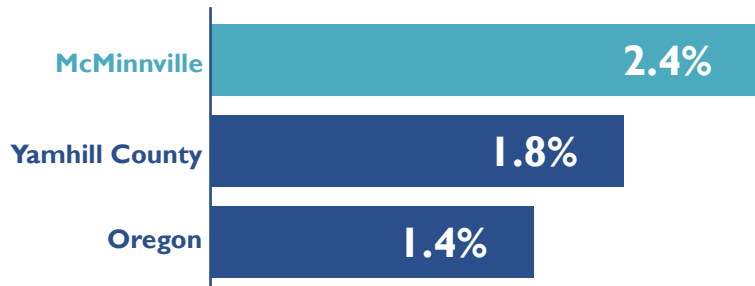
McMinnville's Population and Households

Population and housing characteristics are useful for better understanding McMinnville and McMinnville's residents. Population growth, age of residents, household size and composition, and tenure status (homeowners and renters) provide useful context about how the characteristics of McMinnville's households compare to Yamhill County and Oregon.

Unless otherwise noted, all data in this document are from the U.S. Census 2012-2016 or 2013-2017 American Community Survey.

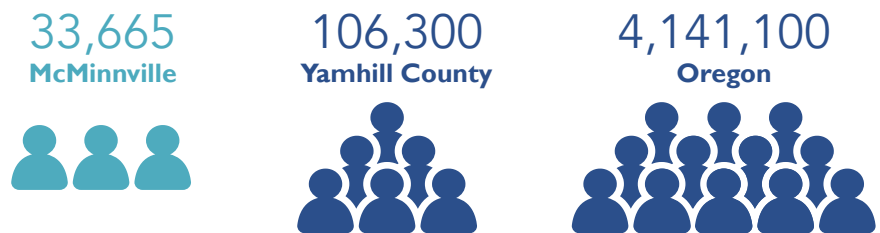
AVERAGE POPULATION GROWTH PER YEAR, 1990-2017

Source: Portland State University, Population Research Center



POPULATION, 2017

Source: Portland State University, Population Research Center



McMinnville's median population age is 35.

McMinnville's population is similarly aged to Yamhill County and Oregon's median.

MEDIAN AGE, 2016

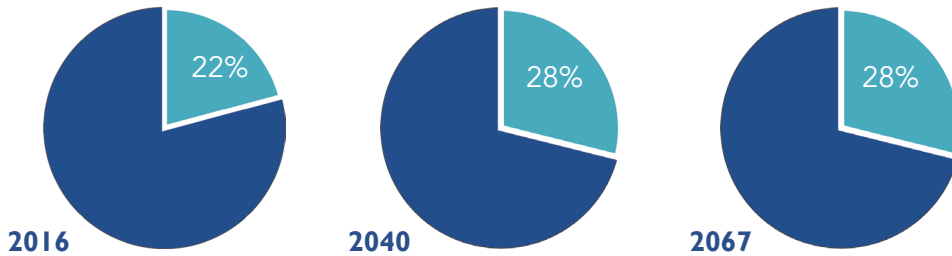
Source: Portland State University, Population Research Center



MCMINNVILLE'S POPULATION AND HOUSEHOLDS

POPULATION AGED 60 AND OLDER, MCMINNVILLE, 2016, 2040, & 2067

Source: Portland State University, Population Research Center



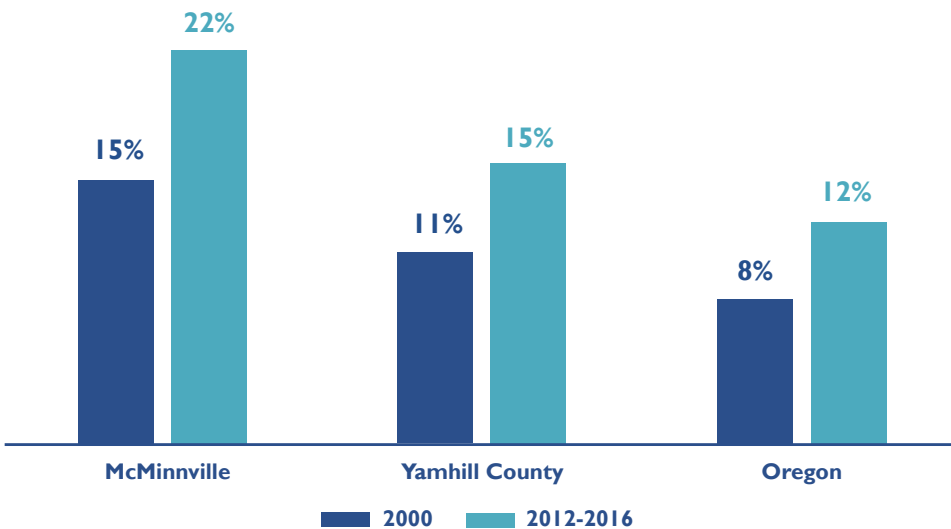
Population over 60 years of age is expected to increase.

McMinnville's share of the population over 60 years of age is expected to increase over the next 20 years.

AVERAGE NUMBER OF PEOPLE PER HOUSEHOLD, 2017



PERCENT OF POPULATION THAT IS HISPANIC OR LATINO, 2000 & 2016



McMinnville is ethnically diverse.

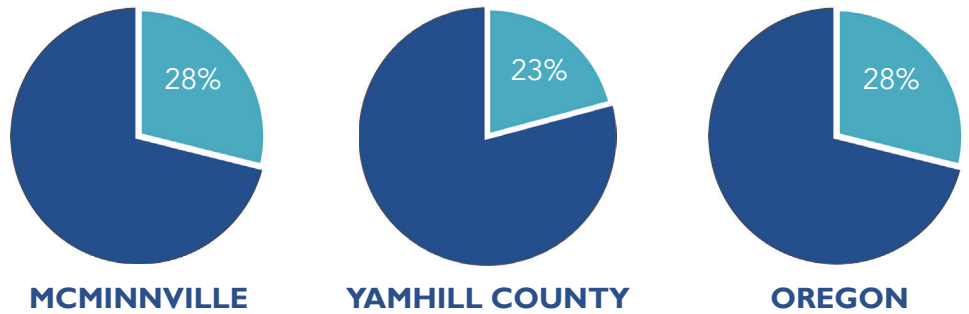
McMinnville's population is more ethnically diverse than Yamhill County and Oregon's population.

MCMINNVILLE'S POPULATION AND HOUSEHOLDS

McMinnville has an increasing number of one-person households.

From 2000 to 2017, McMinnville's share of one-person households grew from 24% of all households to 28%.

PERCENT OF 1-PERSON HOUSEHOLDS, 2017

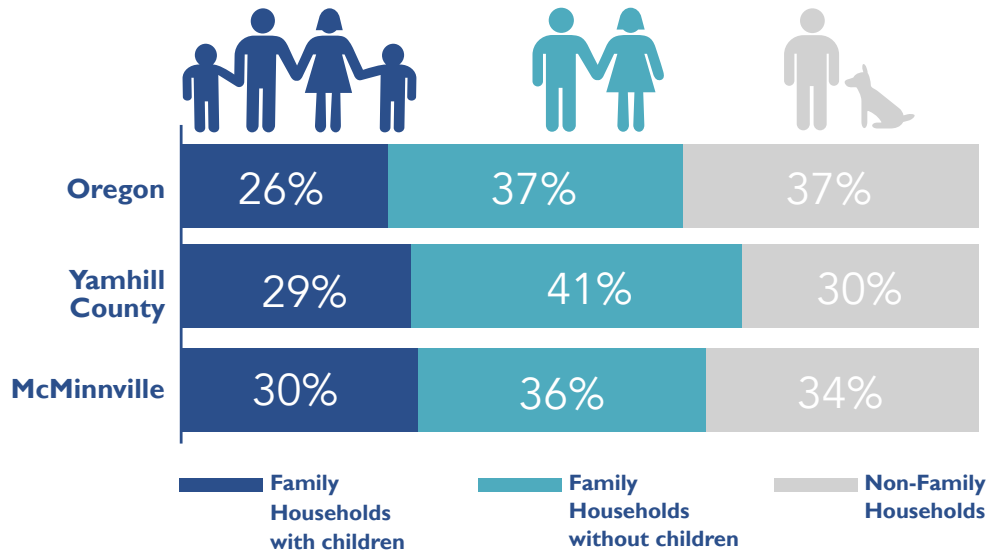


About a third of McMinnville's households were non-family.

McMinnville had a larger share of non-family households than Yamhill County and a smaller share of non-family households than Oregon.

HOUSEHOLD COMPOSITION, 2017

A family household is one in which the residents are related to at least one other person in the household by birth, marriage, or adoption. Non-family households include people living alone, unmarried couples, and unrelated housemates.



MCMINNVILLE'S HOUSING MARKET

McMinnville's Housing Market

Analysis of historical development trends in McMinnville provides insights into how the local housing market functions in the context of Yamhill County. This report groups housing into the three housing types shown below.



SINGLE-FAMILY DETACHED

(includes manufactured homes)



SINGLE-FAMILY ATTACHED

(townhouses)



MULTIFAMILY

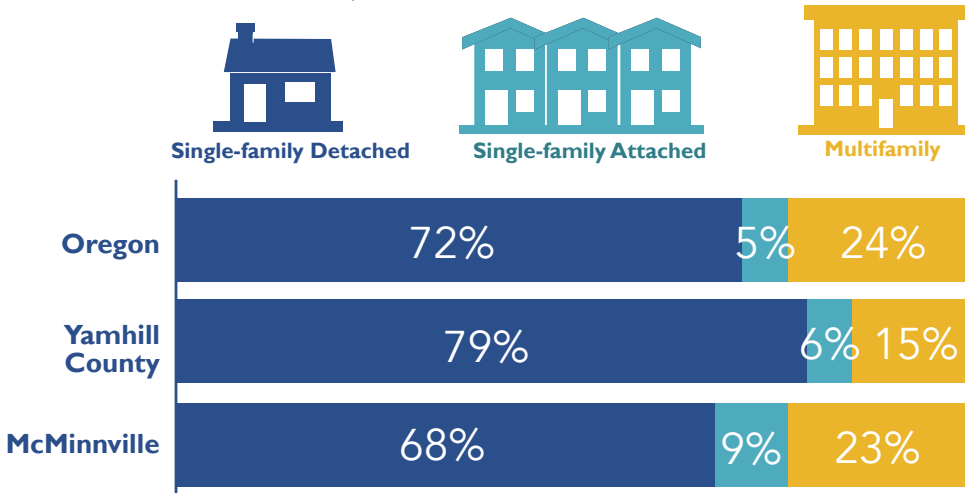
(duplexes, tri- and quad-plexes, buildings with 5+ units)

Most of McMinnville's housing stock, including housing built since 2000 was single-family detached housing.

Limited housing diversity limits opportunities for rental housing and limits the variety of housing available for ownership.

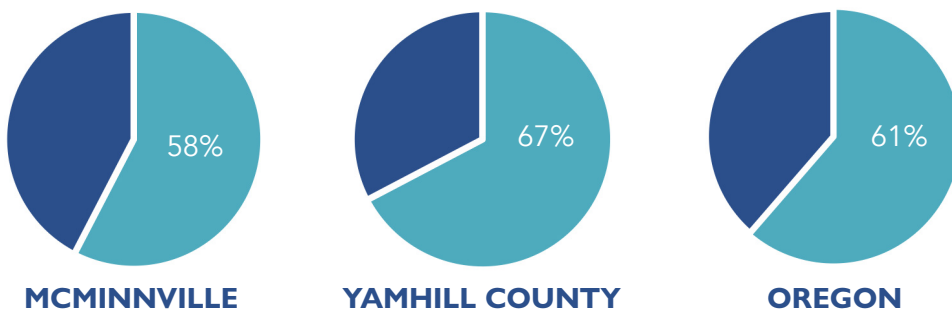
Since 2000, McMinnville mix of housing types has remained relatively unchanged, despite growth in total dwelling units. In McMinnville, government-assisted housing and housing for farmworkers can be any of the housing types listed above.

MIX OF HOUSING TYPES, 2017



Urban areas, like McMinnville, will typically have a larger share of multifamily housing than more rural areas, such as unincorporated areas of Yamhill County.

PERCENT OF HOUSING UNITS THAT ARE OWNER-OCCUPIED, 2016



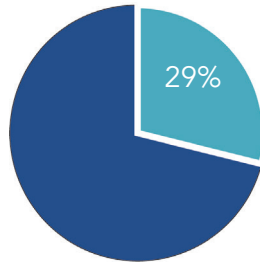
A majority of McMinnville's housing is owner-occupied. Most of McMinnville's homeowners (95%) live in single-family detached housing.

MCMINNVILLE'S HOUSING MARKET

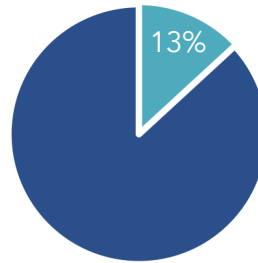
PERCENT OF MCMINNVILLE'S HOUSING UNITS THAT ARE RENTER-OCCUPIED BY TYPE OF HOUSING, 2016

A majority of renters in McMinnville live in multifamily housing.

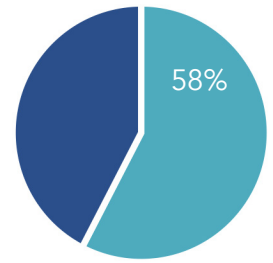
McMinnville has a larger share of renters than both the county and state.



SINGLE-FAMILY DETACHED



SINGLE-FAMILY ATTACHED



MULTIFAMILY

McMinnville issued about 3,000 permits for dwelling units between 2000 and 2017. Sixty-two percent of all permits issued were for single-family detached dwelling units, 8% were for single-family attached dwellings units, and 31% were for multifamily dwelling units.

The 2008 recession impacted McMinnville's housing market. McMinnville permitted about 1,300 fewer units between 2009-2017, compared to 2000-2008.

BUILDING PERMITS ISSUED, 2000 TO 2017

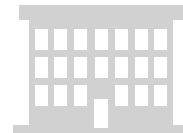
Source: McMinnville Building Permit Database



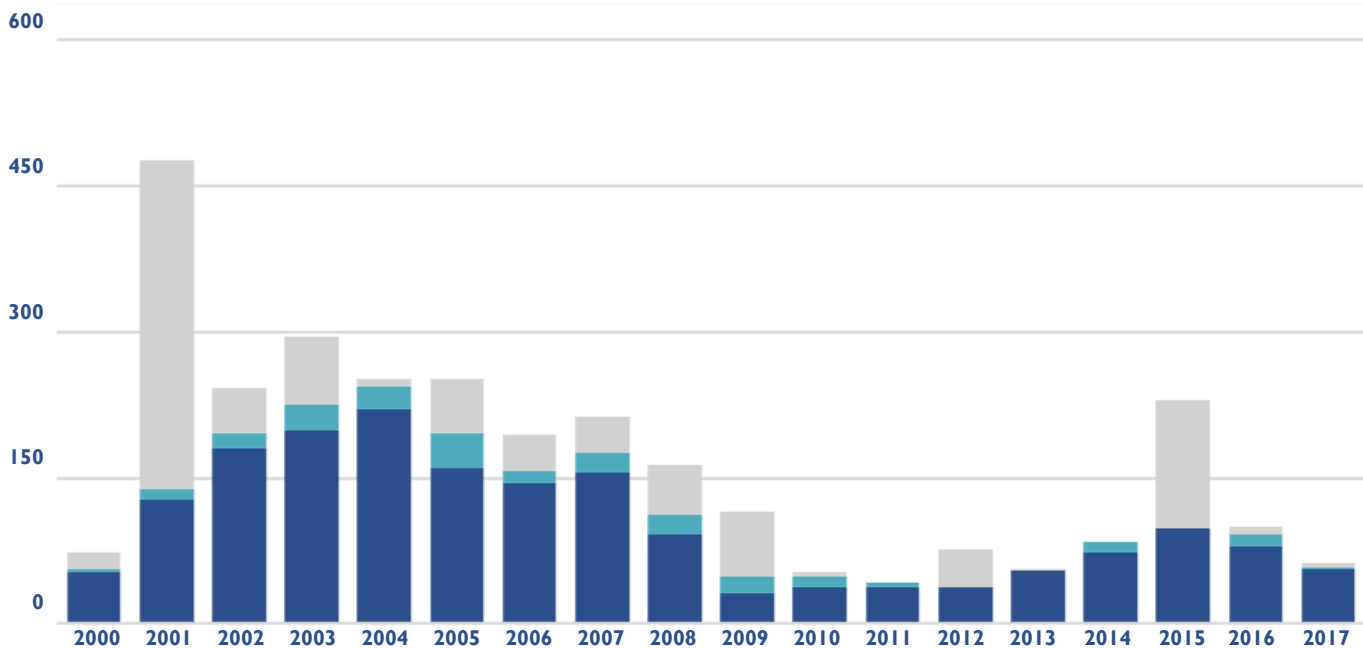
SINGLE-FAMILY DETACHED



SINGLE-FAMILY ATTACHED



MULTI-FAMILY



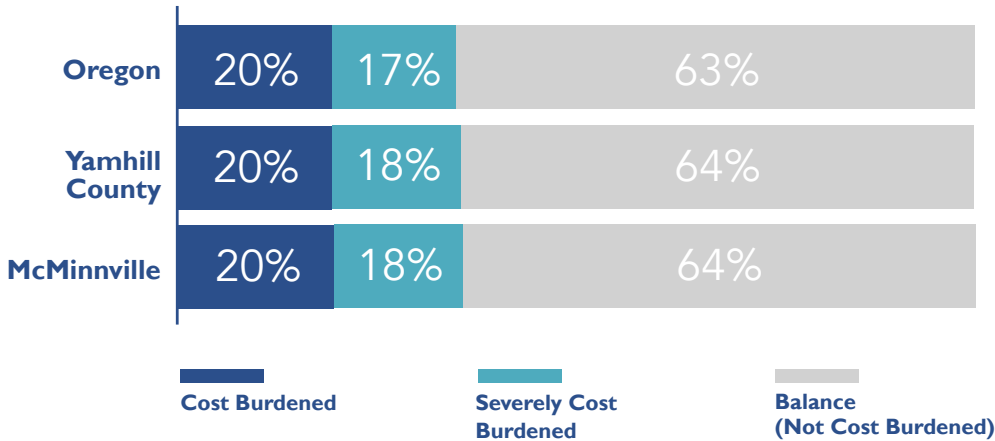
Housing Affordability

The term affordable housing refers to a household’s ability to find housing within its financial means. Housing affordability affects both higher- and lower-income households and is an important issue for McMinnville and the region. Low-income households have fewer resources available to pay for housing and have the most difficulty finding affordable housing. Key points about affordability in McMinnville include:

- McMinnville will have an ongoing need for housing affordable to households across the income spectrum.
- The City is planning for housing types for households at all income levels.
- Future housing affordability will depend on the relationship between income and housing price. The key question, which is difficult to answer based on historical data, is whether housing prices will continue to outpace income growth. It seems likely that without public intervention, housing will become less affordable in McMinnville.



PERCENT OF HOUSEHOLDS THAT ARE COST BURDENED OR SEVERELY COST BURDENED, 2016



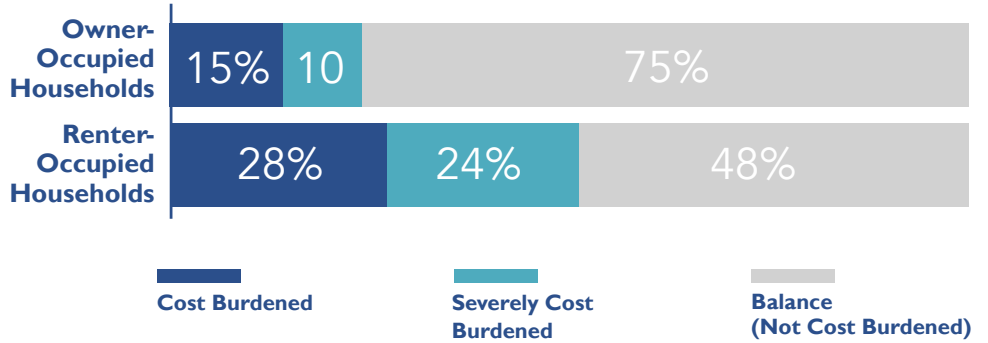
Cost-burdened households spend more than 30% of their gross income on housing.

HOUSING AFFORDABILITY

Consistent with the region, over a third of McMinnville's households are paying more than they can afford for housing.

Renters are much more likely to be cost burdened than homeowners in McMinnville.

PERCENT OF MCMINNVILLE'S HOUSEHOLDS THAT ARE COST BURDENED OR SEVERELY COST BURDENED, BY OWNERSHIP STATUS, 2016

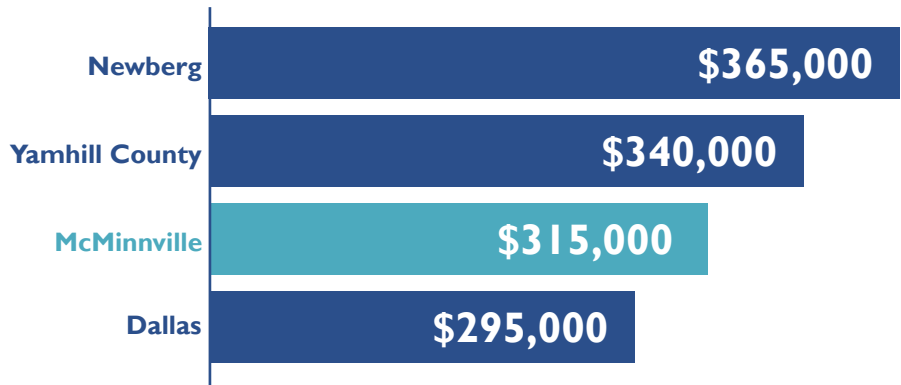


MEDIAN MONTHLY RENTS, 2016



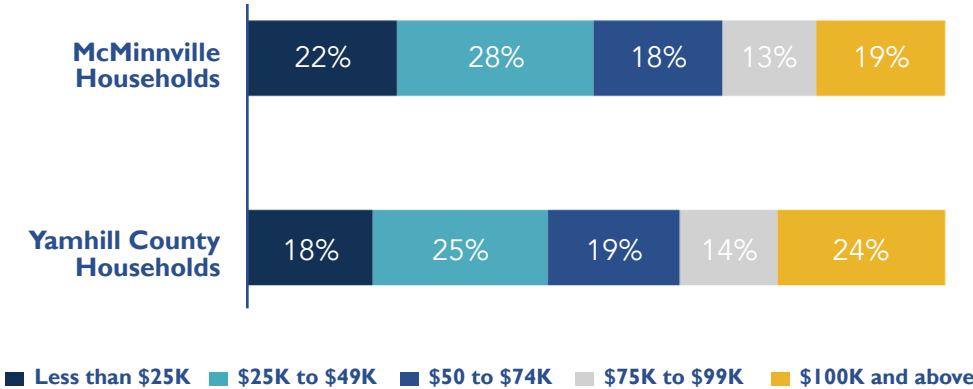
MEDIAN HOME SALES PRICES, FEBRUARY 2019

Source: Redfin



HOUSING AFFORDABILITY

HOUSEHOLD INCOME DISTRIBUTION, 2016



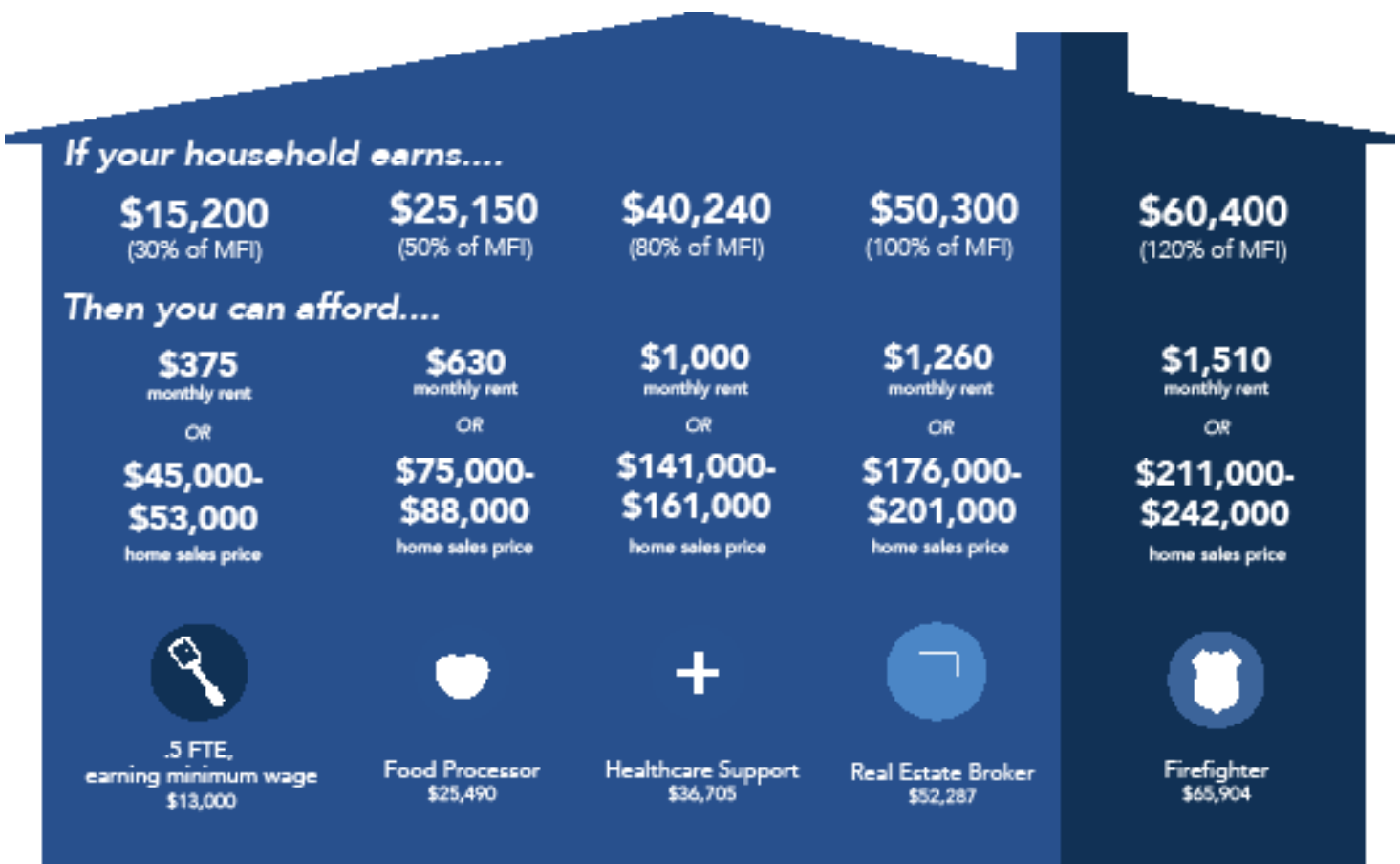
Households earning less than \$25,000 per year are considered Very or Extremely Low-Income. Compared to Yamhill County, more households in McMinnville fall into this category.

Another way to evaluate housing affordability is to consider housing types affordable at different levels of income. The 2017 median household income in McMinnville was \$50,300.

A household in McMinnville would need to earn about \$90,000 per year to afford a house at the median home sales price of \$315,000 in McMinnville. Fewer than 24% of McMinnville's existing households have the income to afford a house at this price.

FINANCIALLY ATTAINABLE HOUSING BY MEDIAN HOUSEHOLD INCOME, 2017

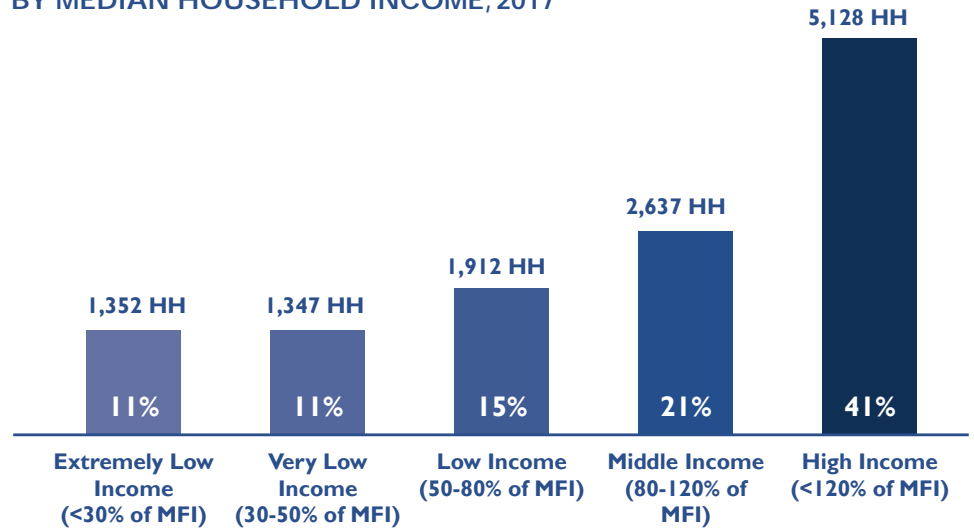
Source: Bureau of Labor Services



HOUSING AFFORDABILITY

SHARE OF MCMINNVILLE'S HOUSEHOLDS BY MEDIAN HOUSEHOLD INCOME, 2017

About 41% of McMinnville's households are high income, earning \$60,359 or more per year. About 37% of McMinnville's households earn 80% or less of MHI (about \$40,200 per year) and cannot afford a two-bedroom unit at Yamhill County's fair market rent of \$1,330.

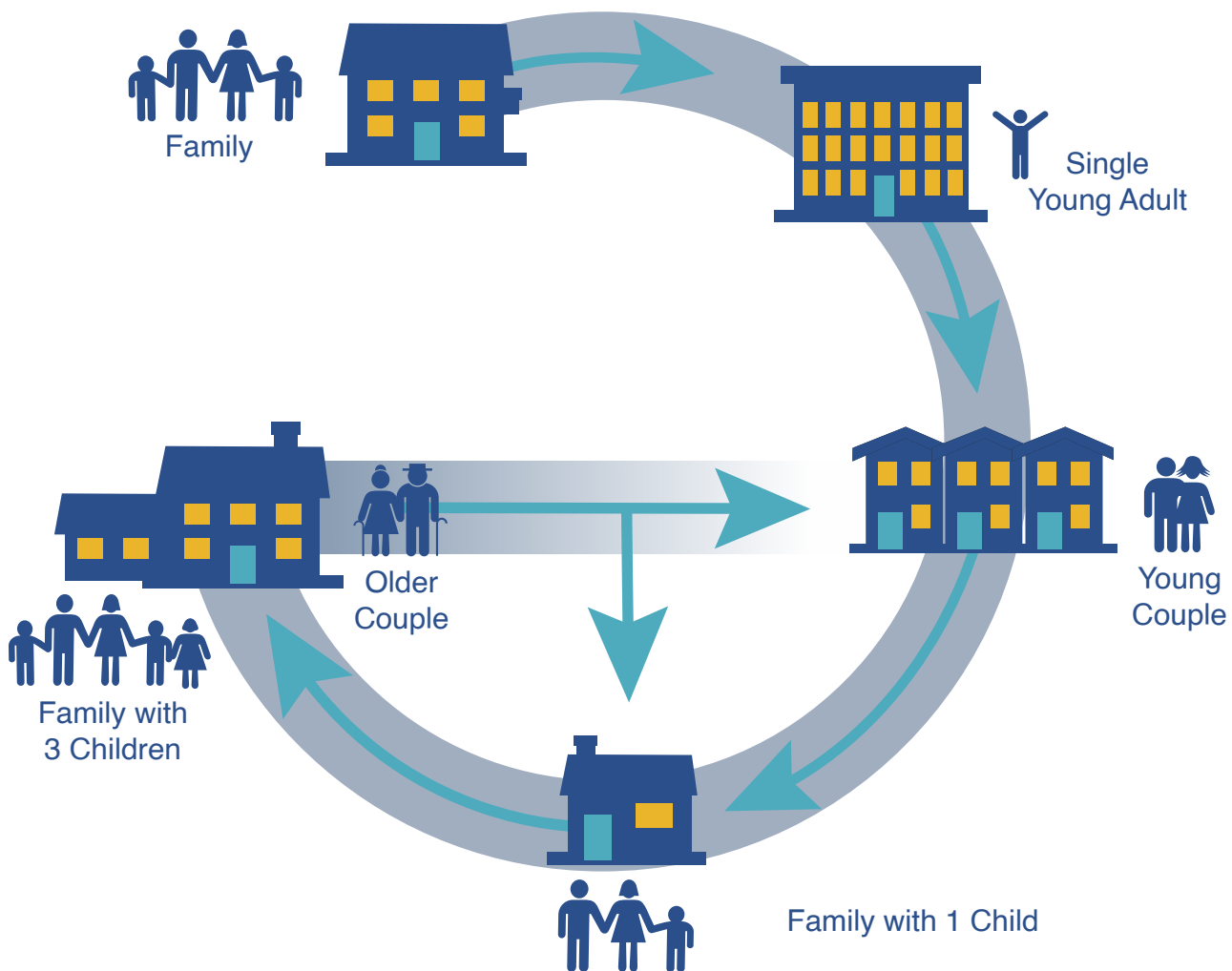


FACTORS AFFECTING HOUSING NEED

Factors Affecting Housing Need

Studies and data analysis have shown a clear linkage between demographic characteristics and housing choice, as shown in the figure below. Key relationships include:

- Housing needs change over a person's lifetime.
- Homeownership rates increase as income increases.
- Homeownership rates increase as age increases.
- Choice of single-family detached housing increases as income increases.
- Renters are much more likely to choose multifamily housing than single-family housing.
- Income is a strong determinant of tenure and housing-type choice for all age categories.



FACTORS AFFECTING HOUSING NEED

The linkages between demographics and housing need can be used to predict future housing need in McMinnville. Three demographic trends are particularly important for McMinnville:

- Aging of Baby Boomer Generation (born 1946 to 1964)
- Aging of the Millennial Generation (born early 1980s to early 2000s)
- Continued growth of the Latinx population

Housing Implications for Boomers:

Need for smaller, lower- cost housing near transit and urban amenities such as shopping and health care services.

Aging of the Baby Boomers

Consistent with state and national trends, McMinnville’s population is growing older. By 2040, 28% of the population of McMinnville is forecast to be 60 years of age and older, up from 22% in 2016.

LIKELY TRENDS AMONG BABY BOOMER HOUSEHOLDS:



Housing Implications for Millennials:

Need for affordable owner and renter housing, especially in walkable neighborhoods. Millennial incomes will increase as they age. They will need opportunities for affordable, owner-occupied single-family housing, such as cottages or townhouses.

Aging of the Millennials

The share of Millennials residing in McMinnville is forecast to stay consistent over the planning period. McMinnville’s ability to attract and retain Millennials will depend on availability of affordable owner- and renter-occupied housing.

LIKELY TRENDS AMONG MILLENNIAL HOUSEHOLDS:



Housing Implications for Latinx Households:

Need for larger, lower-cost renting and ownership opportunities to accommodate larger households with more children and multiple generations.

Continued Growth of the Latinx Population

McMinnville’s Latinx population grew by more than 3,400 people (7%) between 2000 and 2016. Nationwide, the Latinx population is predicted to be the fastest growing ethnic group over the next few decades.

CHARACTERISTICS OF LATINX HOUSEHOLDS COMPARED TO NON-LATINX HOUSEHOLDS:



Development Capacity

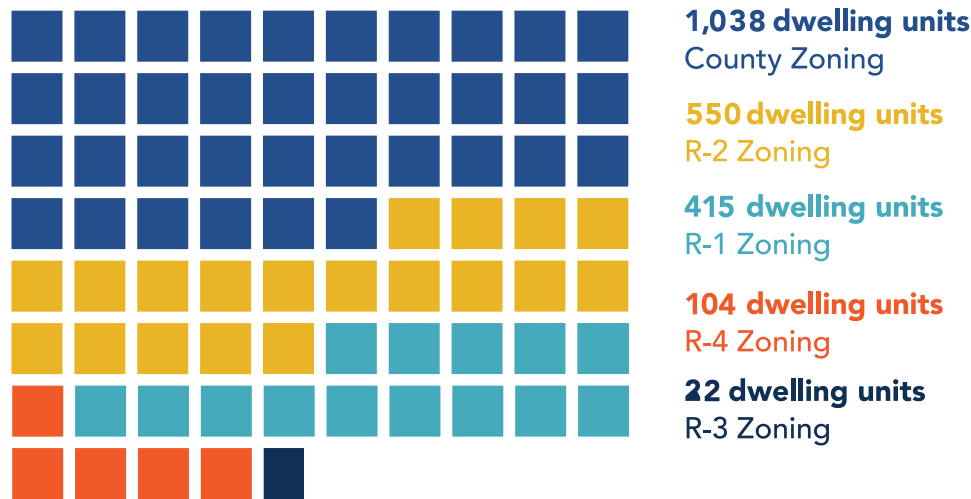
The capacity analysis estimates the number of new dwelling units that can be accommodated on McMinnville’s buildable vacant and partially vacant residential land based on historical densities, with deductions for future rights-of-way.



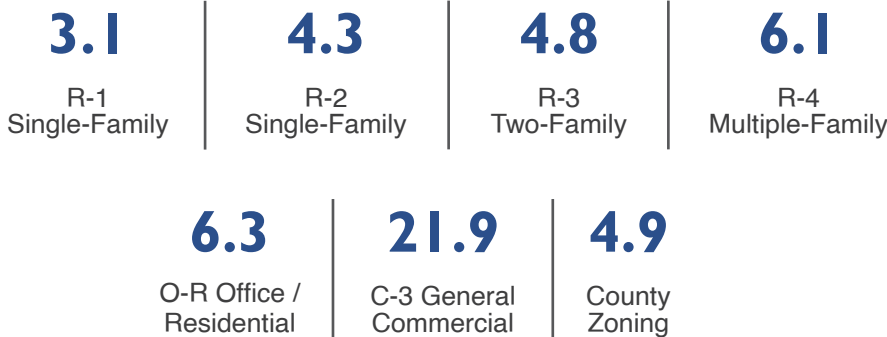
Capacity on Buildable Residential Land

CAPACITY ON RESIDENTIAL LAND, BY ZONING DISTRICT

2,129 total dwelling units 1 square represents 29 dwelling units



DENSITY ON MCMINNVILLE’S RESIDENTIAL LAND BASED ON HISTORICAL DENSITIES, DWELLING UNITS PER GROSS ACRE



Definitions

Capacity:

Number of dwelling units that can be accommodated on buildable land at planned densities.

Housing Density:

Number of dwelling units in an acre of land, with 43,560 square feet to 1 acre.

ACCOMMODATING NEEDED HOUSING

Demand For Residential Land, By Housing Type

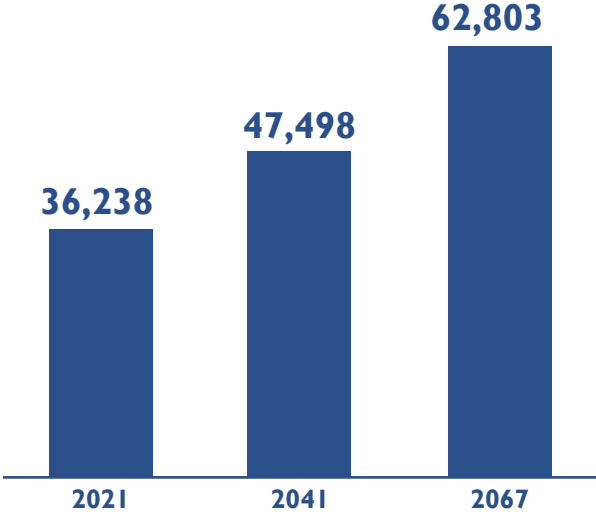
McMinnville’s population is forecast to grow at 1.4% per year, adding over 11,200 new residents between 2021-2041. McMinnville will add another 15,300 new residents between 2041-2067.

McMinnville’s population growth will affect the number of new households created and the demand for residential land. McMinnville’s forecast for new housing is based on the forecast for population growth within the McMinnville UGB.

McMinnville’s population growth will result in the addition of 4,657 new dwelling units between 2021-2041.

To accommodate growth between 2041-2067, McMinnville will add another 6,329 new dwelling units, for a total of 10,986 new units between 2021-2067. Some of these units will be accommodated through redevelopment or by accessory dwelling units and will not require buildable lands.

FORECASTED TOTAL POPULATION, MCMINNVILLE UGB



Population Increase 11,260 (2021-2041) and 15,305 (2041-2067)

McMinnville needs to plan for a wider variety of housing types than has been produced in the past. These include different types of single-family detached units (e.g. tiny homes, cottages, small-lot single-family, traditional and high amenity), more townhouses, and more types of multifamily housing (e.g. duplexes, triplexes, quadplexes, apartments and condos with 5+ units).

McMinnville will need to accommodate growth for 4,657 new dwelling units over the 20-year period, or 10,986 over the 46-year period. The analysis of housing affordability, the factors affecting housing need, and demographic changes suggest that McMinnville needs more affordable housing types (e.g., lower cost) and a greater variety of housing types, including more small-scale single-family detached housing, townhouses, and multifamily housing.

	 SINGLE-FAMILY DETACHED	 SINGLE-FAMILY ATTACHED	 MULTIFAMILY
2021-2041	2,561 new dwelling units	559 new dwelling units	1,537 new dwelling units
2021-2067	6,042 new dwelling units	1,318 new dwelling units	3,626 new dwelling units

ACCOMMODATING NEEDED HOUSING

Comparison of Housing Capacity to Housing Demand

The last step in the Housing Needs Analysis is to compare the capacity of McMinnville’s vacant and partially vacant residential land with demand for housing. McMinnville does not have enough land in its residential plan designations to accommodate growth of single-family detached, single-family attached (townhouses), or multifamily housing.

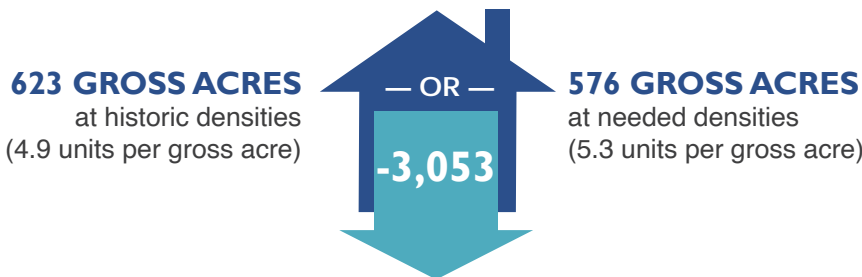


Deficit of Capacity for New Housing

At historic housing densities, McMinnville has capacity for 2,129 dwelling units on existing vacant and partially vacant lands. McMinnville’s planning period begins in 2021 and it is forecast that about 563 dwelling units will be developed in McMinnville before the planning period begins. This results in a refined housing capacity estimate of 1,566 dwelling units in McMinnville in 2021.

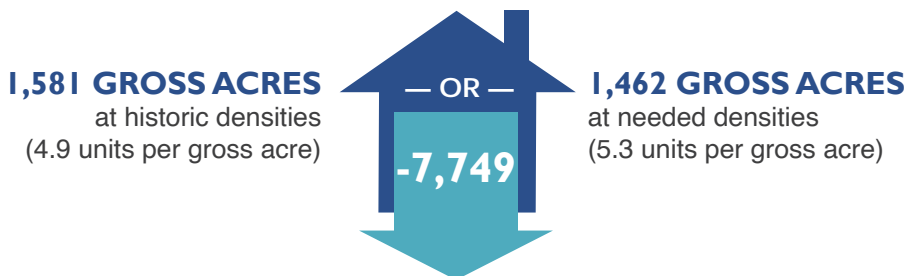
DEFICIT OF LAND FOR NEW HOUSING, MCMINNVILLE UGB, 2041

A deficit of -3,053 dwelling units results in a deficit of:



DEFICIT OF LAND FOR NEW HOUSING, MCMINNVILLE UGB, 2067

A deficit of -7,749 dwelling units results in a deficit of:



KEY FINDINGS AND CONCLUSIONS

Key Findings and Conclusions

McMinnville's UGB is forecast to grow from 36,238 people in 2021 to 47,498 people in 2041, an increase of 11,260 people. After considering a number of factors, including household size and residential vacancy rates, McMinnville will have demand for about 4,657 new dwelling units over the 20-year planning period (2021 to 2041), and about 10,986 new dwelling units for the 46-year period between 2021 and 2067.

McMinnville will need to accommodate an average of 233 new dwelling units annually over the 20-year planning horizon. From 2018-2041, McMinnville will need to accommodate 5,269 new dwelling units. McMinnville will accommodate 87 needed dwelling units through redevelopment and infill — these units will not require vacant or partially vacant lands. Accordingly, this will result in McMinnville needing to accommodate 5,182 needed new dwelling units on vacant or partially vacant buildable residential lands.

In the future, McMinnville will plan for an increased share of single-family attached dwelling units and multifamily units to meet the City's housing needs. Currently, about 68% of McMinnville's housing stock is single-family detached housing, 9% is single-family attached housing, and 23% is multifamily housing. Based on Project Advisory Committee recommendations, McMinnville will plan for a different mix in new housing, which will result in a slight change to McMinnville's aggregate overall mix of existing and new housing. McMinnville will plan for a decrease in share of single-family detached housing (55% of new housing stock) to provide opportunities for more single-family attached housing (12% of new housing) and multifamily housing (33% of new housing).

McMinnville is planning for slightly higher overall average density than it has in the past. As McMinnville shifts toward more single-family attached housing and multifamily housing, McMinnville's average housing density (for new dwelling units) will increase from 4.9 dwelling units per gross acre (historic average density) to 5.3 dwelling units per gross acre (needed average density) — an 8% increase.

McMinnville's existing deficit of relatively affordable housing on both sides of the affordability spectrum indicates a need for a wider range of housing types for renters and homeowners. About 36% of McMinnville's households are cost burdened (paying more than 30% of their income on housing), including a cost-burden rate of 52% for renter households. Without diversification of housing types, lack of affordability will continue to be a problem — possibly growing in the future if incomes continue to grow at a slower rate than housing costs. Under the current conditions between 2021 and 2041, about:

- **1,016 of the forecasted new households will have incomes of \$25,150 or less.** These households often cannot afford market-rate housing without government subsidy.
- **1,711 new households will have incomes between \$25,150 and \$60,359.** These households will need access to relatively affordable housing, such as single-family detached housing (e.g., tiny homes, cottages, small-lot, and traditional), single-family attached housing (e.g., town homes), and multifamily products (particularly middle housing types such as duplexes, triplexes, quadplexes, and apartments/multifamily condominiums).
- **1,930 new households will have incomes over \$60,359.** These households will need higher-amenity housing types such as single-family detached housing, single-family attached housing, and higher-end multifamily products (particularly condominiums).

McMinnville's UGB will not accommodate all of McMinnville's housing needs. Over the planning period through 2041, McMinnville has a deficit of capacity for 3,053 dwelling units, which means the City has an approximate deficit of about 576 gross acres by 2041 based on achieving the "needed density" of 5.3 du/acre. At the historic density of 4.9 du/acre this deficit would be 623 acres.

HOUSING POLICY RECOMMENDATIONS

The McMinnville Housing Strategy presents a full range of policy and action recommendations from the housing needs analysis. This section summarizes the recommendations from that memorandum.

The overall intention of these policy actions is to ensure that McMinnville is allowing for development of a wide range of housing types that will be affordable to households at all income levels, consistent with the intention of Oregon's Statewide Planning Goal 10. No single policy is sufficient to create an environment where more diverse housing and will be developed in McMinnville.

Land Use Strategy

Strategy 1. Growth Planning

- 1.1 Develop an Urban Reserve Area
- 1.2 Establish a Framework Plan for the URA
- 1.3 Identify an Expanded UGB per the URA
- 1.4 Develop Area Plans for UGB Lands Identifying Housing Opportunities
- 1.5 Conduct Infrastructure Planning for URA and UGB Areas (Update infrastructure plans for growth lands)
- 1.6 Update Goal 5 Natural Resource Planning & Policies, incl. Wetlands and Riparian Areas
- 1.7 Update Goal 7 Hazards Planning & Policies, incl. Landslide Susceptibility
- 1.8 Review and Update City/County Urban Growth Management Agreement (UGMA) if needed.
- 1.9 Implement Great Neighborhood Principles
- 1.10 Create a Diverse Housing Zone
- 1.11 Develop a High-Density Residential Zone
- 1.12 Develop Annexation Process to Mandate Housing Types Upon Annexation per Area Plans

Strategy 2. Housing Development in Existing UGB

- 2.1 Create a Diverse Housing Zone
- 2.2 Develop a High-Density Residential Zone
- 2.3 Provide Density Bonuses to Developers
- 2.4 Promote Infill Development, Allowing Flexibility in Existing Zones with Appropriate Design and Development Standards
- 2.5 Update Infrastructure Plans for Infill Development
- 2.6 Implement Great Neighborhood Principles
- 2.7 Re-designate or Rezone Land for Housing

Strategy 3. Infrastructure & Public Facilities Planning

- 3.1 Assess Infrastructure Capacity to Support Infill
- 3.2 Repeal Outdated Policies Related to Old Sewer Treatment Capacity Limits
- 3.3 Identify Issues and Plan for Water Zone 2 Infrastructure Improvements
- 3.4 Develop Infrastructure Allocation Policies
- 3.5 Identify Areas with Underutilized Infrastructure Capacity
- 3.6 Encourage "To and Through" Infrastructure Policies

Strategy 4. Special Area Planning

- 4.1 City Center Housing Strategy
- 4.2 Evaluate Three Mile Lane for Residential Development
- 4.3 Undertake a Highway 99W Corridor Study – Explore Opportunities for Higher Density Mixed-Use Development

Strategy 5. Land Use / Code Amendments

- 5.1 Allow Duplexes, Cottages, Townhomes, Row Houses, and Tri- and Quad-Plexes in Single-Family Zones with Appropriate Design & Development Standards
- 5.2 Implement Other Code Amendments Prioritized by the PAC.
- 5.3 Streamline Zoning Code and Other Ordinances
- 5.4 Implement the Great Neighborhood Principles
- 5.5 Repeal Outdated Policies Related to Old Sewer Treatment Capacity Limits
- 5.6 Evaluate Code for Fair Housing Act Best Practices
- 5.7 Advocate for Inclusionary Zoning Enablement – State Legislation and Annexation Processes

Other, Non-Land Use Strategies

Strategy 6. Programs for Affordable Housing (Non-Land Use)

- 6.1 Pursue Funds for Affordable Housing (City Influence).
- 6.2 Financial Incentives Supporting Inclusionary Zoning
- 6.3 Reduced or Waived Planning Fees, Permit Fees, SDCs for Affordable Housing
- 6.4 Vertical Housing Tax Abatement (Locally Enabled & Managed)
- 6.5 SDC Financing and Credits
- 6.6 Parcel assembly
- 6.7 Multiple-Unit Limited Tax Exemption Program (Locally Enabled and Managed)
- 6.8 Sole Source SDCs
- 6.9 Grants or Loans
- 6.10 Vacant Property Tax.
- 6.11 Fee for Demolition of Affordable Home for Expensive Home.

Strategy 7. Leveraging Partnerships for Housing (Non-Land Use)

- 7.1 Support Partners Pursuit of Affordable Housing Funds
- 7.2 Community Land Trust (CLT)
- 7.3 Affordable Housing Property Tax Abatement
- 7.4 Land Banking

ECONOMIC OPPORTUNITIES ANALYSIS



McMinnville's Economic Opportunities Analysis (EOA) provides information to support economic development planning and management of McMinnville's commercial and industrial land. The City last evaluated economic trends in an EOA in 2013. Substantial changes have occurred in the national and regional economy since 2013 that have implications for economic growth in McMinnville, including the recovery from the Great Recession and changes in retail and increased automation. In 2019, the City adopted the MAC-Town 2032 Economic Development Strategic Plan which identifies target industries and establishes a detailed action plan to enhance McMinnville's economy.

This report summarizes detailed technical analysis found in the 2020 McMinnville Economic Opportunities Analysis. The purpose of the 2020 EOA was to develop a factual base to provide the City with information about current economic conditions. This factual basis, presented in the EOA, provides information necessary for updating the City's economic development Comprehensive Plan policies and to evaluate whether McMinnville has an adequate inventory of industrial and other employment sites to accommodate economic and employment growth.

The EOA provides information that the City can use to identify and capitalize on its economic opportunities. It also provides information essential to addressing the City's challenges in managing economic development. These challenges include a lack of appropriate industrial sites to support growth of businesses that require specific characteristics, as well as a significant deficit of land for retail, office, and other commercial uses.

This summary report presents the results of the McMinnville Economic Opportunities Analysis 2021 to 2041, which presents the full results of the EOA for McMinnville and is intended to comply with statewide planning Goal 9 (economy) and Oregon Administrative Rule (OAR) 660-009. The EOA presents an evaluation of McMinnville Comprehensive Plan policies related to economic development.

City staff and ECONorthwest staff worked with the Project Advisory Committee (PAC) to review the results of the EOA.

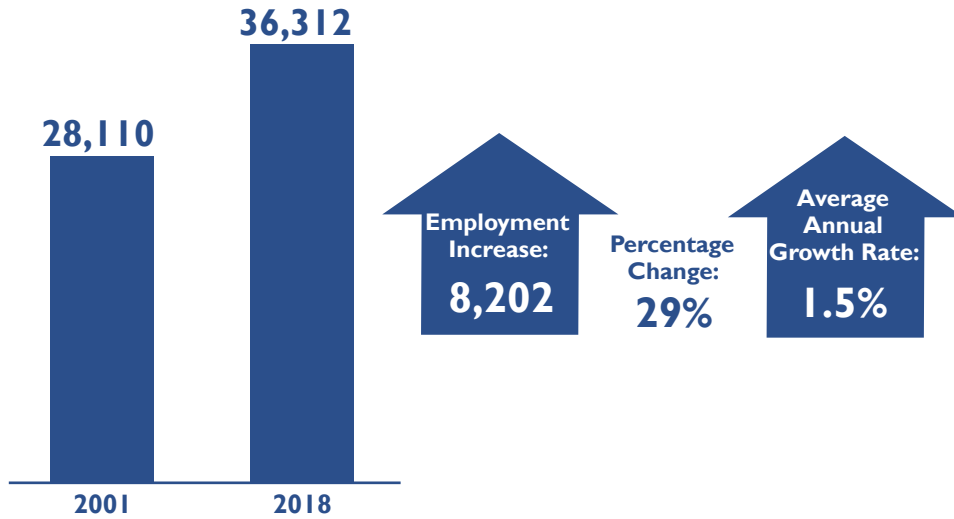


FACTORS AFFECTING ECONOMIC GROWTH IN MCMINNVILLE

McMinnville’s economy and employment will grow as a result of growth in the national and regional economy, as well as factors in Yamhill County and the Willamette Valley. The following are key trends that have implications for economic growth in McMinnville.

CHANGE IN COVERED EMPLOYMENT, YAMHILL COUNTY, 2001-2018

Source: U.S. Bureau of Labor Statistics.

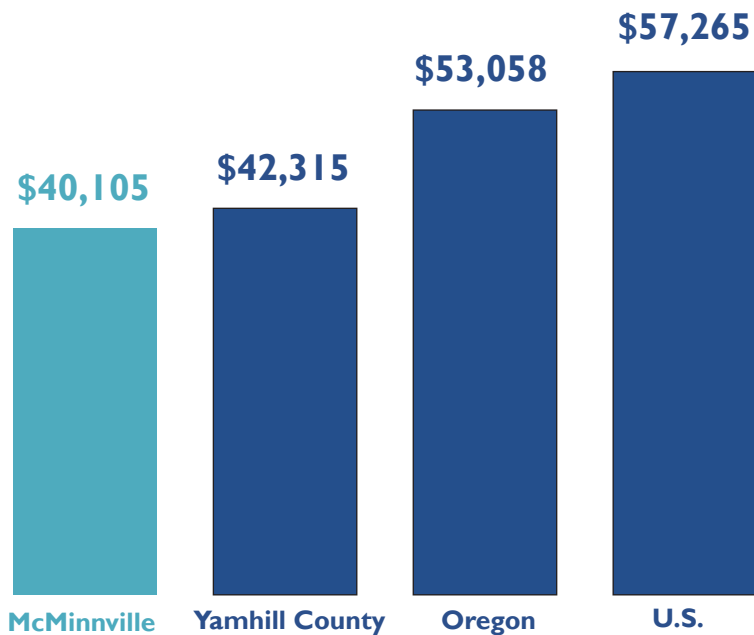


Industrial employment, including sectors such as manufacturing, grew in Yamhill County between 2001 and 2018

Industrial sectors added more than 2,500 jobs, commercial services added almost 5,000 jobs, and retail employment increased by over 570 jobs.

AVERAGE ANNUAL PAY

Oregon Employment Department: Oregon Labor Market Information System, U.S. Bureau of Labor Statistics

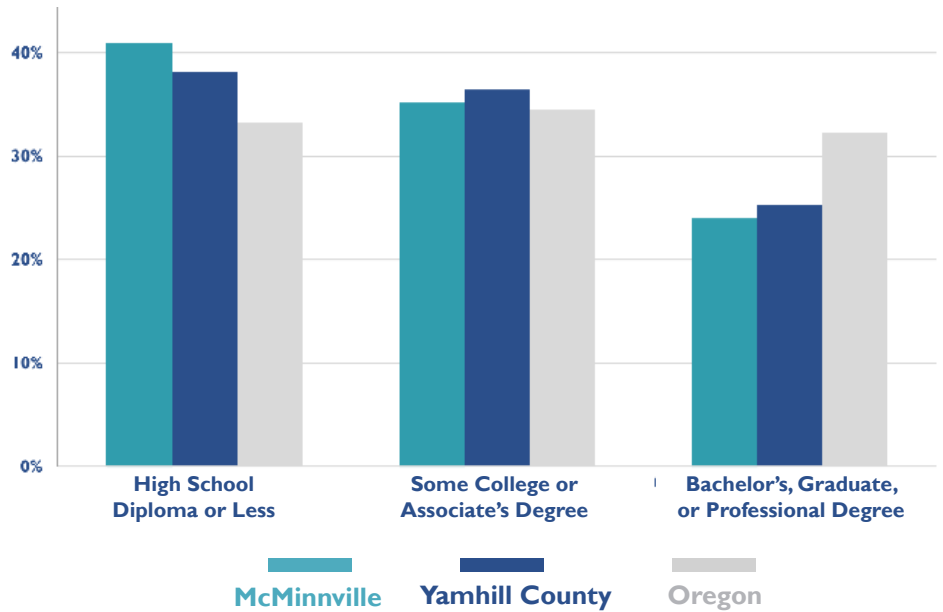


The average pay for jobs in McMinnville was \$40,105 per job, below the County and State averages.

FACTORS AFFECTING ECONOMIC GROWTH IN MCMINNVILLE

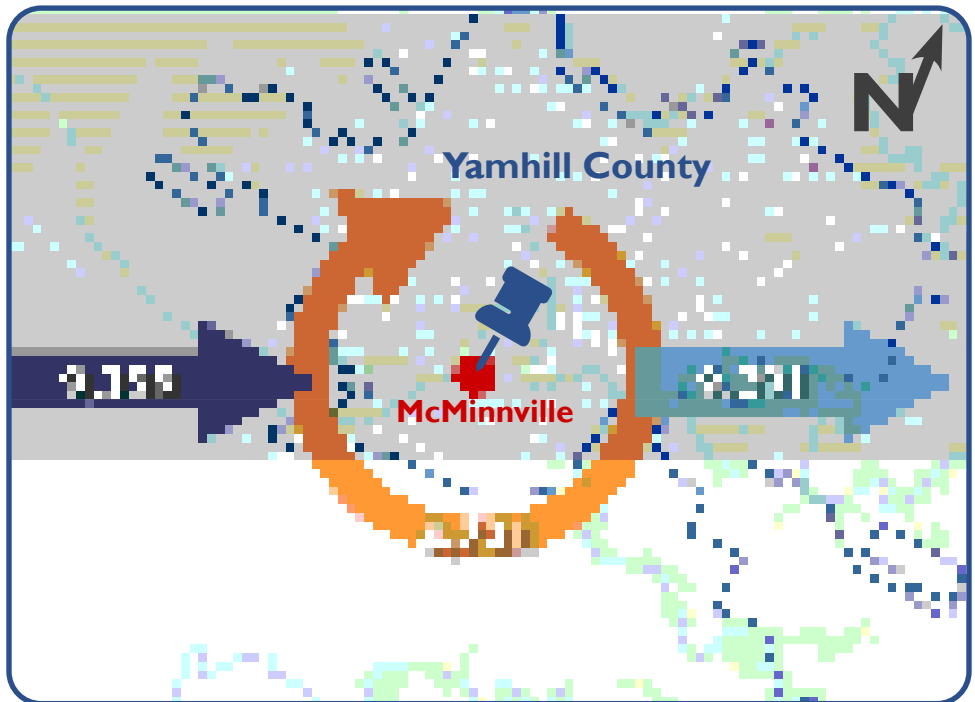
EDUCATIONAL ATTAINMENT,
PERCENT OF THE POPULATION AGE 25 AND OVER, 2017

McMinnville has a lower than average percent of population with a Bachelor's Degree (or higher) relative to statewide trends.



COMMUTING PATTERNS IN MCMINNVILLE, 2017

McMinnville is part of the regional economy of the Mid-Willamette Valley. About 38% of people who work in McMinnville also reside in McMinnville, while other workers commute to McMinnville from other places including Salem, Portland, and Newberg.



EMPLOYMENT IN MCMINNVILLE

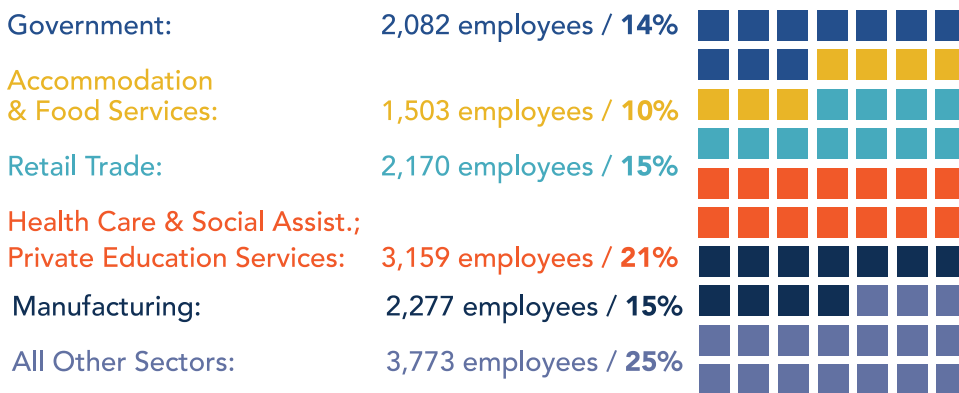
Employment in McMinnville

In 2017, McMinnville had about 14,964 covered employees¹ at 1,208 businesses and other employers. McMinnville's average employer size was 12.4 employees per employer. The sectors with the largest concentrations of employees in McMinnville were in the following sectors: Health Care and Social Assistance / Private Education (21%), Manufacturing (15%), Retail Trade (15%), Government (14%), and Accommodation and Food Service (10%).

JOBS BY SECTOR, MCMINNVILLE, 2017

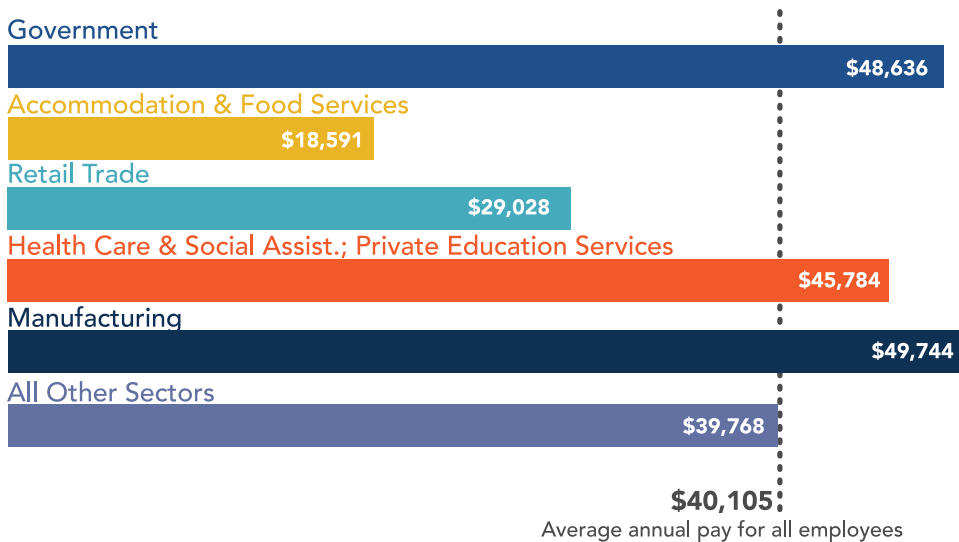
Source: Oregon Employment Department, Quarterly Census of Employment and Wages

1square represents 500 jobs



Food and Beverage manufacturing accounts for about one quarter of McMinnville's employment in the manufacturing sector.

AVERAGE PAY BY SECTOR, MCMINNVILLE, 2017



McMinnville's employment in Healthcare, Social Assistance, and Private Education has the largest share of employment and higher-than-average wages.

¹ Covered employment is employment covered by unemployment insurance. Covered employment does not include all workers in an economy. Most notably, covered employment does not include sole proprietors.

MCMINNVILLE'S COMPETITIVE ADVANTAGES AND TARGET INDUSTRIES



Target Industries

The industries identified as having potential for growth in McMinnville (according to the MAC-Town 2032 Economic Development Strategic Plan) are:



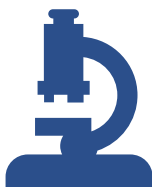
Traditional Industry
& Advanced Manufacturing



Craft Beverages & Food Systems



Technology & Entrepreneurship



Education, Medicine
& Other Sciences

Economic development opportunities in McMinnville will be affected by local conditions as well as the national and state economic conditions addressed above. Economic conditions in McMinnville relative to these conditions in other portions of the Mid-Willamette Valley region form McMinnville's competitive advantage for economic development. McMinnville's competitive advantages have implications for the types of firms most likely to locate and expand in the area.

- **Location and size.** McMinnville is located with proximity to Portland, Salem, and the Oregon Coast. McMinnville's central location serves the local community, regional employment, and commercial service needs, as well as serving tourism industries as a regionally recognized destination for Yamhill and Willamette Valley wineries.
- **Transportation.** McMinnville is directly served by Highway 99W – as a historically significant central organizing spine to access commercial and industrial businesses throughout the community. Highway 18 and Highway 22 (via 99W) also provide connections to the region. The McMinnville Municipal Airport has the capacity to handle corporate jet aircraft – together with availability of aircraft rentals, flight instruction, aircraft maintenance, and fuel.
- **Low public utility rates.** McMinnville is recognized as offering low electricity and water rates compared with other public and private utilities region-wide and statewide.
- **Access to labor pool and workforce training resources.** McMinnville employers have access to a county-wide labor market of nearly 50,000, as well as the larger regional Mid-Valley labor pool. McMinnville's access to education through Linfield College and Chemeketa Community College also provide direct connections for businesses and potential employees.
- **Quality of life.** McMinnville's small-town character, including a walkable downtown attracts workers and businesses to McMinnville, and is especially attractive for entrepreneurial and other individually owned, non-corporate enterprises.

McMinnville's disadvantages for economic development include:

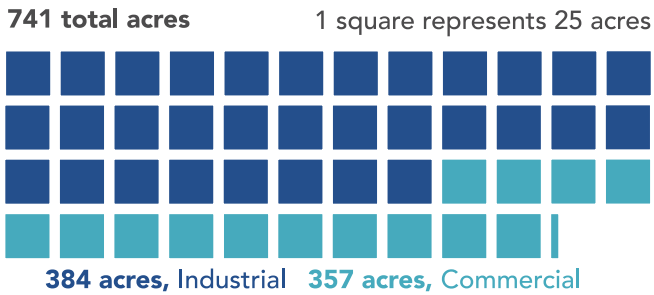
- **Transportation.** McMinnville's poor linkages to Interstate access and congestion on the 99W corridor present challenges to Transportation in McMinnville.
- **Land supply.** Since 2000, population has been increasing somewhat more rapidly than the state, at an average annual rate of 1.4%. In the past, City services have been able to match without experiencing major fiscal issues. However, continued population growth at a somewhat reduced coordinated population growth rate averaging about 1.2% per year is now forecast through 2067. Constrained land supply may be restricting growth and the cost of services is increasing faster than increases in assessed values. The EOA shows a deficit of commercial land in McMinnville.

FORECAST OF EMPLOYMENT GROWTH AND LAND SUFFICIENCY

The rate at which McMinnville’s employment base grows over the next 20 years will affect development of new commercial and industrial buildings and demand for employment land. McMinnville’s employment forecast assumes that employment will grow at the same rate as population growth, at 1.36% average annual per year. Employment growth will result in growth of more than 6,800 new jobs and demand for 741 acres of land between 2021 and 2041, and demand for 954 acres of land between 2021 and 2067.

McMinnville’s employment is forecast to grow at the same rate as its population, 1.36% per year.

FORECASTED DEMAND FOR LAND TO ACCOMMODATE EMPLOYMENT, 2021-2041

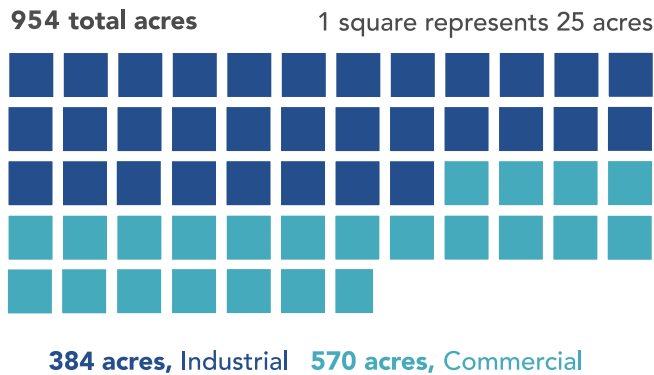


DEFICIT OF LAND FOR EMPLOYMENT LAND, MCMINNVILLE UGB, 2041

McMinnville does not have enough land to accommodate commercial and industrial employment growth over the next 20 years. The City has a deficit of about 70 acres of industrial land and about 280 acres of commercial land.



FORECASTED DEMAND FOR LAND TO ACCOMMODATE EMPLOYMENT, 2021-2067



DEFICIT OF LAND FOR EMPLOYMENT LAND, MCMINNVILLE UGB, 2067

McMinnville does not have enough land to accommodate commercial and industrial employment growth over the next 46 years. The City has a deficit of about 70 acres of industrial land and about 494 acres of commercial land.



PUBLIC AND INSTITUTIONAL LAND NEEDS

PUBLIC AND INSTITUTIONAL USES INCLUDE:

- Public Schools
- Private Schools
- Religious Uses
- Parks
- Government
- Semi-Public Services
- Infrastructure



Public and Institutional Land Needs

Certain land uses don't lend themselves to forecasting land needs by use of an employment forecast and employment density assumptions. Statewide Planning Goal 14 (Urbanization) explicitly discusses specific public lands under Land Need Factor 2 (emphasis added): "Demonstrated need for housing, employment opportunities, livability or uses such as **public facilities, streets and roads, schools, parks or open space**, or any combination of the need categories...". The HNA and EOA identify land supply and demand for housing and employment. Cities, however, provide land for other uses that support housing and employment as well as other aspects of community life.

Inventorying public and institutional land needs was the first step in the analysis. The inventory was then converted into the number of acres per 1,000 population. Public and institutional land needs were further informed through consultations with affected city departments, the McMinnville School District, Chemeketa Community College, and Linfield College, and government agencies. The results were discussed at several meetings of a subcommittee of the EOA PAC and reflect the PAC's recommendations.

ESTIMATED PUBLIC AND INSTITUTIONAL LAND NEEDS

ORGANIZATION/SECTOR	ADDITIONAL LAND NEED (ACRES)		
	2019-2021	2021-2041	TOTAL (2019-41)
City of McMinnville			
• Parks	27	365	392
• Power & Light	0	21	21
• Other (non-parks)	0	7	7
Chemeketa Community College	0	0	0
Linfield College	0	0	0
McMinnville School District	0	10	10
Yamhill County	0	6	6
State of Oregon	0	1	1
Federal Government	0	2	2
Churches	6	32	38
Other	0	0	0
Total	33	444	477

ACKNOWLEDGMENTS

ECONorthwest prepared this report for the City of McMinnville. ECONorthwest and the City of McMinnville thank the many people who helped to develop the McMinnville Housing Needs Analysis, Economic Opportunities Analysis, and Urbanization Report. This project was funded in part by Oregon general fund dollars through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

HOUSING NEEDS ANALYSIS AND ECONOMIC OPPORTUNITIES ANALYSIS PROJECT ADVISORY COMMITTEE (PAC) (Members in **bold** participated in both the HNA and EOA PAC)

Marilyn Worrix	Alan Ruden	Robert J. Banagay	Doug Hurl	Ed Gormley
Kellie Menke	Sid Friedman	Amanda Perron	Scott Cooper	Kyle Faulk
Zack Geary	Mark Davis	Matt Deppe	Alan Amerson	Jody Christensen
Roger Lizut	Danielle Hoffman	Brad Bassitt	Kelly McDonald	
Susan Dirks	Andrew Burton	Patty O’Leary	Mike Morris	
Roger Hall	Beth Caster	Paul Davis	Jeff Knapp	
Sal Peralta	Michael Jester	Andrew Burton	Gioia Goodrum	

PUBLIC/INSTITUTIONAL LANDS WORK GROUP

PAC Members:

Paul Davis, Chemeketa John Dietz, MWL
 Susan Muir, Parks Other Interested PAC Members
 Mike Bisset, City Infrastructure

Additional Representatives:

Mary Ann Rodriguez, Linfield Ryan McIrvine, SD/Athletics
 Matt Johnson, Churches Steve Ganzer, Parks
 Laura Syring, SD, Parks Justin Hogue, County
 Peter Keenan, SD

TECHNICAL ADVISORY COMMITTEE (TAC) STATE OF OREGON

Angela Carnahan, Regional Representative – Oregon Department of Land Conservation and Development
 Kevin Young, Housing Specialist – Oregon Department of Land Conservation and Development

CITY OF MCMINNVILLE

Tom Schauer, Senior Planner — Lead
 Heather Richards, Planning Director
 Chuck Darnell, Senior Planner
 Jamie Fleckenstein, Associate Planner
 Mike Bisset, Community Development Director
 Susan Muir, Parks Director

YAMHILL COUNTY

Ken Friday, Planning Director
 Stephanie Armstrong, Associate Planner

CONSULTING TEAM (ECONORTHWEST)

Robert Parker, Senior Project Adviser
 Beth Goodman, Project Director
 Margaret Raimann, Technical Manager
 Sadie DiNatale, Associate

CITY OF MCMINNVILLE CONTACT:

Tom Schauer, Senior Planner
 City of McMinnville
 230 NE Second Street
 McMinnville, Oregon 97128
 503-474-5108
 tom.schauer@mcminnvileoregon.gov

ECONORTHWEST CONTACT:

Robert Parker, Project Director
 ECONorthwest
 222 SW Columbia, Suite 1600
 Portland, OR 97201
 503-222-6060
 parker@econw.com

ECONorthwest

ECONOMICS • FINANCE • PLANNING

www.ECONW.com

OREGON
KOIN Center
222 SW Columbia St., Suite 1600
Portland, OR 97201
503-222-6060

OREGON
The Washburne Building
72 W Broadway, Suite 206
Eugene, OR 97401
541-687-0051

WASHINGTON
Park Place
1200 6th Avenue, Suite 615
Seattle, WA 98101
206-823-3060

IDAHO
Eagles Center
223 North 6th Street, Suite 430
Boise, ID 83702
208-515-3353

Enrolled
House Bill 2001

Sponsored by Representative KOTEK; Representatives FAHEY, HERNANDEZ, MARSH, MITCHELL, POWER, STARK, WILLIAMS, ZIKA (Presession filed.)

CHAPTER

AN ACT

Relating to housing; creating new provisions; amending ORS 197.296, 197.303, 197.312 and 455.610 and section 1, chapter 47, Oregon Laws 2018; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. Section 2 of this 2019 Act is added to and made a part of ORS chapter 197.

SECTION 2. (1) As used in this section:

(a) “Cottage clusters” means groupings of no fewer than four detached housing units per acre with a footprint of less than 900 square feet each and that include a common courtyard.

(b) “Middle housing” means:

(A) Duplexes;

(B) Triplexes;

(C) Quadplexes;

(D) Cottage clusters; and

(E) Townhouses.

(c) “Townhouses” means a dwelling unit constructed in a row of two or more attached units, where each dwelling unit is located on an individual lot or parcel and shares at least one common wall with an adjacent unit.

(2) Except as provided in subsection (4) of this section, each city with a population of 25,000 or more and each county or city within a metropolitan service district shall allow the development of:

(a) All middle housing types in areas zoned for residential use that allow for the development of detached single-family dwellings; and

(b) A duplex on each lot or parcel zoned for residential use that allows for the development of detached single-family dwellings.

(3) Except as provided in subsection (4) of this section, each city not within a metropolitan service district with a population of more than 10,000 and less than 25,000 shall allow the development of a duplex on each lot or parcel zoned for residential use that allows for the development of detached single-family dwellings. Nothing in this subsection prohibits a local government from allowing middle housing types in addition to duplexes.

(4) This section does not apply to:

(a) Cities with a population of 1,000 or fewer;

(b) Lands not within an urban growth boundary;

(c) Lands that are not incorporated and also lack sufficient urban services, as defined in ORS 195.065;

(d) Lands that are not zoned for residential use, including lands zoned primarily for commercial, industrial, agricultural or public uses; or

(e) Lands that are not incorporated and are zoned under an interim zoning designation that maintains the land's potential for planned urban development.

(5) Local governments may regulate siting and design of middle housing required to be permitted under this section, provided that the regulations do not, individually or cumulatively, discourage the development of all middle housing types permitted in the area through unreasonable costs or delay. Local governments may regulate middle housing to comply with protective measures adopted pursuant to statewide land use planning goals.

(6) This section does not prohibit local governments from permitting:

(a) Single-family dwellings in areas zoned to allow for single-family dwellings; or

(b) Middle housing in areas not required under this section.

SECTION 3. (1) Notwithstanding ORS 197.646, a local government shall adopt land use regulations or amend its comprehensive plan to implement section 2 of this 2019 Act no later than:

(a) June 30, 2021, for each city subject to section 2 (3) of this 2019 Act; or

(b) June 30, 2022, for each local government subject to section 2 (2) of this 2019 Act.

(2) The Land Conservation and Development Commission, with the assistance of the Building Codes Division of the Department of Consumer and Business Services, shall develop a model middle housing ordinance no later than December 31, 2020.

(3) A local government that has not acted within the time provided under subsection (1) of this section shall directly apply the model ordinance developed by the commission under subsection (2) of this section under ORS 197.646 (3) until the local government acts as described in subsection (1) of this section.

(4) In adopting regulations or amending a comprehensive plan under this section, a local government shall consider ways to increase the affordability of middle housing by considering ordinances and policies that include but are not limited to:

(a) Waiving or deferring system development charges;

(b) Adopting or amending criteria for property tax exemptions under ORS 307.515 to 307.523, 307.540 to 307.548 or 307.651 to 307.687 or property tax freezes under ORS 308.450 to 308.481; and

(c) Assessing a construction tax under ORS 320.192 and 320.195.

(5) When a local government makes a legislative decision to amend its comprehensive plan or land use regulations to allow middle housing in areas zoned for residential use that allow for detached single-family dwellings, the local government is not required to consider whether the amendments significantly affect an existing or planned transportation facility.

SECTION 4. (1) Notwithstanding section 3 (1) or (3) of this 2019 Act, the Department of Land Conservation and Development may grant to a local government that is subject to section 2 of this 2019 Act an extension of the time allowed to adopt land use regulations or amend its comprehensive plan under section 3 of this 2019 Act.

(2) An extension under this section may be applied only to specific areas where the local government has identified water, sewer, storm drainage or transportation services that are either significantly deficient or are expected to be significantly deficient before December 31, 2023, and for which the local government has established a plan of actions that will remedy the deficiency in those services that is approved by the department. The extension may not extend beyond the date that the local government intends to correct the deficiency under the plan.

(3) In areas where the extension under this section does not apply, the local government shall apply its own land use regulations consistent with section 3 (1) of this 2019 Act or the model ordinance developed under section 3 (2) of this 2019 Act.

(4) A request for an extension by a local government must be filed with the department no later than:

- (a) **December 31, 2020, for a city subject to section 2 (3) of this 2019 Act.**
- (b) **June 30, 2021, for a local government subject to section 2 (2) of this 2019 Act.**
- (5) **The department shall grant or deny a request for an extension under this section:**
 - (a) **Within 90 days of receipt of a complete request from a city subject to section 2 (3) of this 2019 Act.**
 - (b) **Within 120 days of receipt of a complete request from a local government subject to section 2 (2) of this 2019 Act.**
- (6) **The department shall adopt rules regarding the form and substance of a local government's application for an extension under this section. The department may include rules regarding:**
 - (a) **Defining the affected areas;**
 - (b) **Calculating deficiencies of water, sewer, storm drainage or transportation services;**
 - (c) **Service deficiency levels required to qualify for the extension;**
 - (d) **The components and timing of a remediation plan necessary to qualify for an extension;**
 - (e) **Standards for evaluating applications; and**
 - (f) **Establishing deadlines and components for the approval of a plan of action.**

SECTION 5. ORS 197.296 is amended to read:

197.296. (1)(a) The provisions of subsections (2) to (9) of this section apply to metropolitan service district regional framework plans and local government comprehensive plans for lands within the urban growth boundary of a city that is located outside of a metropolitan service district and has a population of 25,000 or more.

(b) The Land Conservation and Development Commission may establish a set of factors under which additional cities are subject to the provisions of this section. In establishing the set of factors required under this paragraph, the commission shall consider the size of the city, the rate of population growth of the city or the proximity of the city to another city with a population of 25,000 or more or to a metropolitan service district.

(2) At periodic review pursuant to ORS 197.628 to 197.651 or at any other legislative review of the comprehensive plan or regional framework plan that concerns the urban growth boundary and requires the application of a statewide planning goal relating to buildable lands for residential use, a local government shall demonstrate that its comprehensive plan or regional framework plan provides sufficient buildable lands within the urban growth boundary established pursuant to statewide planning goals to accommodate estimated housing needs for 20 years. The 20-year period shall commence on the date initially scheduled for completion of the periodic or legislative review.

(3) In performing the duties under subsection (2) of this section, a local government shall:

(a) Inventory the supply of buildable lands within the urban growth boundary and determine the housing capacity of the buildable lands; and

(b) Conduct an analysis of **existing and projected** housing need by type and density range, in accordance with **all factors under** ORS 197.303 and statewide planning goals and rules relating to housing, to determine the number of units and amount of land needed for each needed housing type for the next 20 years.

(4)(a) For the purpose of the inventory described in subsection (3)(a) of this section, "buildable lands" includes:

(A) Vacant lands planned or zoned for residential use;

(B) Partially vacant lands planned or zoned for residential use;

(C) Lands that may be used for a mix of residential and employment uses under the existing planning or zoning; and

(D) Lands that may be used for residential infill or redevelopment.

(b) For the purpose of the inventory and determination of housing capacity described in subsection (3)(a) of this section, the local government must demonstrate consideration of:

(A) The extent that residential development is prohibited or restricted by local regulation and ordinance, state law and rule or federal statute and regulation;

(B) A written long term contract or easement for radio, telecommunications or electrical facilities, if the written contract or easement is provided to the local government; and

(C) The presence of a single family dwelling or other structure on a lot or parcel.

(c) Except for land that may be used for residential infill or redevelopment, a local government shall create a map or document that may be used to verify and identify specific lots or parcels that have been determined to be buildable lands.

(5)(a) Except as provided in paragraphs (b) and (c) of this subsection, the determination of housing capacity *[and need]* pursuant to subsection [(3)] **(3)(a)** of this section must be based on data relating to land within the urban growth boundary that has been collected since the last *[periodic]* review or *[five]* **six** years, whichever is greater. The data shall include:

(A) The number, density and average mix of housing types of urban residential development that have actually occurred;

(B) Trends in density and average mix of housing types of urban residential development;

(C) **Market factors that may substantially impact future urban residential development;**
and

[(C) Demographic and population trends;]

[(D) Economic trends and cycles; and]

[(E)] **(D)** The number, density and average mix of housing types that have occurred on the buildable lands described in subsection (4)(a) of this section.

(b) A local government shall make the determination described in paragraph (a) of this subsection using a shorter time period than the time period described in paragraph (a) of this subsection if the local government finds that the shorter time period will provide more accurate and reliable data related to housing capacity *[and need]*. The shorter time period may not be less than three years.

(c) A local government shall use data from a wider geographic area or use a time period *[for economic cycles and trends]* longer than the time period described in paragraph (a) of this subsection if the analysis of a wider geographic area or the use of a longer time period will provide more accurate, complete and reliable data relating to trends affecting housing need than an analysis performed pursuant to paragraph (a) of this subsection. The local government must clearly describe the geographic area, time frame and source of data used in a determination performed under this paragraph.

(6) If the housing need determined pursuant to subsection (3)(b) of this section is greater than the housing capacity determined pursuant to subsection (3)(a) of this section, the local government shall take one or *[more]* **both** of the following actions to accommodate the additional housing need:

(a) Amend its urban growth boundary to include sufficient buildable lands to accommodate housing needs for the next 20 years. As part of this process, the local government shall consider the effects of measures taken pursuant to paragraph (b) of this subsection. The amendment shall include sufficient land reasonably necessary to accommodate the siting of new public school facilities. The need and inclusion of lands for new public school facilities shall be a coordinated process between the affected public school districts and the local government that has the authority to approve the urban growth boundary[;].

(b) Amend its comprehensive plan, regional framework plan, functional plan or land use regulations to include new measures that demonstrably increase the likelihood that residential development will occur at densities sufficient to accommodate housing needs for the next 20 years without expansion of the urban growth boundary. A local government or metropolitan service district that takes this action shall *[monitor and record the level of development activity and development density by housing type following the date of the adoption of the new measures; or]* **adopt findings regarding the density expectations assumed to result from measures adopted under this paragraph based upon the factors listed in ORS 197.303 (2) and data in subsection (5)(a) of this section. The density expectations may not project an increase in residential capacity above achieved density by more than three percent without quantifiable validation of such departures. For a local government located outside of a metropolitan service district, a quantifiable vali-**

ation must demonstrate that the assumed housing capacity has been achieved in areas that are zoned to allow no greater than the same authorized density level within the local jurisdiction or a jurisdiction in the same region. For a metropolitan service district, a quantifiable validation must demonstrate that the assumed housing capacity has been achieved in areas that are zoned to allow no greater than the same authorized density level within the metropolitan service district.

[(c) Adopt a combination of the actions described in paragraphs (a) and (b) of this subsection.]

(c) As used in this subsection, “authorized density level” has the meaning given that term in ORS 227.175.

(7) Using the **housing need** analysis conducted under subsection (3)(b) of this section, the local government shall determine the overall average density and overall mix of housing types at which residential development of needed housing types must occur in order to meet housing needs over the next 20 years. If that density is greater than the actual density of development determined under subsection (5)(a)(A) of this section, or if that mix is different from the actual mix of housing types determined under subsection (5)(a)(A) of this section, the local government, as part of its periodic review, shall adopt measures that demonstrably increase the likelihood that residential development will occur at the housing types and density and at the mix of housing types required to meet housing needs over the next 20 years.

(8)(a) A local government outside a metropolitan service district that takes any actions under subsection (6) or (7) of this section shall demonstrate that the comprehensive plan and land use regulations comply with goals and rules adopted by the commission and implement ORS 197.295 to 197.314.

(b) *[The]* A local government shall determine the density and mix of housing types anticipated as a result of actions taken under subsections (6) and (7) of this section and monitor and record the actual density and mix of housing types achieved **following the adoption of these actions**. The local government shall compare actual and anticipated density and mix. The local government shall submit its comparison to the commission at the next periodic review or at the next legislative review of its urban growth boundary, whichever comes first.

(9) In establishing that actions and measures adopted under subsections (6) and (7) of this section demonstrably increase the likelihood of higher density residential development, the local government shall at a minimum ensure that land zoned for needed housing is in locations appropriate for the housing types identified under subsection (3) of this section, *[and]* is zoned at density ranges that are likely to be achieved by the housing market using the analysis in subsection (3) of this section **and is in areas where sufficient urban services are planned to enable the higher density development to occur over the 20-year period**. Actions or measures, or both, may include but are not limited to:

- (a) Increases in the permitted density on existing residential land;
- (b) Financial incentives for higher density housing;
- (c) Provisions permitting additional density beyond that generally allowed in the zoning district in exchange for amenities and features provided by the developer;
- (d) Removal or easing of approval standards or procedures;
- (e) Minimum density ranges;
- (f) Redevelopment and infill strategies;
- (g) Authorization of housing types not previously allowed by the plan or regulations;
- (h) Adoption of an average residential density standard; and
- (i) Rezoning or redesignation of nonresidential land.

(10)(a) The provisions of this subsection apply to local government comprehensive plans for lands within the urban growth boundary of a city that is located outside of a metropolitan service district and has a population of less than 25,000.

(b) At periodic review pursuant to ORS 197.628 to 197.651 or at any other legislative review of the comprehensive plan that requires the application of a statewide planning goal relating to buildable lands for residential use, a city shall, according to rules of the commission:

- (A) Determine the estimated housing needs within the jurisdiction for the next 20 years;
- (B) Inventory the supply of buildable lands available within the urban growth boundary to accommodate the estimated housing needs determined under this subsection; and
- (C) Adopt measures necessary to accommodate the estimated housing needs determined under this subsection.

(c) For the purpose of the inventory described in this subsection, “buildable lands” includes those lands described in subsection (4)(a) of this section.

SECTION 6. ORS 197.303 is amended to read:

197.303. (1) As used in ORS [197.307] **197.295 to 197.314**, “needed housing” means all housing on land zoned for residential use or mixed residential and commercial use that is determined to meet the need shown for housing within an urban growth boundary at price ranges and rent levels that are affordable to households within the county with a variety of incomes, including but not limited to households with low incomes, very low incomes and extremely low incomes, as those terms are defined by the United States Department of Housing and Urban Development under 42 U.S.C. 1437a. “Needed housing” includes the following housing types:

- (a) Attached and detached single-family housing and multiple family housing for both owner and renter occupancy;
- (b) Government assisted housing;
- (c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490;
- (d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions; and
- (e) Housing for farmworkers.

(2) For the purpose of estimating housing needs, as described in ORS 197.296 (3)(b), a local government shall use the population projections prescribed by ORS 195.033 or 195.036 and shall consider and adopt findings related to changes in each of the following factors since the last periodic or legislative review or six years, whichever is greater, and the projected future changes in these factors over a 20-year planning period:

- (a) Household sizes;**
- (b) Household demographics in terms of age, gender, race or other established demographic category;**
- (c) Household incomes;**
- (d) Vacancy rates; and**
- (e) Housing costs.**

(3) A local government shall make the estimate described in subsection (2) of this section using a shorter time period than since the last periodic or legislative review or six years, whichever is greater, if the local government finds that the shorter time period will provide more accurate and reliable data related to housing need. The shorter time period may not be less than three years.

(4) A local government shall use data from a wider geographic area or use a time period longer than the time period described in subsection (2) of this section if the analysis of a wider geographic area or the use of a longer time period will provide more accurate, complete and reliable data relating to trends affecting housing need than an analysis performed pursuant to subsection (2) of this section. The local government must clearly describe the geographic area, time frame and source of data used in an estimate performed under this subsection.

[2] **(5)** Subsection (1)(a) and (d) of this section does not apply to:

- (a) A city with a population of less than 2,500.
- (b) A county with a population of less than 15,000.

[3] **(6)** A local government may take an exception under ORS 197.732 to the definition of “needed housing” in subsection (1) of this section in the same manner that an exception may be taken under the goals.

SECTION 7. ORS 197.312, as amended by section 7, chapter 15, Oregon Laws 2018, is amended to read:

197.312. (1) A city or county may not by charter prohibit from all residential zones attached or detached single-family housing, multifamily housing for both owner and renter occupancy or manufactured homes. A city or county may not by charter prohibit government assisted housing or impose additional approval standards on government assisted housing that are not applied to similar but unassisted housing.

(2)(a) A single-family dwelling for a farmworker and the farmworker's immediate family is a permitted use in any residential or commercial zone that allows single-family dwellings as a permitted use.

(b) A city or county may not impose a zoning requirement on the establishment and maintenance of a single-family dwelling for a farmworker and the farmworker's immediate family in a residential or commercial zone described in paragraph (a) of this subsection that is more restrictive than a zoning requirement imposed on other single-family dwellings in the same zone.

(3)(a) Multifamily housing for farmworkers and farmworkers' immediate families is a permitted use in any residential or commercial zone that allows multifamily housing generally as a permitted use.

(b) A city or county may not impose a zoning requirement on the establishment and maintenance of multifamily housing for farmworkers and farmworkers' immediate families in a residential or commercial zone described in paragraph (a) of this subsection that is more restrictive than a zoning requirement imposed on other multifamily housing in the same zone.

(4) A city or county may not prohibit a property owner or developer from maintaining a real estate sales office in a subdivision or planned community containing more than 50 lots or dwelling units for the sale of lots or dwelling units that remain available for sale to the public.

(5)(a) A city with a population greater than 2,500 or a county with a population greater than 15,000 shall allow in areas within the urban growth boundary that are zoned for detached single-family dwellings the development of at least one accessory dwelling unit for each detached single-family dwelling, subject to reasonable local regulations relating to siting and design.

(b) As used in this subsection[,]:

(A) "Accessory dwelling unit" means an interior, attached or detached residential structure that is used in connection with or that is accessory to a single-family dwelling.

(B) "**Reasonable local regulations relating to siting and design**" does not include owner-occupancy requirements of either the primary or accessory structure or requirements to construct additional off-street parking.

(6) **Subsection (5) of this section does not prohibit local governments from regulating vacation occupancies, as defined in ORS 90.100, to require owner-occupancy or off-street parking.**

SECTION 8. Section 1, chapter 47, Oregon Laws 2018, is amended to read:

Sec. 1. (1) For purposes of this section:

(a) A household is severely rent burdened if the household spends more than 50 percent of the income of the household on gross rent for housing.

(b) A regulated affordable unit is a residential unit subject to a regulatory agreement that runs with the land and that requires affordability for an established income level for a defined period of time.

[(c) A single-family unit may be rented or owned by a household and includes single-family homes, duplexes, townhomes, row homes and mobile homes.]

(2)(a) The Housing and Community Services Department shall annually provide to the governing body of each city in this state with a population greater than 10,000 the most current data available from the United States Census Bureau, or any other source the department considers at least as reliable, showing the percentage of renter households in the city that are severely rent burdened.

(b) The Housing and Community Services Department, in collaboration with the Department of Land Conservation and Development, shall develop a survey form on which the governing body of

a city may provide specific information related to the affordability of housing within the city, including, but not limited to:

(A) The actions relating to land use and other related matters that the governing body has taken to increase the affordability of housing and reduce rent burdens for severely rent burdened households; and

(B) The additional actions the governing body intends to take to reduce rent burdens for severely rent burdened households.

(c) If the Housing and Community Services Department determines that at least 25 percent of the renter households in a city are severely rent burdened, the department shall provide the governing body of the city with the survey form developed pursuant to paragraph (b) of this subsection.

(d) The governing body of the city shall return the completed survey form to the Housing and Community Services Department and the Department of Land Conservation and Development within 60 days of receipt.

(3)(a) In any year in which the governing body of a city is informed under this section that at least 25 percent of the renter households in the city are severely rent burdened, the governing body shall hold at least one public meeting to discuss the causes and consequences of severe rent burdens within the city, the barriers to reducing rent burdens and possible solutions.

(b) The Housing and Community Services Department may adopt rules governing the conduct of the public meeting required under this subsection.

(4) No later than February 1 of each year, the governing body of each city in this state with a population greater than 10,000 shall submit to the Department of Land Conservation and Development a report for the immediately preceding calendar year setting forth separately for each of the following categories the total number of units that were permitted and the total number that were produced:

- (a) Residential units.
- (b) Regulated affordable residential units.
- (c) Multifamily residential units.
- (d) Regulated affordable multifamily residential units.
- (e) Single-family *[units]* **homes**.
- (f) Regulated affordable single-family *[units]* **homes**.
- (g) Accessory dwelling units.**
- (h) Regulated affordable accessory dwelling units.**
- (i) Units of middle housing, as defined in section 2 of this 2019 Act.**
- (j) Regulated affordable units of middle housing.**

SECTION 9. ORS 455.610 is amended to read:

455.610. (1) The Director of the Department of Consumer and Business Services shall adopt, and amend as necessary, a Low-Rise Residential Dwelling Code that contains all requirements, including structural design provisions, related to the construction of residential dwellings three stories or less above grade. The code provisions for plumbing and electrical requirements must be compatible with other specialty codes adopted by the director. The Electrical and Elevator Board, the Mechanical Board and the State Plumbing Board shall review, respectively, amendments to the electrical, mechanical or plumbing provisions of the code.

(2) Changes or amendments to the code adopted under subsection (1) of this section may be made when:

- (a) Required by geographic or climatic conditions unique to Oregon;
- (b) Necessary to be compatible with other statutory provisions;
- (c) Changes to the national codes are adopted in Oregon; or
- (d) Necessary to authorize the use of building materials and techniques that are consistent with nationally recognized standards and building practices.

(3) Notwithstanding ORS 455.030, 455.035, 455.110 and 455.112, the director may, at any time following appropriate consultation with the Mechanical Board or Building Codes Structures Board,

amend the mechanical specialty code or structural specialty code to ensure compatibility with the Low-Rise Residential Dwelling Code.

(4) The water conservation provisions for toilets, urinals, shower heads and interior faucets adopted in the Low-Rise Residential Dwelling Code shall be the same as those adopted under ORS 447.020 to meet the requirements of ORS 447.145.

(5) The Low-Rise Residential Dwelling Code shall be adopted and amended as provided by ORS 455.030 and 455.110.

(6) The director, by rule, shall establish uniform standards for a municipality to allow an alternate method of construction to the requirements for one and two family dwellings built to the Low-Rise Residential Dwelling Code in areas where the local jurisdiction determines that the fire apparatus means of approach to a property or water supply serving a property does not meet applicable fire code or state building code requirements. The alternate method of construction, which may include but is not limited to the installation of automatic fire sprinkler systems, must be approved in conjunction with the approval of an application under ORS 197.522.

(7) For lots of record existing before July 2, 2001, or property that receives any approval for partition, subdivision or construction under ORS 197.522 before July 2, 2001, a municipality allowing an alternate method of construction to the requirements for one and two family dwellings built to the Low-Rise Residential Dwelling Code may apply the uniform standards established by the director pursuant to subsection (6) of this section. For property that receives all approvals for partition, subdivision or construction under ORS 197.522 on or after July 2, 2001, a municipality allowing an alternate method of construction to the requirements for one and two family dwellings built to the Low-Rise Residential Dwelling Code must apply the uniform standards established by the director pursuant to subsection (6) of this section.

(8) The director, by rule, shall establish uniform standards for a municipality to allow alternate approval of construction related to conversions of single-family dwellings into no more than four residential dwelling units built to the Low-Rise Residential Dwelling Code that received occupancy approval prior to January 1, 2020. The standards established under this subsection must include standards describing the information that must be submitted before an application for alternate approval will be deemed complete.

(9)(a) A building official described in ORS 455.148 or 455.150 must approve or deny an application for alternate approval under subsection (8) of this section no later than 15 business days after receiving a complete application.

(b) A building official who denies an application for alternate approval under this subsection shall provide to the applicant:

(A) A written explanation of the basis for the denial; and

(B) A statement that describes the applicant's appeal rights under subsection (10) of this section.

(10)(a) An appeal from a denial under subsection (9) of this section must be made through a municipal administrative process. A municipality shall provide an administrative process that:

(A) Is other than a judicial proceeding in a court of law; and

(B) Affords the party an opportunity to appeal the denial before an individual, department or body that is other than a plan reviewer, inspector or building official for the municipality.

(b) A decision in an administrative process under this subsection must be completed no later than 30 business days after the building official receives notice of the appeal.

(c) Notwithstanding ORS 455.690, a municipal administrative process required under this subsection is the exclusive means for appealing a denial under subsection (9) of this section.

(11) The costs incurred by a municipality under subsections (9) and (10) of this section are building inspection program administration and enforcement costs for the purpose of fee adoption under ORS 455.210.

SECTION 10. (1) It is the policy of the State of Oregon to reduce to the extent practicable administrative and permitting costs and barriers to the construction of middle housing, as defined in section 2 of this 2019 Act, while maintaining safety, public health and the general welfare with respect to construction and occupancy.

(2) The Department of Consumer and Business Services shall submit a report describing rules and standards relating to low-rise residential dwellings proposed under ORS 455.610, as amended by section 9 of this 2019 Act, in the manner provided in ORS 192.245, to an interim committee of the Legislative Assembly related to housing no later than January 1, 2020.

SECTION 11. Section 12 of this 2019 Act is added to and made a part of ORS 94.550 to 94.783.

SECTION 12. A provision in a governing document that is adopted or amended on or after the effective date of this 2019 Act, is void and unenforceable to the extent that the provision would prohibit or have the effect of unreasonably restricting the development of housing that is otherwise allowable under the maximum density of the zoning for the land.

SECTION 13. A provision in a recorded instrument affecting real property is not enforceable if:

(1) The provision would allow the development of a single-family dwelling on the real property but would prohibit the development of:

- (a) Middle housing, as defined in section 2 of this 2019 Act; or
- (b) An accessory dwelling unit allowed under ORS 197.312 (5); and

(2) The instrument was executed on or after the effective date of this 2019 Act.

SECTION 14. (1) Sections 2, 12 and 13 of this 2019 Act and the amendments to ORS 197.296, 197.303, 197.312 and 455.610 and section 1, chapter 47, Oregon Laws 2018, by sections 5 to 9 of this 2019 Act become operative on January 1, 2020.

(2) The Land Conservation and Development Commission, the Department of Consumer and Business Services and the Residential and Manufactured Structures Board may take any actions before the operative date specified in subsection (1) of this section necessary to enable the commission, department or board to exercise, on or after the operative date specified in subsection (1) of this section, the duties required under sections 2, 3 and 10 of this 2019 Act and the amendments to ORS 455.610 by section 9 of this 2019 Act.

SECTION 15. In addition to and not in lieu of any other appropriation, there is appropriated to the Department of Land Conservation and Development, for the biennium beginning July 1, 2019, out of the General Fund, the amount of \$3,500,000 for the purpose of providing technical assistance to local governments in implementing section 3 (1) of this 2019 Act and to develop plans to improve water, sewer, storm drainage and transportation services as described in section 4 (2) of this 2019 Act. The department shall prioritize technical assistance to cities or counties with limited planning staff or that commit to implementation earlier than the date required under section 3 (1) of this 2019 Act.

SECTION 16. This 2019 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2019 Act takes effect on its passage.

Passed by House June 20, 2019

.....
Timothy G. Sekerak, Chief Clerk of House

.....
Tina Kotek, Speaker of House

Passed by Senate June 30, 2019

.....
Peter Courtney, President of Senate

Received by Governor:

.....M,....., 2019

Approved:

.....M,....., 2019

.....
Kate Brown, Governor

Filed in Office of Secretary of State:

.....M,....., 2019

.....
Bev Clarno, Secretary of State

Enrolled
House Bill 2003

Sponsored by Representative KOTEK; Representatives FAHEY, KENY-GUYER, WILDE

CHAPTER

AN ACT

Relating to buildings; creating new provisions; amending ORS 197.296, 197.299, 197.303, 197.319, 197.320, 215.416, 215.441, 227.175, 227.500 and 455.062 and section 1, chapter 47, Oregon Laws 2018, and section 3, chapter 97, Oregon Laws 2019 (Enrolled Senate Bill 39); and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. (1) As used in this section:

(a) **“Area median income” means the median income for households established by the United States Department of Housing and Urban Development.**

(b) **“Existing housing stock” means housing, by affordability level and type, actually constructed in a city or Metro.**

(c) **“High income” means above 120 percent of the area median income.**

(d) **“Housing shortage” means the difference between the estimated housing units of different affordability levels and housing types needed to accommodate the existing population and the existing housing stock, measured in dwelling units.**

(e) **“Low income” means income above 50 percent and at or below 80 percent of the area median income.**

(f) **“Metro” means a metropolitan service district organized under ORS chapter 268.**

(g) **“Moderate income” means income above 80 percent and at or below 120 percent of the area median income.**

(h) **“Region” has the meaning given that term in ORS 284.752.**

(i) **“Very low income” means income at or below 50 percent of the area median income.**

(2) **The Housing and Community Services Department, in coordination with the Department of Land Conservation and Development and the Oregon Department of Administrative Services, shall develop a methodology for calculating:**

(a) **A regional housing needs analysis that identifies the total number of housing units necessary to accommodate anticipated populations in a region over the next 20 years based on:**

(A) **Trends in density and in the average mix of housing types of urban residential development;**

(B) **Demographic and population trends;**

(C) **Economic trends and cycles; and**

(D) **Equitable distribution of publicly supported housing within a region.**

(b) **An estimate of existing housing stock of each city and Metro.**

(c) **A housing shortage analysis for each city and Metro.**

(d) An estimate of the number of housing units necessary to accommodate anticipated population growth over the next 20 years for each city and Metro.

(3) The methodologies for calculating the regional housing needs analysis, the estimate of existing housing stock, the housing shortage analysis and the estimate of housing necessary to accommodate growth that are developed under subsection (2) of this section must classify housing by:

(a) Housing type, including attached and detached single-family housing, multifamily housing and manufactured dwellings or mobile homes; and

(b) Affordability, by housing that is affordable to households with:

(A) Very low income;

(B) Low income;

(C) Moderate income; or

(D) High income.

(4) No later than September 1, 2020, the Housing and Community Services Department, in coordination with the Department of Land Conservation and Development and the Oregon Department of Administrative Services, shall conduct for each region a regional housing needs analysis and, for each city and Metro, shall estimate existing housing stock, conduct a housing shortage analysis and estimate the housing necessary to accommodate growth.

(5) In developing the methodologies and conducting the analyses under this section, the Housing and Community Services Department may:

(a) Consult or contract with subject matter experts, cities and Metro, regional solutions centers described in ORS 284.754 (2) and other jurisdictions that have created or conducted regional housing needs analyses.

(b) Consider the most recent consolidated population forecast produced by the Portland State University Population Research Center in making any relevant calculation or forecast.

(c) Consider any other relevant existing analyses, data and other information collected or produced by state agencies or public entities.

(d) Make changes to the regional boundaries in order to make regions more accurately align with shared employment, transportation or housing market dynamics.

SECTION 2. (1) No later than March 1, 2021, the Housing and Community Services Department, in consultation with the Department of Land Conservation and Development and the Oregon Department of Administrative Services, shall submit a report, in the manner provided in ORS 192.245 to an appropriate committee of the Legislative Assembly, that summarizes the findings of the regional housing needs analysis, estimate of housing stock, housing shortage analysis and estimate of housing necessary to accommodate growth conducted under section 1 (4) of this 2019 Act.

(2) No later than March 1, 2021, the Department of Land Conservation and Development, in consultation with the Oregon Department of Administrative Services and the Housing and Community Services Department, shall submit a report, in the manner provided in ORS 192.245, to an appropriate committee of the Legislative Assembly that evaluates:

(a) Whether a regional housing needs analysis and housing shortage analysis described in section 1 of this 2019 Act could appropriately allocate among the cities or local governments in a region the housing shortage described;

(b) How a regional housing needs analysis and housing shortage analysis may compare to existing assessments of housing need and capacity conducted by local governments under ORS 197.296 (3) and (10) in terms of:

(A) Cost and cost effectiveness;

(B) Reliability and accuracy;

(C) Repeatability; and

(D) Predictability;

(c) How a regional housing needs analysis and housing shortage analysis may relate to statewide planning goals related to housing and any rules and policies adopted pursuant to these goals and ORS 197.295 to 197.314;

(d) Whether different boundaries would be more appropriate for defining regions within the regional housing needs analysis based on:

(A) Relevance of data in appropriately defining a commuting, employment or housing market; or

(B) Ease or cost of collecting or analyzing data;

(e) Other ways in which the regional housing needs analysis or housing shortage analysis could be improved; and

(f) Whether the regional housing needs analysis, or an improved version, could serve as an acceptable methodology statewide for land use planning relating to housing.

(3) In preparing the report required under subsection (2) of this section, the Department of Land Conservation and Development may consult or contract with other state agencies, subject matter experts, private firms, local governments, regional solutions centers described in ORS 284.754 (2) and other jurisdictions that have created or conducted regional housing needs analyses.

SECTION 3. Sections 4 to 6 of this 2019 Act are added to and made a part of ORS 197.295 to 197.314.

SECTION 4. (1) A city with a population greater than 10,000 shall develop and adopt a housing production strategy under this section no later than one year after:

(a) The city's deadline for completing a housing capacity analysis under ORS 197.296 (2)(a);

(b) The city's deadline for completing a housing capacity analysis under ORS 197.296 (10)(b); or

(c) A date scheduled by the Land Conservation and Development Commission following the allocation of housing capacity to the city by a metropolitan service district under ORS 197.299 (2)(d).

(2) A housing production strategy must include a list of specific actions, including the adoption of measures and policies, that the city shall undertake to promote development within the city to address a housing need identified under ORS 197.296 (6) for the most recent 20-year period described in ORS 197.296 (2)(b). Actions under this subsection may include:

(a) The reduction of financial and regulatory impediments to developing needed housing, including removing or easing approval standards or procedures for needed housing at higher densities or that is affordable;

(b) The creation of financial and regulatory incentives for development of needed housing, including creating incentives for needed housing at higher densities or that is affordable; and

(c) The development of a plan to access resources available at local, regional, state and national levels to increase the availability and affordability of needed housing.

(3) In creating a housing production strategy, a city shall review and consider:

(a) Socioeconomic and demographic characteristics of households living in existing needed housing;

(b) Market conditions affecting the provision of needed housing;

(c) Measures already adopted by the city to promote the development of needed housing;

(d) Existing and expected barriers to the development of needed housing; and

(e) For each action the city includes in its housing production strategy:

(A) The schedule for its adoption;

(B) The schedule for its implementation;

(C) Its expected magnitude of impact on the development of needed housing; and

(D) The time frame over which it is expected to impact needed housing.

(4) The housing production strategy must include within its index a copy of the city's most recently completed survey under section 1 (2), chapter 47, Oregon Laws 2018.

(5) The adoption of a housing production strategy is not a land use decision and is not subject to appeal or review except as provided in section 5 of this 2019 Act.

SECTION 5. (1) No later than 20 days after a city's adoption or amendment of a housing production strategy under section 4 of this 2019 Act, a city shall submit the adopted strategy or amended strategy to the Department of Land Conservation and Development.

(2) The submission under subsection (1) of this section must include copies of:

(a) The signed decision adopting the housing production strategy or amended strategy;

(b) The text of the housing production strategy clearly indicating any amendments to the most recent strategy submitted under this section;

(c) A brief narrative summary of the housing production strategy; and

(d) The information reviewed and considered under section 6 (2) of this 2019 Act.

(3) On the same day the city submits notice of the housing production strategy or amended strategy, the city shall provide a notice to persons that participated in the proceedings that led to the adoption of the strategy and requested notice in writing.

(4) Within 10 days of receipt of the submission under subsection (1) of this section, the department shall provide notice to persons described under ORS 197.615 (3).

(5) The notices given under subsections (3) and (4) of this section must state:

(a) How and where materials described in subsection (2) of this section may be freely obtained;

(b) That comments on the strategy may be submitted to the department within 45 days after the department has received the submission; and

(c) That there is no further right of appeal.

(6) Based upon criteria adopted by the Land Conservation and Development Commission, including any criteria adopted under section 6 (2) of this 2019 Act, the department shall, within 120 days after receiving the submission under subsection (1) of this section:

(a) Approve the housing production strategy;

(b) Approve the housing production strategy, subject to further review and actions under section 6 (2) of this 2019 Act; or

(c) Remand the housing production strategy for further modification as identified by the department.

(7) A determination by the department under subsection (6) of this section is not a land use decision and is final and not subject to appeal.

SECTION 6. (1) The Land Conservation and Development Commission, in consultation with the Housing and Community Services Department, shall adopt criteria for reviewing and identifying cities with a population greater than 10,000 that have not sufficiently:

(a) Achieved production of needed housing within their jurisdiction; or

(b) Implemented a housing production strategy adopted under section 4 of this 2019 Act.

(2) The criteria adopted by the commission under subsection (1) of this section may include the city's:

(a) Unmet housing need as described in ORS 197.296 (6);

(b) Unmet housing need in proportion to the city's population;

(c) Percentage of households identified as severely rent burdened as described in section 1, chapter 47, Oregon Laws 2018;

(d) Recent housing development;

(e) Recent adoption of a housing production strategy under section 4 of this 2019 Act or adoption of actions pursuant to a housing production strategy;

(f) Recent or frequent previous identification by the Department of Land Conservation and Development under this section; or

(g) Other attributes that the commission considers relevant.

(3) The Department of Land Conservation and Development may review cities under the criteria adopted under subsection (2) of this section for the purposes of prioritizing actions by the department, including:

- (a) Awarding available technical or financial resources;
- (b) Providing enhanced review and oversight of the city's housing production strategy;
- (c) Requiring a report and explanation if a city does not implement an action within the approximate time frame scheduled within a housing production strategy;
- (d) Entering into agreements with the city relating to the city's modification or implementation of its housing production strategy; or
- (e) Petitioning the commission to act under ORS 197.319 to 197.335 to require the city to comply with ORS 197.295 to 197.314 or statewide land use planning goals related to housing or urbanization.

SECTION 7. No later than December 31, 2019, the Land Conservation and Development Commission shall adopt a schedule by which metropolitan service districts and cities described in ORS 197.296 (2)(a)(B) and (10)(c)(B) shall demonstrate sufficient buildable lands. Dates in the schedule may not be earlier than two years following the commission's creation of rules implementing sections 4 to 6 of this 2019 Act and the amendments to ORS 197.296 and 197.299 by sections 8 and 9 of this 2019 Act.

SECTION 8. ORS 197.296 is amended to read:

197.296. (1)(a) The provisions of subsections (2) to (9) of this section apply to metropolitan service district regional framework plans and local government comprehensive plans for lands within the urban growth boundary of a city that is located outside of a metropolitan service district and has a population of 25,000 or more.

(b) The Land Conservation and Development Commission may establish a set of factors under which additional cities are subject to the provisions of this section. In establishing the set of factors required under this paragraph, the commission shall consider the size of the city, the rate of population growth of the city or the proximity of the city to another city with a population of 25,000 or more or to a metropolitan service district.

(2)(a) *[At periodic review pursuant to ORS 197.628 to 197.651 or at any other legislative review of the comprehensive plan or regional framework plan that concerns the urban growth boundary and requires the application of a statewide planning goal relating to buildable lands for residential use,]* A local government shall demonstrate that its comprehensive plan or regional framework plan provides sufficient buildable lands within the urban growth boundary established pursuant to statewide planning goals to accommodate estimated housing needs for 20 years:

(A) At periodic review under ORS 197.628 to 197.651;

(B) As scheduled by the commission:

(i) At least once each eight years for local governments that are not within a metropolitan service district; or

(ii) At least once each six years for a metropolitan service district; or

(C) At any other legislative review of the comprehensive plan or regional framework plan that concerns the urban growth boundary and requires the application of a statewide planning goal relating to buildable lands for residential use.

(b) The 20-year period shall commence on the date initially scheduled for completion of the *[periodic or legislative]* review **under paragraph (a) of this subsection.**

(3) In performing the duties under subsection (2) of this section, a local government shall:

(a) Inventory the supply of buildable lands within the urban growth boundary and determine the housing capacity of the buildable lands; and

(b) Conduct an analysis of housing need by type and density range, in accordance with ORS 197.303 and statewide planning goals and rules relating to housing, to determine the number of units and amount of land needed for each needed housing type for the next 20 years.

(4)(a) For the purpose of the inventory described in subsection (3)(a) of this section, "buildable lands" includes:

- (A) Vacant lands planned or zoned for residential use;
- (B) Partially vacant lands planned or zoned for residential use;
- (C) Lands that may be used for a mix of residential and employment uses under the existing planning or zoning; and
- (D) Lands that may be used for residential infill or redevelopment.

(b) For the purpose of the inventory and determination of housing capacity described in subsection (3)(a) of this section, the local government must demonstrate consideration of:

(A) The extent that residential development is prohibited or restricted by local regulation and ordinance, state law and rule or federal statute and regulation;

(B) A written long term contract or easement for radio, telecommunications or electrical facilities, if the written contract or easement is provided to the local government; and

(C) The presence of a single family dwelling or other structure on a lot or parcel.

(c) Except for land that may be used for residential infill or redevelopment, a local government shall create a map or document that may be used to verify and identify specific lots or parcels that have been determined to be buildable lands.

(5)(a) Except as provided in paragraphs (b) and (c) of this subsection, the determination of housing capacity and need pursuant to subsection (3) of this section must be based on data relating to land within the urban growth boundary that has been collected since the last *[periodic]* review *[or]* **under subsection (2)(a)(B) of this section** *[five years, whichever is greater]*. The data shall include:

(A) The number, density and average mix of housing types of urban residential development that have actually occurred;

(B) Trends in density and average mix of housing types of urban residential development;

(C) Demographic and population trends;

(D) Economic trends and cycles; and

(E) The number, density and average mix of housing types that have occurred on the buildable lands described in subsection (4)(a) of this section.

(b) A local government shall make the determination described in paragraph (a) of this subsection using a shorter time period than the time period described in paragraph (a) of this subsection if the local government finds that the shorter time period will provide more accurate and reliable data related to housing capacity and need. The shorter time period may not be less than three years.

(c) A local government shall use data from a wider geographic area or use a time period for economic cycles and trends longer than the time period described in paragraph (a) of this subsection if the analysis of a wider geographic area or the use of a longer time period will provide more accurate, complete and reliable data relating to trends affecting housing need than an analysis performed pursuant to paragraph (a) of this subsection. The local government must clearly describe the geographic area, time frame and source of data used in a determination performed under this paragraph.

(6) If the housing need determined pursuant to subsection (3)(b) of this section is greater than the housing capacity determined pursuant to subsection (3)(a) of this section, the local government shall take one or more of the following actions to accommodate the additional housing need:

(a) Amend its urban growth boundary to include sufficient buildable lands to accommodate housing needs for the next 20 years. As part of this process, the local government shall consider the effects of measures taken pursuant to paragraph (b) of this subsection. The amendment shall include sufficient land reasonably necessary to accommodate the siting of new public school facilities. The need and inclusion of lands for new public school facilities shall be a coordinated process between the affected public school districts and the local government that has the authority to approve the urban growth boundary;

(b) Amend its comprehensive plan, regional framework plan, functional plan or land use regulations to include new measures that demonstrably increase the likelihood that residential development will occur at densities sufficient to accommodate housing needs for the next 20 years without

expansion of the urban growth boundary. A local government or metropolitan service district that takes this action shall monitor and record the level of development activity and development density by housing type following the date of the adoption of the new measures; or

(c) Adopt a combination of the actions described in paragraphs (a) and (b) of this subsection.

(7) Using the analysis conducted under subsection (3)(b) of this section, the local government shall determine the overall average density and overall mix of housing types at which residential development of needed housing types must occur in order to meet housing needs over the next 20 years. If that density is greater than the actual density of development determined under subsection (5)(a)(A) of this section, or if that mix is different from the actual mix of housing types determined under subsection (5)(a)(A) of this section, the local government, as part of its periodic review, shall adopt measures that demonstrably increase the likelihood that residential development will occur at the housing types and density and at the mix of housing types required to meet housing needs over the next 20 years.

(8)(a) A local government outside a metropolitan service district that takes any actions under subsection (6) or (7) of this section shall demonstrate that the comprehensive plan and land use regulations comply with goals and rules adopted by the commission and implement ORS 197.295 to 197.314.

(b) The local government shall determine the density and mix of housing types anticipated as a result of actions taken under subsections (6) and (7) of this section and monitor and record the actual density and mix of housing types achieved. The local government shall compare actual and anticipated density and mix. The local government shall submit its comparison to the commission at the next *[periodic review or at the next legislative]* review of its urban growth boundary, *whichever comes first* **under subsection (2)(a) of this section.**

(9) In establishing that actions and measures adopted under subsections (6) and (7) of this section demonstrably increase the likelihood of higher density residential development, the local government shall at a minimum ensure that land zoned for needed housing is in locations appropriate for the housing types identified under subsection (3) of this section and is zoned at density ranges that are likely to be achieved by the housing market using the analysis in subsection (3) of this section. Actions or measures, or both, may include but are not limited to:

(a) Increases in the permitted density on existing residential land;

(b) Financial incentives for higher density housing;

(c) Provisions permitting additional density beyond that generally allowed in the zoning district in exchange for amenities and features provided by the developer;

(d) Removal or easing of approval standards or procedures;

(e) Minimum density ranges;

(f) Redevelopment and infill strategies;

(g) Authorization of housing types not previously allowed by the plan or regulations;

(h) Adoption of an average residential density standard; and

(i) Rezoning or redesignation of nonresidential land.

(10)(a) The provisions of this subsection apply to local government comprehensive plans for lands within the urban growth boundary of a city that is located outside of a metropolitan service district and has a population of less than 25,000.

(b) *[At periodic review pursuant to ORS 197.628 to 197.651 or at any other legislative review of the comprehensive plan that requires the application of a statewide planning goal relating to buildable lands for residential use,]* **As required under paragraph (c) of this subsection,** a city shall, according to rules of the commission:

(A) Determine the estimated housing needs within the jurisdiction for the next 20 years;

(B) Inventory the supply of buildable lands available within the urban growth boundary to accommodate the estimated housing needs determined under this subsection; and

(C) Adopt measures necessary to accommodate the estimated housing needs determined under this subsection.

(c) The actions required under paragraph (b) of this subsection shall be undertaken:

- (A) At periodic review pursuant to ORS 197.628 to 197.651;
- (B) On a schedule established by the commission for cities with a population greater than 10,000, not to exceed once each eight years; or
- (C) At any other legislative review of the comprehensive plan that requires the application of a statewide planning goal relating to buildable lands for residential use.

[(c)] (d) For the purpose of the inventory described in this subsection, “buildable lands” includes those lands described in subsection (4)(a) of this section.

SECTION 8a. If House Bill 2001 becomes law, section 8 of this 2019 Act (amending ORS 197.296) is repealed and ORS 197.296, as amended by section 5, chapter _____, Oregon Laws 2019 (Enrolled House Bill 2001), is amended to read:

197.296. (1)(a) The provisions of subsections (2) to (9) of this section apply to metropolitan service district regional framework plans and local government comprehensive plans for lands within the urban growth boundary of a city that is located outside of a metropolitan service district and has a population of 25,000 or more.

(b) The Land Conservation and Development Commission may establish a set of factors under which additional cities are subject to the provisions of this section. In establishing the set of factors required under this paragraph, the commission shall consider the size of the city, the rate of population growth of the city or the proximity of the city to another city with a population of 25,000 or more or to a metropolitan service district.

(2)(a) [At periodic review pursuant to ORS 197.628 to 197.651 or at any other legislative review of the comprehensive plan or regional framework plan that concerns the urban growth boundary and requires the application of a statewide planning goal relating to buildable lands for residential use,] A local government shall demonstrate that its comprehensive plan or regional framework plan provides sufficient buildable lands within the urban growth boundary established pursuant to statewide planning goals to accommodate estimated housing needs for 20 years:

- (A) At periodic review under ORS 197.628 to 197.651;
- (B) As scheduled by the commission:
 - (i) At least once each eight years for local governments that are not within a metropolitan service district; or
 - (ii) At least once each six years for a metropolitan service district; or
- (C) At any other legislative review of the comprehensive plan or regional framework plan that concerns the urban growth boundary and requires the application of a statewide planning goal relating to buildable lands for residential use.

(b) The 20-year period shall commence on the date initially scheduled for completion of the [periodic or legislative] review **under paragraph (a) of this subsection.**

(3) In performing the duties under subsection (2) of this section, a local government shall:

- (a) Inventory the supply of buildable lands within the urban growth boundary and determine the housing capacity of the buildable lands; and
- (b) Conduct an analysis of existing and projected housing need by type and density range, in accordance with all factors under ORS 197.303 and statewide planning goals and rules relating to housing, to determine the number of units and amount of land needed for each needed housing type for the next 20 years.

(4)(a) For the purpose of the inventory described in subsection (3)(a) of this section, “buildable lands” includes:

- (A) Vacant lands planned or zoned for residential use;
- (B) Partially vacant lands planned or zoned for residential use;
- (C) Lands that may be used for a mix of residential and employment uses under the existing planning or zoning; and
- (D) Lands that may be used for residential infill or redevelopment.

(b) For the purpose of the inventory and determination of housing capacity described in subsection (3)(a) of this section, the local government must demonstrate consideration of:

(A) The extent that residential development is prohibited or restricted by local regulation and ordinance, state law and rule or federal statute and regulation;

(B) A written long term contract or easement for radio, telecommunications or electrical facilities, if the written contract or easement is provided to the local government; and

(C) The presence of a single family dwelling or other structure on a lot or parcel.

(c) Except for land that may be used for residential infill or redevelopment, a local government shall create a map or document that may be used to verify and identify specific lots or parcels that have been determined to be buildable lands.

(5)(a) Except as provided in paragraphs (b) and (c) of this subsection, the determination of housing capacity pursuant to subsection (3)(a) of this section must be based on data relating to land within the urban growth boundary that has been collected since the last review [*or six years, whichever is greater*] **under subsection (2)(a)(B) of this section.** The data shall include:

(A) The number, density and average mix of housing types of urban residential development that have actually occurred;

(B) Trends in density and average mix of housing types of urban residential development;

(C) Market factors that may substantially impact future urban residential development; and

(D) The number, density and average mix of housing types that have occurred on the buildable lands described in subsection (4)(a) of this section.

(b) A local government shall make the determination described in paragraph (a) of this subsection using a shorter time period than the time period described in paragraph (a) of this subsection if the local government finds that the shorter time period will provide more accurate and reliable data related to housing capacity. The shorter time period may not be less than three years.

(c) A local government shall use data from a wider geographic area or use a time period longer than the time period described in paragraph (a) of this subsection if the analysis of a wider geographic area or the use of a longer time period will provide more accurate, complete and reliable data relating to trends affecting housing need than an analysis performed pursuant to paragraph (a) of this subsection. The local government must clearly describe the geographic area, time frame and source of data used in a determination performed under this paragraph.

(6) If the housing need determined pursuant to subsection (3)(b) of this section is greater than the housing capacity determined pursuant to subsection (3)(a) of this section, the local government shall take one or both of the following actions to accommodate the additional housing need:

(a) Amend its urban growth boundary to include sufficient buildable lands to accommodate housing needs for the next 20 years. As part of this process, the local government shall consider the effects of measures taken pursuant to paragraph (b) of this subsection. The amendment shall include sufficient land reasonably necessary to accommodate the siting of new public school facilities. The need and inclusion of lands for new public school facilities shall be a coordinated process between the affected public school districts and the local government that has the authority to approve the urban growth boundary.

(b) Amend its comprehensive plan, regional framework plan, functional plan or land use regulations to include new measures that demonstrably increase the likelihood that residential development will occur at densities sufficient to accommodate housing needs for the next 20 years without expansion of the urban growth boundary. A local government or metropolitan service district that takes this action shall adopt findings regarding the density expectations assumed to result from measures adopted under this paragraph based upon the factors listed in ORS 197.303 (2) and data in subsection (5)(a) of this section. The density expectations may not project an increase in residential capacity above achieved density by more than three percent without quantifiable validation of such departures. For a local government located outside of a metropolitan service district, a quantifiable validation must demonstrate that the assumed housing capacity has been achieved in areas that are zoned to allow no greater than the same authorized density level within the local jurisdiction or a jurisdiction in the same region. For a metropolitan service district, a quantifiable validation must demonstrate that the assumed housing capacity has been achieved in areas that are

zoned to allow no greater than the same authorized density level within the metropolitan service district.

(c) As used in this subsection, “authorized density level” has the meaning given that term in ORS 227.175.

(7) Using the housing need analysis conducted under subsection (3)(b) of this section, the local government shall determine the overall average density and overall mix of housing types at which residential development of needed housing types must occur in order to meet housing needs over the next 20 years. If that density is greater than the actual density of development determined under subsection (5)(a)(A) of this section, or if that mix is different from the actual mix of housing types determined under subsection (5)(a)(A) of this section, the local government, as part of its periodic review, shall adopt measures that demonstrably increase the likelihood that residential development will occur at the housing types and density and at the mix of housing types required to meet housing needs over the next 20 years.

(8)(a) A local government outside a metropolitan service district that takes any actions under subsection (6) or (7) of this section shall demonstrate that the comprehensive plan and land use regulations comply with goals and rules adopted by the commission and implement ORS 197.295 to 197.314.

(b) A local government shall determine the density and mix of housing types anticipated as a result of actions taken under subsections (6) and (7) of this section and monitor and record the actual density and mix of housing types achieved following the adoption of these actions. The local government shall compare actual and anticipated density and mix. The local government shall submit its comparison to the commission at the next *[periodic review or at the next legislative]* review of its urban growth boundary, *whichever comes first* **under subsection (2)(a) of this section.**

(9) In establishing that actions and measures adopted under subsections (6) and (7) of this section demonstrably increase the likelihood of higher density residential development, the local government shall at a minimum ensure that land zoned for needed housing is in locations appropriate for the housing types identified under subsection (3) of this section, is zoned at density ranges that are likely to be achieved by the housing market using the analysis in subsection (3) of this section and is in areas where sufficient urban services are planned to enable the higher density development to occur over the 20-year period. Actions or measures, or both, may include but are not limited to:

- (a) Increases in the permitted density on existing residential land;
- (b) Financial incentives for higher density housing;
- (c) Provisions permitting additional density beyond that generally allowed in the zoning district in exchange for amenities and features provided by the developer;
- (d) Removal or easing of approval standards or procedures;
- (e) Minimum density ranges;
- (f) Redevelopment and infill strategies;
- (g) Authorization of housing types not previously allowed by the plan or regulations;
- (h) Adoption of an average residential density standard; and
- (i) Rezoning or redesignation of nonresidential land.

(10)(a) The provisions of this subsection apply to local government comprehensive plans for lands within the urban growth boundary of a city that is located outside of a metropolitan service district and has a population of less than 25,000.

(b) *[At periodic review pursuant to ORS 197.628 to 197.651 or at any other legislative review of the comprehensive plan that requires the application of a statewide planning goal relating to buildable lands for residential use.]* **As required under paragraph (c) of this subsection,** a city shall, according to rules of the commission:

- (A) Determine the estimated housing needs within the jurisdiction for the next 20 years;
- (B) Inventory the supply of buildable lands available within the urban growth boundary to accommodate the estimated housing needs determined under this subsection; and
- (C) Adopt measures necessary to accommodate the estimated housing needs determined under this subsection.

- (c) **The actions required under paragraph (b) of this subsection shall be undertaken:**
 - (A) **At periodic review pursuant to ORS 197.628 to 197.651;**
 - (B) **On a schedule established by the commission for cities with a population greater than 10,000, not to exceed once each eight years; or**
 - (C) **At any other legislative review of the comprehensive plan that requires the application of a statewide planning goal relating to buildable lands for residential use.**

[(c)] (d) For the purpose of the inventory described in this subsection, “buildable lands” includes those lands described in subsection (4)(a) of this section.

SECTION 9. ORS 197.299 is amended to read:

197.299. (1) A metropolitan service district organized under ORS chapter 268 shall complete the inventory, determination and analysis required under ORS 197.296 (3) not later than six years after completion of the previous inventory, determination and analysis.

(2)(a) The metropolitan service district shall take such action as necessary under ORS 197.296 (6)(a) to accommodate one-half of a 20-year buildable land supply determined under ORS 197.296 (3) within one year of completing the analysis.

(b) The metropolitan service district shall take all final action under ORS 197.296 (6)(a) necessary to accommodate a 20-year buildable land supply determined under ORS 197.296 (3) within two years of completing the analysis.

(c) The metropolitan service district shall take action under ORS 197.296 (6)(b), within one year after the analysis required under ORS 197.296 (3)(b) is completed, to provide sufficient buildable land within the urban growth boundary to accommodate the estimated housing needs for 20 years from the time the actions are completed.

(d) The metropolitan service district shall consider and adopt new measures that the governing body deems appropriate under ORS 197.296 (6)(b) **and shall allocate any housing capacity that is not accommodated under this section to be accommodated by the application of ORS 197.296 (6)(b) by cities within the metropolitan service district with a population greater than 10,000.**

(e) **Cities to which housing capacity is allocated under paragraph (d) of this subsection shall take steps, at least once every six years as scheduled by the Land Conservation and Development Commission, to demonstrably increase the likelihood that residential development will occur at densities sufficient to accommodate housing needs for the next 20 years as required by ORS 197.296 (6)(b).**

(3) The [*Land Conservation and Development*] commission may grant an extension to the time limits of subsection (2) of this section if the Director of the Department of Land Conservation and Development determines that the metropolitan service district has provided good cause for failing to meet the time limits.

(4)(a) The metropolitan service district shall establish a process to expand the urban growth boundary to accommodate a need for land for a public school that cannot reasonably be accommodated within the existing urban growth boundary. The metropolitan service district shall design the process to:

(A) Accommodate a need that must be accommodated between periodic analyses of urban growth boundary capacity required by subsection (1) of this section; and

(B) Provide for a final decision on a proposal to expand the urban growth boundary within four months after submission of a complete application by a large school district as defined in ORS 195.110.

(b) At the request of a large school district, the metropolitan service district shall assist the large school district to identify school sites required by the school facility planning process described in ORS 195.110. A need for a public school is a specific type of identified land need under ORS 197.298 (3).

(5) Three years after completing its most recent demonstration of sufficient buildable lands under ORS 197.296, a metropolitan service district may, on a single occasion, revise the determination

and analysis required as part of the demonstration for the purpose of considering an amendment to the metropolitan service district's urban growth boundary, provided:

(a) The metropolitan service district has entered into an intergovernmental agreement and has designated rural reserves and urban reserves under ORS 195.141 and 195.145 with each county located within the district;

(b) The commission has acknowledged the rural reserve and urban reserve designations described in paragraph (a) of this subsection;

(c) One or more cities within the metropolitan service district have proposed a development that would require expansion of the urban growth boundary;

(d) The city or cities proposing the development have provided evidence to the metropolitan service district that the proposed development would provide additional needed housing to the needed housing included in the most recent determination and analysis;

(e) The location chosen for the proposed development is adjacent to the city proposing the development; and

(f) The location chosen for the proposed development is located within an area designated and acknowledged as an urban reserve.

(6)(a) If a metropolitan service district, after revising its most recent determination and analysis pursuant to subsection (5) of this section, concludes that an expansion of its urban growth boundary is warranted, the metropolitan service district may take action to expand its urban growth boundary in one or more locations to accommodate the proposed development, provided the urban growth boundary expansion does not exceed a total of 1,000 acres.

(b) A metropolitan service district that expands its urban growth boundary under this subsection:

(A) Must adopt the urban growth boundary expansion not more than four years after completing its most recent demonstration of sufficient buildable lands under ORS 197.296; and

(B) Is exempt from the boundary location requirements described in the statewide land use planning goals relating to urbanization.

SECTION 10. ORS 197.303 is amended to read:

197.303. (1) As used in ORS [197.307] **197.295 to 197.314**, "needed housing" means all housing on land zoned for residential use or mixed residential and commercial use that is determined to meet the need shown for housing within an urban growth boundary at price ranges and rent levels that are affordable to households within the county with a variety of incomes, including but not limited to households with low incomes, very low incomes and extremely low incomes, as those terms are defined by the United States Department of Housing and Urban Development under 42 U.S.C. 1437a. "Needed housing" includes the following housing types:

(a) Attached and detached single-family housing and multiple family housing for both owner and renter occupancy;

(b) Government assisted housing;

(c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490;

(d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions; and

(e) Housing for farmworkers.

(2) Subsection (1)(a) and (d) of this section does not apply to:

(a) A city with a population of less than 2,500.

(b) A county with a population of less than 15,000.

(3) A local government may take an exception under ORS 197.732 to the definition of "needed housing" in subsection (1) of this section in the same manner that an exception may be taken under the goals.

SECTION 10a. If House Bill 2001 becomes law, section 10 of this 2019 Act (amending ORS 197.303) is repealed and ORS 197.303, as amended by section 6, chapter _____, Oregon Laws 2019 (Enrolled House Bill 2001), is amended to read:

197.303. (1) As used in ORS 197.295 to 197.314, “needed housing” means all housing on land zoned for residential use or mixed residential and commercial use that is determined to meet the need shown for housing within an urban growth boundary at price ranges and rent levels that are affordable to households within the county with a variety of incomes, including but not limited to households with low incomes, very low incomes and extremely low incomes, as those terms are defined by the United States Department of Housing and Urban Development under 42 U.S.C. 1437a. “Needed housing” includes the following housing types:

- (a) Attached and detached single-family housing and multiple family housing for both owner and renter occupancy;
- (b) Government assisted housing;
- (c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490;
- (d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions; and
- (e) Housing for farmworkers.

(2) For the purpose of estimating housing needs, as described in ORS 197.296 (3)(b), a local government shall use the population projections prescribed by ORS 195.033 or 195.036 and shall consider and adopt findings related to changes in each of the following factors since the last [*periodic or legislative review or six years, whichever is greater,*] **review under ORS 197.296 (2)(a)(B)** and the projected future changes in these factors over a 20-year planning period:

- (a) Household sizes;
- (b) Household demographics [*in terms of age, gender, race or other established demographic category*];
- (c) Household incomes;
- (d) Vacancy rates; and
- (e) Housing costs.

(3) A local government shall make the estimate described in subsection (2) of this section using a shorter time period than since the last [*periodic or legislative review or six years, whichever is greater,*] **review under ORS 197.296 (2)(a)(B)** if the local government finds that the shorter time period will provide more accurate and reliable data related to housing need. The shorter time period may not be less than three years.

(4) A local government shall use data from a wider geographic area or use a time period longer than the time period described in subsection (2) of this section if the analysis of a wider geographic area or the use of a longer time period will provide more accurate, complete and reliable data relating to trends affecting housing need than an analysis performed pursuant to subsection (2) of this section. The local government must clearly describe the geographic area, time frame and source of data used in an estimate performed under this subsection.

(5) Subsection (1)(a) and (d) of this section does not apply to:

- (a) A city with a population of less than 2,500.
- (b) A county with a population of less than 15,000.

(6) A local government may take an exception under ORS 197.732 to the definition of “needed housing” in subsection (1) of this section in the same manner that an exception may be taken under the goals.

SECTION 11. ORS 197.319 is amended to read:

197.319. (1) Before a person may request adoption of an enforcement order under ORS 197.320, the person shall:

- (a) Present the reasons, in writing, for such an order to the affected local government; and
- (b) Request:

(A) Revisions to the local comprehensive plan, land use regulations, special district cooperative or urban service agreement or decision-making process which is the basis for the order; or

(B) That an action be taken regarding the local comprehensive plan, land use regulations, special district agreement, **housing production strategy** or decision-making process that is the basis for the order.

(2)(a) The local government or special district shall issue a written response to the request within 60 days of the date the request is mailed to the local government or special district.

(b) The requestor and the local government or special district may enter into mediation to resolve issues in the request. The Department of Land Conservation and Development shall provide mediation services when jointly requested by the local government or special district and the requestor.

(c) If the local government or special district does not act in a manner which the requestor believes is adequate to address the issues raised in the request within the time period provided in paragraph (a) of this subsection, a petition may be presented to the Land Conservation and Development Commission under ORS 197.324.

(3) A metropolitan service district may request an enforcement order under ORS 197.320 (12) without first complying with subsections (1) and (2) of this section.

SECTION 12. ORS 197.320 is amended to read:

197.320. The Land Conservation and Development Commission shall issue an order requiring a local government, state agency or special district to take action necessary to bring its comprehensive plan, land use regulation, limited land use decisions or other land use decisions **or actions** into compliance with the goals, acknowledged comprehensive plan provisions, [or] land use regulations **or housing production strategy** if the commission has good cause to believe:

(1) A comprehensive plan or land use regulation adopted by a local government not on a compliance schedule is not in compliance with the goals by the date set in ORS 197.245 or 197.250 for such compliance;

(2) A plan, program, rule or regulation affecting land use adopted by a state agency or special district is not in compliance with the goals by the date set in ORS 197.245 or 197.250 for such compliance;

(3) A local government is not making satisfactory progress toward performance of its compliance schedule;

(4) A state agency is not making satisfactory progress in carrying out its coordination agreement or the requirements of ORS 197.180;

(5) A local government has no comprehensive plan or land use regulation and is not on a compliance schedule directed to developing the plan or regulation;

(6) A local government has engaged in a pattern or practice of decision making that violates an acknowledged comprehensive plan or land use regulation. In making its determination under this subsection, the commission shall determine whether there is evidence in the record to support the decisions made. The commission shall not judge the issue solely upon adequacy of the findings in support of the decisions;

(7) A local government has failed to comply with a commission order entered under ORS 197.644;

(8) A special district has engaged in a pattern or practice of decision-making that violates an acknowledged comprehensive plan or cooperative agreement adopted pursuant to ORS 197.020;

(9) A special district is not making satisfactory progress toward performance of its obligations under ORS chapters 195 and 197;

(10) A local government's approval standards, special conditions on approval of specific development proposals or procedures for approval do not comply with ORS 197.307 (4) or (6);

(11) A local government is not making satisfactory progress toward meeting its obligations under ORS 195.065; [or]

(12) A local government within the jurisdiction of a metropolitan service district has failed to make changes to the comprehensive plan or land use regulations to comply with the regional framework plan of the district or has engaged in a pattern or practice of decision-making that violates a requirement of the regional framework plan[.]; **or**

(13) A city is not making satisfactory progress in taking actions listed in its housing production strategy under section 4 of this 2019 Act.

SECTION 13. Section 1, chapter 47, Oregon Laws 2018, is amended to read:

Sec. 1. (1) For purposes of this section:

(a) A household is severely rent burdened if the household spends more than 50 percent of the income of the household on gross rent for housing.

(b) A regulated affordable unit is a residential unit subject to a regulatory agreement that runs with the land and that requires affordability for an established income level for a defined period of time.

(c) A single-family unit may be rented or owned by a household and includes single-family homes, duplexes, townhomes, row homes and mobile homes.

(2)(a) The Housing and Community Services Department shall annually provide to the governing body of each city in this state with a population greater than 10,000 the most current data available from the United States Census Bureau, or any other source the department considers at least as reliable, showing the percentage of renter households in the city that are severely rent burdened.

(b) *[The Housing and Community Services Department, in collaboration with]* The Department of Land Conservation and Development, **in consultation with the Housing and Community Services Department**, shall develop a survey form on which the governing body of a city may provide specific information related to the affordability of housing within the city, including~~l~~, *but not limited to:*

[(A)] the actions relating to land use and other related matters that the *[governing body]* city has taken to **encourage the development of needed housing**, increase the affordability of housing and reduce rent burdens for severely rent burdened households~~;~~ *and*.

[(B)] *The additional actions the governing body intends to take to reduce rent burdens for severely rent burdened households.*

(c) *[If the Housing and Community Services Department determines that at least 25 percent of the renter households in a city are severely rent burdened,]* The Department of **Land Conservation and Development** shall provide the governing body of the city with the survey form developed pursuant to paragraph (b) of this subsection.

(d) The governing body of the city shall return the completed survey form to the *[Housing and Community Services Department and the]* Department of Land Conservation and Development *[within 60 days of receipt]* **at least 24 months prior to a deadline for completing a housing production strategy under section 4 of this 2019 Act.**

(3)(a) In any year in which the governing body of a city is informed under this section that at least 25 percent of the renter households in the city are severely rent burdened, the governing body shall hold at least one public meeting to discuss the causes and consequences of severe rent burdens within the city, the barriers to reducing rent burdens and possible solutions.

(b) The Housing and Community Services Department may adopt rules governing the conduct of the public meeting required under this subsection.

(4) No later than February 1 of each year, the governing body of each city in this state with a population greater than 10,000 shall submit to the Department of Land Conservation and Development a report for the immediately preceding calendar year setting forth separately for each of the following categories the total number of units that were permitted and the total number that were produced:

- (a) Residential units.
- (b) Regulated affordable residential units.
- (c) Multifamily residential units.
- (d) Regulated affordable multifamily residential units.
- (e) Single-family units.
- (f) Regulated affordable single-family units.

SECTION 14. Section 15 of this 2019 Act is added to and made a part of ORS chapter 197.

SECTION 15. (1) As used in this section, “public property” means all real property of the state, counties, cities, incorporated towns or villages, school districts, irrigation districts, drainage districts, ports, water districts, service districts, metropolitan service districts, housing authorities, public universities listed in ORS 352.002 or all other public or municipal corporations in this state.

(2) Notwithstanding any land use regulation, comprehensive plan, or statewide land use planning goal, a local government may allow the development of housing on public property provided:

(a) The real property is not inventoried as a park or open space as a protective measure pursuant to a statewide land use planning goal;

(b) The real property is located within the urban growth boundary;

(c) The real property is zoned for residential development or adjacent to parcels zoned for residential development;

(d) The housing complies with applicable land use regulations and meets the standards and criteria for residential development for the underlying zone of the land or the adjacent residential land described in paragraph (c) of this subsection;

(e) At least 50 percent of the residential units provided under this section is affordable to households with incomes equal to or less than 60 percent of the area median income, as defined in ORS 456.270; and

(f) The affordability of the residential units described in paragraph (e) of this subsection is subject to an affordable housing covenant, as described in ORS 456.270 to 456.295, held by the local government or the Housing and Community Services Department and with a duration of no less than 60 years.

(3) Notwithstanding any statewide land use planning goal, a local government may amend its comprehensive plan and land use regulations to allow public property to be used for the purposes described in subsection (2) of this section.

SECTION 16. Notwithstanding ORS 197.646, a local government required to comply with the amendments to ORS 197.312 by section 6, chapter 745, Oregon Laws 2017, shall adopt land use regulations, or adopt amendments to its comprehensive plan, to comply with the amendments to ORS 197.312 by section 6, chapter 745, Oregon Laws 2017, no later than the effective date of this 2019 Act.

SECTION 17. ORS 215.416 is amended to read:

215.416. (1) When required or authorized by the ordinances, rules and regulations of a county, an owner of land may apply in writing to such persons as the governing body designates, for a permit, in the manner prescribed by the governing body. The governing body shall establish fees charged for processing permits at an amount no more than the actual or average cost of providing that service.

(2) The governing body shall establish a consolidated procedure by which an applicant may apply at one time for all permits or zone changes needed for a development project. The consolidated procedure shall be subject to the time limitations set out in ORS 215.427. The consolidated procedure shall be available for use at the option of the applicant no later than the time of the first periodic review of the comprehensive plan and land use regulations.

(3) Except as provided in subsection (11) of this section, the hearings officer shall hold at least one public hearing on the application.

(4)(a) A county may not approve an application if the proposed use of land is found to be in conflict with the comprehensive plan of the county and other applicable land use regulation or ordinance provisions. The approval may include such conditions as are authorized by statute or county legislation.

(b)(A) A county may not deny an application for a housing development located within the urban growth boundary if the development complies with clear and objective standards, including but not limited to clear and objective design standards contained in the county comprehensive plan or land use regulations.

(B) This paragraph does not apply to:

(i) Applications or permits for residential development in areas described in ORS 197.307 (5); or

(ii) Applications or permits reviewed under an alternative approval process adopted under ORS 197.307 (6).

(c) A county may not [*reduce the density of*] **condition** an application for a housing development **on a reduction in density** if:

(A) The density applied for is at or below the authorized density level under the local land use regulations; and

(B) At least 75 percent of the floor area applied for is reserved for housing.

(d) A county may not [*reduce the height of*] **condition** an application for a housing development **on a reduction in height** if:

(A) The height applied for is at or below the authorized height level under the local land use regulations;

(B) At least 75 percent of the floor area applied for is reserved for housing; and

(C) Reducing the height has the effect of reducing the authorized density level under local land use regulations.

(e) Notwithstanding paragraphs (c) and (d) of this subsection, a county may [*reduce the density or height of*] **condition** an application for a housing development **on a reduction in density or height only** if the reduction is necessary to resolve a health, safety or habitability issue or to comply with a protective measure adopted pursuant to a statewide land use planning goal. **Notwithstanding ORS 197.350, the county must adopt findings supported by substantial evidence demonstrating the necessity of the reduction.**

(f) As used in this subsection:

(A) "Authorized density level" means the maximum number of lots or dwelling units or the maximum floor area ratio that is permitted under local land use regulations.

(B) "Authorized height level" means the maximum height of a structure that is permitted under local land use regulations.

(C) "Habitability" means being in compliance with the applicable provisions of the state building code under ORS chapter 455 and the rules adopted thereunder.

(5) Hearings under this section shall be held only after notice to the applicant and also notice to other persons as otherwise provided by law and shall otherwise be conducted in conformance with the provisions of ORS 197.763.

(6) Notice of a public hearing on an application submitted under this section shall be provided to the owner of an airport defined by the Oregon Department of Aviation as a "public use airport" if:

(a) The name and address of the airport owner has been provided by the Oregon Department of Aviation to the county planning authority; and

(b) The property subject to the land use hearing is:

(A) Within 5,000 feet of the side or end of a runway of an airport determined by the Oregon Department of Aviation to be a "visual airport"; or

(B) Within 10,000 feet of the side or end of the runway of an airport determined by the Oregon Department of Aviation to be an "instrument airport."

(7) Notwithstanding the provisions of subsection (6) of this section, notice of a land use hearing need not be provided as set forth in subsection (6) of this section if the zoning permit would only allow a structure less than 35 feet in height and the property is located outside the runway "approach surface" as defined by the Oregon Department of Aviation.

(8)(a) Approval or denial of a permit application shall be based on standards and criteria which shall be set forth in the zoning ordinance or other appropriate ordinance or regulation of the county and which shall relate approval or denial of a permit application to the zoning ordinance and comprehensive plan for the area in which the proposed use of land would occur and to the zoning ordinance and comprehensive plan for the county as a whole.

(b) When an ordinance establishing approval standards is required under ORS 197.307 to provide only clear and objective standards, the standards must be clear and objective on the face of the ordinance.

(9) Approval or denial of a permit or expedited land division shall be based upon and accompanied by a brief statement that explains the criteria and standards considered relevant to the deci-

sion, states the facts relied upon in rendering the decision and explains the justification for the decision based on the criteria, standards and facts set forth.

(10) Written notice of the approval or denial shall be given to all parties to the proceeding.

(11)(a)(A) The hearings officer or such other person as the governing body designates may approve or deny an application for a permit without a hearing if the hearings officer or other designated person gives notice of the decision and provides an opportunity for any person who is adversely affected or aggrieved, or who is entitled to notice under paragraph (c) of this subsection, to file an appeal.

(B) Written notice of the decision shall be mailed to those persons described in paragraph (c) of this subsection.

(C) Notice under this subsection shall comply with ORS 197.763 (3)(a), (c), (g) and (h) and shall describe the nature of the decision. In addition, the notice shall state that any person who is adversely affected or aggrieved or who is entitled to written notice under paragraph (c) of this subsection may appeal the decision by filing a written appeal in the manner and within the time period provided in the county's land use regulations. A county may not establish an appeal period that is less than 12 days from the date the written notice of decision required by this subsection was mailed. The notice shall state that the decision will not become final until the period for filing a local appeal has expired. The notice also shall state that a person who is mailed written notice of the decision cannot appeal the decision directly to the Land Use Board of Appeals under ORS 197.830.

(D) An appeal from a hearings officer's decision made without hearing under this subsection shall be to the planning commission or governing body of the county. An appeal from such other person as the governing body designates shall be to a hearings officer, the planning commission or the governing body. In either case, the appeal shall be to a de novo hearing.

(E) The de novo hearing required by subparagraph (D) of this paragraph shall be the initial evidentiary hearing required under ORS 197.763 as the basis for an appeal to the Land Use Board of Appeals. At the de novo hearing:

(i) The applicant and other parties shall have the same opportunity to present testimony, arguments and evidence as they would have had in a hearing under subsection (3) of this section before the decision;

(ii) The presentation of testimony, arguments and evidence shall not be limited to issues raised in a notice of appeal; and

(iii) The decision maker shall consider all relevant testimony, arguments and evidence that are accepted at the hearing.

(b) If a local government provides only a notice of the opportunity to request a hearing, the local government may charge a fee for the initial hearing. The maximum fee for an initial hearing shall be the cost to the local government of preparing for and conducting the appeal, or \$250, whichever is less. If an appellant prevails at the hearing or upon subsequent appeal, the fee for the initial hearing shall be refunded. The fee allowed in this paragraph shall not apply to appeals made by neighborhood or community organizations recognized by the governing body and whose boundaries include the site.

(c)(A) Notice of a decision under paragraph (a) of this subsection shall be provided to the applicant and to the owners of record of property on the most recent property tax assessment roll where such property is located:

(i) Within 100 feet of the property that is the subject of the notice when the subject property is wholly or in part within an urban growth boundary;

(ii) Within 250 feet of the property that is the subject of the notice when the subject property is outside an urban growth boundary and not within a farm or forest zone; or

(iii) Within 750 feet of the property that is the subject of the notice when the subject property is within a farm or forest zone.

(B) Notice shall also be provided to any neighborhood or community organization recognized by the governing body and whose boundaries include the site.

(C) At the discretion of the applicant, the local government also shall provide notice to the Department of Land Conservation and Development.

(12) A decision described in ORS 215.402 (4)(b) shall:

(a) Be entered in a registry available to the public setting forth:

(A) The street address or other easily understood geographic reference to the subject property;

(B) The date of the decision; and

(C) A description of the decision made.

(b) Be subject to the jurisdiction of the Land Use Board of Appeals in the same manner as a limited land use decision.

(c) Be subject to the appeal period described in ORS 197.830 (5)(b).

(13) At the option of the applicant, the local government shall provide notice of the decision described in ORS 215.402 (4)(b) in the manner required by ORS 197.763 (2), in which case an appeal to the board shall be filed within 21 days of the decision. The notice shall include an explanation of appeal rights.

(14) Notwithstanding the requirements of this section, a limited land use decision shall be subject to the requirements set forth in ORS 197.195 and 197.828.

SECTION 18. ORS 227.175 is amended to read:

227.175. (1) When required or authorized by a city, an owner of land may apply in writing to the hearings officer, or such other person as the city council designates, for a permit or zone change, upon such forms and in such a manner as the city council prescribes. The governing body shall establish fees charged for processing permits at an amount no more than the actual or average cost of providing that service.

(2) The governing body of the city shall establish a consolidated procedure by which an applicant may apply at one time for all permits or zone changes needed for a development project. The consolidated procedure shall be subject to the time limitations set out in ORS 227.178. The consolidated procedure shall be available for use at the option of the applicant no later than the time of the first periodic review of the comprehensive plan and land use regulations.

(3) Except as provided in subsection (10) of this section, the hearings officer shall hold at least one public hearing on the application.

(4)(a) A city may not approve an application unless the proposed development of land would be in compliance with the comprehensive plan for the city and other applicable land use regulation or ordinance provisions. The approval may include such conditions as are authorized by ORS 227.215 or any city legislation.

(b)(A) A city may not deny an application for a housing development located within the urban growth boundary if the development complies with clear and objective standards, including [*but not limited to*] clear and objective design standards contained in the city comprehensive plan or land use regulations.

(B) This paragraph does not apply to:

(i) Applications or permits for residential development in areas described in ORS 197.307 (5); or

(ii) Applications or permits reviewed under an alternative approval process adopted under ORS 197.307 (6).

(c) A city may not [*reduce the density of*] **condition** an application for a housing development **on a reduction in density** if:

(A) The density applied for is at or below the authorized density level under the local land use regulations; and

(B) At least 75 percent of the floor area applied for is reserved for housing.

(d) A city may not [*reduce the height of*] **condition** an application for a housing development **on a reduction in height** if:

(A) The height applied for is at or below the authorized height level under the local land use regulations;

(B) At least 75 percent of the floor area applied for is reserved for housing; and

(C) Reducing the height has the effect of reducing the authorized density level under local land use regulations.

(e) Notwithstanding paragraphs (c) and (d) of this subsection, a city may [reduce the density or height of] **condition** an application for a housing development **on a reduction in density or height only** if the reduction is necessary to resolve a health, safety or habitability issue or to comply with a protective measure adopted pursuant to a statewide land use planning goal. **Notwithstanding ORS 197.350, the city must adopt findings supported by substantial evidence demonstrating the necessity of the reduction.**

(f) As used in this subsection:

(A) "Authorized density level" means the maximum number of lots or dwelling units or the maximum floor area ratio that is permitted under local land use regulations.

(B) "Authorized height level" means the maximum height of a structure that is permitted under local land use regulations.

(C) "Habitability" means being in compliance with the applicable provisions of the state building code under ORS chapter 455 and the rules adopted thereunder.

(5) Hearings under this section may be held only after notice to the applicant and other interested persons and shall otherwise be conducted in conformance with the provisions of ORS 197.763.

(6) Notice of a public hearing on a zone use application shall be provided to the owner of an airport, defined by the Oregon Department of Aviation as a "public use airport" if:

(a) The name and address of the airport owner has been provided by the Oregon Department of Aviation to the city planning authority; and

(b) The property subject to the zone use hearing is:

(A) Within 5,000 feet of the side or end of a runway of an airport determined by the Oregon Department of Aviation to be a "visual airport"; or

(B) Within 10,000 feet of the side or end of the runway of an airport determined by the Oregon Department of Aviation to be an "instrument airport."

(7) Notwithstanding the provisions of subsection (6) of this section, notice of a zone use hearing need only be provided as set forth in subsection (6) of this section if the permit or zone change would only allow a structure less than 35 feet in height and the property is located outside of the runway "approach surface" as defined by the Oregon Department of Aviation.

(8) If an application would change the zone of property that includes all or part of a mobile home or manufactured dwelling park as defined in ORS 446.003, the governing body shall give written notice by first class mail to each existing mailing address for tenants of the mobile home or manufactured dwelling park at least 20 days but not more than 40 days before the date of the first hearing on the application. The governing body may require an applicant for such a zone change to pay the costs of such notice.

(9) The failure of a tenant or an airport owner to receive a notice which was mailed shall not invalidate any zone change.

(10)(a)(A) The hearings officer or such other person as the governing body designates may approve or deny an application for a permit without a hearing if the hearings officer or other designated person gives notice of the decision and provides an opportunity for any person who is adversely affected or aggrieved, or who is entitled to notice under paragraph (c) of this subsection, to file an appeal.

(B) Written notice of the decision shall be mailed to those persons described in paragraph (c) of this subsection.

(C) Notice under this subsection shall comply with ORS 197.763 (3)(a), (c), (g) and (h) and shall describe the nature of the decision. In addition, the notice shall state that any person who is adversely affected or aggrieved or who is entitled to written notice under paragraph (c) of this subsection may appeal the decision by filing a written appeal in the manner and within the time period provided in the city's land use regulations. A city may not establish an appeal period that is less than 12 days from the date the written notice of decision required by this subsection was mailed. The notice shall state that the decision will not become final until the period for filing a local ap-

peal has expired. The notice also shall state that a person who is mailed written notice of the decision cannot appeal the decision directly to the Land Use Board of Appeals under ORS 197.830.

(D) An appeal from a hearings officer's decision made without hearing under this subsection shall be to the planning commission or governing body of the city. An appeal from such other person as the governing body designates shall be to a hearings officer, the planning commission or the governing body. In either case, the appeal shall be to a de novo hearing.

(E) The de novo hearing required by subparagraph (D) of this paragraph shall be the initial evidentiary hearing required under ORS 197.763 as the basis for an appeal to the Land Use Board of Appeals. At the de novo hearing:

(i) The applicant and other parties shall have the same opportunity to present testimony, arguments and evidence as they would have had in a hearing under subsection (3) of this section before the decision;

(ii) The presentation of testimony, arguments and evidence shall not be limited to issues raised in a notice of appeal; and

(iii) The decision maker shall consider all relevant testimony, arguments and evidence that are accepted at the hearing.

(b) If a local government provides only a notice of the opportunity to request a hearing, the local government may charge a fee for the initial hearing. The maximum fee for an initial hearing shall be the cost to the local government of preparing for and conducting the appeal, or \$250, whichever is less. If an appellant prevails at the hearing or upon subsequent appeal, the fee for the initial hearing shall be refunded. The fee allowed in this paragraph shall not apply to appeals made by neighborhood or community organizations recognized by the governing body and whose boundaries include the site.

(c)(A) Notice of a decision under paragraph (a) of this subsection shall be provided to the applicant and to the owners of record of property on the most recent property tax assessment roll where such property is located:

(i) Within 100 feet of the property that is the subject of the notice when the subject property is wholly or in part within an urban growth boundary;

(ii) Within 250 feet of the property that is the subject of the notice when the subject property is outside an urban growth boundary and not within a farm or forest zone; or

(iii) Within 750 feet of the property that is the subject of the notice when the subject property is within a farm or forest zone.

(B) Notice shall also be provided to any neighborhood or community organization recognized by the governing body and whose boundaries include the site.

(C) At the discretion of the applicant, the local government also shall provide notice to the Department of Land Conservation and Development.

(11) A decision described in ORS 227.160 (2)(b) shall:

(a) Be entered in a registry available to the public setting forth:

(A) The street address or other easily understood geographic reference to the subject property;

(B) The date of the decision; and

(C) A description of the decision made.

(b) Be subject to the jurisdiction of the Land Use Board of Appeals in the same manner as a limited land use decision.

(c) Be subject to the appeal period described in ORS 197.830 (5)(b).

(12) At the option of the applicant, the local government shall provide notice of the decision described in ORS 227.160 (2)(b) in the manner required by ORS 197.763 (2), in which case an appeal to the board shall be filed within 21 days of the decision. The notice shall include an explanation of appeal rights.

(13) Notwithstanding other requirements of this section, limited land use decisions shall be subject to the requirements set forth in ORS 197.195 and 197.828.

SECTION 19. ORS 215.441 is amended to read:

215.441. (1) If a church, synagogue, temple, mosque, chapel, meeting house or other nonresidential place of worship is allowed on real property under state law and rules and local zoning ordinances and regulations, a county shall allow the reasonable use of the real property for activities customarily associated with the practices of the religious activity, including:

- (a) Worship services.
- (b) Religion classes.
- (c) Weddings.
- (d) Funerals.
- (e) Meal programs.

(f) Child care, but not including private or parochial school education for prekindergarten through grade 12 or higher education.

(g) Providing housing or space for housing in a building **or buildings** that *[is]* **are** detached from the place of worship, provided:

(A) At least 50 percent of the residential units provided under this paragraph are affordable to households with incomes equal to or less than 60 percent of the median family income for the county in which the real property is located;

(B) The real property is in an area zoned for residential use that is located within the urban growth boundary; and

(C) The housing or space for housing complies with applicable land use regulations and meets the standards and criteria for residential development for the underlying zone.

(2) A county may:

(a) Subject real property described in subsection (1) of this section to reasonable regulations, including site review or design review, concerning the physical characteristics of the uses authorized under subsection (1) of this section; or

(b) Prohibit or restrict the use of real property by a place of worship described in subsection (1) of this section if the county finds that the level of service of public facilities, including transportation, water supply, sewer and storm drain systems is not adequate to serve the place of worship described in subsection (1) of this section.

(3) Notwithstanding any other provision of this section, a county may allow a private or parochial school for prekindergarten through grade 12 or higher education to be sited under applicable state law and rules and local zoning ordinances and regulations.

(4) Housing and space for housing provided under subsection (1)(g) of this section must be subject to a covenant appurtenant that restricts the owner and each successive owner of *[the]* a building or any residential unit contained in *[the]* a building from selling or renting any residential unit described in subsection (1)(g)(A) of this section as housing that is not affordable to households with incomes equal to or less than 60 percent of the median family income for the county in which the real property is located for a period of 60 years from the date of the certificate of occupancy.

SECTION 20. ORS 227.500 is amended to read:

227.500. (1) If a church, synagogue, temple, mosque, chapel, meeting house or other nonresidential place of worship is allowed on real property under state law and rules and local zoning ordinances and regulations, a city shall allow the reasonable use of the real property for activities customarily associated with the practices of the religious activity, including:

- (a) Worship services.
- (b) Religion classes.
- (c) Weddings.
- (d) Funerals.
- (e) Meal programs.

(f) Child care, but not including private or parochial school education for prekindergarten through grade 12 or higher education.

(g) Providing housing or space for housing in a building **or buildings** that *[is]* **are** detached from the place of worship, provided:

(A) At least 50 percent of the residential units provided under this paragraph are affordable to households with incomes equal to or less than 60 percent of the median family income for the county in which the real property is located;

(B) The real property is in an area zoned for residential use that is located within the urban growth boundary; and

(C) The housing or space for housing complies with applicable land use regulations and meets the standards and criteria for residential development for the underlying zone.

(2) A city may:

(a) Subject real property described in subsection (1) of this section to reasonable regulations, including site review and design review, concerning the physical characteristics of the uses authorized under subsection (1) of this section; or

(b) Prohibit or regulate the use of real property by a place of worship described in subsection (1) of this section if the city finds that the level of service of public facilities, including transportation, water supply, sewer and storm drain systems is not adequate to serve the place of worship described in subsection (1) of this section.

(3) Notwithstanding any other provision of this section, a city may allow a private or parochial school for prekindergarten through grade 12 or higher education to be sited under applicable state law and rules and local zoning ordinances and regulations.

(4) Housing and space for housing provided under subsection (1)(g) of this section must be subject to a covenant appurtenant that restricts the owner and each successive owner of [*the*] a building or any residential unit contained in [*the*] a building from selling or renting any residential unit described in subsection (1)(g)(A) of this section as housing that is not affordable to households with incomes equal to or less than 60 percent of the median family income for the county in which the real property is located for a period of 60 years from the date of the certificate of occupancy.

SECTION 21. ORS 455.062 is amended to read:

455.062. (1) A Department of Consumer and Business Services employee acting within the scope of that employment may provide typical plans and specifications:

(a) For structures of a type for which the provision of plans or specifications is exempted under ORS 671.030 from the application of ORS 671.010 to 671.220 and exempted under ORS 672.060 from the application of ORS 672.002 to 672.325; and

(b) Notwithstanding ORS 671.010 to 671.220 and 672.002 to 672.325, for structures that are metal or wood frame Use and Occupancy Classification Group U structures under the structural specialty code.

(2) A Department of Consumer and Business Services employee, who is licensed or registered under ORS 671.010 to 671.220 or 672.002 to 672.325, who is acting within the scope of that employment and who is providing typical plans and specifications under subsection (1) of this section, is not required to seal or sign the typical plans and specifications and is not subject to disciplinary action under ORS 671.010 to 671.220 or 672.002 to 672.325 based on providing those typical plans and specifications.

[2] (3) A building official or inspector, as those terms are defined in ORS 455.715, when acting within the scope of direct employment by a municipality, may provide typical plans and specifications for structures of a type for which the provision of plans or specifications is exempted under ORS 671.030 from the application of ORS 671.010 to 671.220 and exempted under ORS 672.060 from the application of ORS 672.002 to 672.325.

[3] This [*section*] **subsection** does not alter any applicable requirement under ORS 671.010 to 671.220 or 672.002 to 672.325 regarding stamps and seals for a set of plans for a structure.

SECTION 21a. If Senate Bill 39 becomes law, ORS 455.062, as amended by section 2, chapter 97, Oregon Laws 2019 (Enrolled Senate Bill 39), and section 21 of this 2019 Act, is amended to read:

455.062. (1) A Department of Consumer and Business Services employee acting within the scope of that employment may provide typical drawings and specifications:

(a) For structures of a type for which the provision of drawings or specifications is exempted under ORS 671.030 from the application of ORS 671.010 to 671.220 and exempted under ORS 672.060 from the registration requirements of ORS 672.002 to 672.325; and

(b) Notwithstanding ORS 671.010 to 671.220 and 672.002 to 672.325, for structures that are metal or wood frame Use and Occupancy Classification Group U structures under the structural specialty code.

(2) A Department of Consumer and Business Services employee, who is licensed or registered under ORS 671.010 to 671.220 or 672.002 to 672.325, who is acting within the scope of that employment and who is providing typical [plans] **drawings** and specifications under subsection (1) of this section, is not required to seal or sign the typical [plans] **drawings** and specifications and is not subject to disciplinary action under ORS 671.010 to 671.220 or 672.002 to 672.325 based on providing those typical [plans] **drawings** and specifications.

(3) A building official or inspector, as those terms are defined in ORS 455.715, when acting within the scope of direct employment by a municipality, may provide typical drawings or specifications for structures of a type for which the provision of drawings or specifications is exempted under ORS 671.030 from the application of ORS 671.010 to 671.220 and exempted under ORS 672.060 from the registration requirements of ORS 672.002 to 672.325. This subsection does not alter any applicable requirement under ORS 671.010 to 671.220 or 672.002 to 672.325 regarding stamps and seals for a set of plans for a structure.

SECTION 21b. If Senate Bill 39 becomes law, section 3, chapter 97, Oregon Laws 2019 (Enrolled Senate Bill 39), is amended to read:

Sec. 3. The amendments to ORS 455.062 and 672.060 by sections 1 and 2 [of this 2019 Act], **chapter 97, Oregon Laws 2019 (Enrolled Senate Bill 39), and section 21a of this 2019 Act** apply to work performed, and offers made, on or after the effective date of [this 2019 Act] **chapter 97, Oregon Laws 2019 (Enrolled Senate Bill 39).**

SECTION 22. In addition to and not in lieu of any other appropriation, there is appropriated to the Department of Land Conservation and Development, for the biennium beginning July 1, 2019, out of the General Fund, the amount of \$1,000,000, to provide technical assistance to local governments to implement sections 4 to 6 and 15 of this 2019 Act and the amendments to ORS 197.296, 197.299, 197.303, 197.319, 197.320, 215.416, 215.441, 227.175 and 227.500 and section 1, chapter 47, Oregon Laws 2018, by sections 8 to 13 and 17 to 20 of this 2019 Act.

SECTION 23. In addition to and not in lieu of any other appropriation, there is appropriated to the Housing and Community Services Department, for the biennium beginning July 1, 2019, out of the General Fund, the amount of \$655,274, for research, administration and reporting that relate to a regional housing needs analysis described in section 1 of this 2019 Act.

SECTION 24. (1) Sections 4 to 6 of this 2019 Act and the amendments to ORS 197.296, 197.299, 197.303, 197.319 and 197.320 and section 1, chapter 47, Oregon Laws 2018, by sections 8 to 13 of this 2019 Act become operative on January 1, 2020.

(2) The Land Conservation and Development Commission, the Department of Land Conservation and Development and the Housing and Community Services Department may take any action before the operative date specified in subsection (1) of this section that is necessary for the departments and the commission to exercise, on or after the operative date specified in subsection (1) of this section, all of the duties, functions and powers conferred on the departments and the commission by sections 4 to 6 of this 2019 Act and the amendments to ORS 197.296, 197.299, 197.303, 197.319, 197.320 and section 1, chapter 47, Oregon Laws 2018, by sections 8 to 13 of this 2019 Act.

SECTION 25. This 2019 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2019 Act takes effect on its passage.

Passed by House June 26, 2019

.....
Timothy G. Sekerak, Chief Clerk of House

.....
Tina Kotek, Speaker of House

Passed by Senate June 30, 2019

.....
Peter Courtney, President of Senate

Received by Governor:

.....M,....., 2019

Approved:

.....M,....., 2019

.....
Kate Brown, Governor

Filed in Office of Secretary of State:

.....M,....., 2019

.....
Bev Clarno, Secretary of State



City of McMinnville
Planning Department
231 NE Fifth Street
McMinnville, OR 97128
(503) 434-7311
www.mcminnvilleoregon.gov

EXHIBIT 4 - STAFF REPORT

DATE: May 20, 2021
TO: Planning Commission Members
FROM: Heather Richards, Planning Director
SUBJECT: (Docket G 1-21) – Amending the Zoning Ordinance to Reduce Regulatory Barriers for Child Care and Align the City’s Code with State Regulations.

STRATEGIC PRIORITY & GOAL:



GROWTH & DEVELOPMENT CHARACTER

Guide growth & development strategically, responsively & responsibly to enhance our unique character.

OBJECTIVE/S: Strategically plan for short and long-term growth and development that will create enduring value for the community

Report in Brief:

This is the consideration of proposed amendments to the McMinnville Municipal Code, Chapter 17, Zoning Ordinance, to reduce regulatory barriers for child care and align the City’s code with state regulations.

The Planning Commission hosted a public hearing on this proposal on April 15, 2021. They closed the public hearing on the same day but elected to keep the record open for written comments until April 30, 2021 per the request of the Department of Land Conservation and Development.

Background:

Currently child care is allowed as an outright permitted use in residential zones if it occurs in a residential dwelling unit and twelve or fewer people are present at any one time. In all other scenarios it is a conditional use process.

Recently the provision of available child care has emerged as a barrier for parents to work, and for employers to access necessary workforce. With the pandemic it has become an even more significant barrier for women to be in the workforce.

Cities are starting to review their zoning ordinances to evaluate how they can remove regulations which may be preventing the development of more child care opportunities in their communities.

The City of McMinnville was asked to evaluate its zoning ordinance for the same purpose.

On November 19, 2020, city staff conducted a work session with the Planning Commission to discuss the current code regulations for child care, state regulations and opportunities to revise the city's code to better emulate state regulations and to create an easier path towards success for child care providers. At that time, Planning Commission asked staff to bring back some proposed amendments to the zoning ordinance to remove regulatory barriers for child care providers in McMinnville.

On April 15, 2021, the Planning Commission hosted a public hearing on proposed code amendments to the McMinnville Municipal Code, Chapter 17, Zoning Ordinance that would remove regulatory barriers for child care opportunities and align the City's code with state regulations.

There are three different types of child care facilities licensed in the State of Oregon per Oregon Administrative Rules (OAR) 414-200-0415 – 414-350-0415.

- **Registered Family Child Care Home:** A facility in the provider's own home in which up to 10 children receive child care, including the provider's own children. (OAR 414-205-0000 to OAR 414-350-0170).
- **Certified Family Child Care Home:** A facility in the provider's own home, in which up to 16 children received child care, including the provider's own children, regardless of full-time or part-time. The number of children depends upon the physical size of the home, provider qualifications, and the number of qualified caregivers. (OAR 414-350-0000 to OAR 414-350-0405).
- **Child Care Center:** A facility, usually located in a commercial building, in which children receive care. The number of children allowed depends on the physical size of the facility and the number of qualified staff members. (OAR 414-300-0000 to OAR 414-200-0415).

Oregon Revised Statute 329A.440 governs how cities and counties can regulate certain types of child care facilities. Per ORS 329A.440, registered family child care homes and certified family child care homes shall be considered a residential use of property for zoning purposes and shall be permitted uses in all areas zoned for residential or commercial purposes. A city cannot enact or enforce zoning ordinance prohibiting the use of a residential dwelling, located in an area zoned for residential or commercial use, as a registered or certified family child care home.

329A.440 Application of zoning ordinances to registered or certified family child care homes.

(1) A registered or certified family child care home shall be considered a residential use of property for zoning purposes. The registered or certified family child care home shall be a permitted use in all areas zoned for residential or commercial purposes, including areas zoned for single-family dwellings. A city or county may not enact or enforce zoning ordinances prohibiting the use of a residential dwelling, located in an area zoned for residential or commercial use, as a registered or certified family child care home.

(2) A city or county may impose zoning conditions on the establishment and maintenance of a registered or certified family child care home in an area zoned for residential or commercial use if the conditions are no more restrictive than conditions imposed on other residential dwellings in the same zone.

(3) A county may:

(a) Allow a registered or certified family child care home in an existing dwelling in any area zoned for farm use, including an exclusive farm use zone established under ORS 215.203;

(b) Impose reasonable conditions on the establishment of a registered or certified family child care home in an area zoned for farm use; and

(c) Allow a division of land for a registered or certified family child care home in an exclusive farm use zone only as provided in ORS 215.263 (9).

(4) This section applies only to a registered or certified family child care home where child care is offered in the home of the provider to not more than 16 children, including children of the provider, regardless of full-time or part-time status. [Formerly 657A.440]

Thus, in McMinnville, any zone that allows residential dwelling units needs to allow **registered family child care and certified family child care homes** as an outright permitted use. Currently the code limits child care facilities to a maximum of twelve people as an outright permitted use. The proposed amendments bring the code into compliance with ORS 329A.440, allowing child care homes in the R1 (Single Family Residential), R2 (Single Family Residential), R3 (Two-Family Residential), R4 (Multi-Family Residential), R5 (Multiple Family Residential) and OR (Office Residential) zones.

The proposed amendments also allow for **child care centers** to be considered as permitted outright uses in City-owned parks or recreation facilities, public schools or conforming private schools in the same zones: R1 (Single Family Residential), R2 (Single Family Residential), R3 (Two-Family Residential), R4 (Multi-Family Residential), R5 (Multiple Family Residential) and OR (Office Residential) zones, and as conditional uses if located in facility that is not a City-owned park or recreation facility, public school or conforming private school in the same zones.

And the proposed amendments allow for **registered child care and certified family child care homes** and **child care centers** to be considered permitted outright uses in all commercial zones (C1, C2 and C3), and then in the light industrial zones (M-L, M-1). **Child care centers** are conditional uses in the M2 zone.

Lastly, the proposed amendments require one off-street parking space per on-site employee for all child care facilities and child care centers, and a designated pick-up and drop-off zone for two vehicles, which can be on-street parking if it is not immediately adjacent to another use.

Discussion:

The Planning Commission closed the public hearing on April 15, 2021 and left the record open for written comments until April 30, 2021 per the request of the Department of Land Conservation and Development.

After the close of the public hearing, planning commissioners asked staff to research the following questions:

1. *Can Cities regulate how many child care homes are allowed in attached residential dwelling units?*

Answer: No, state law requires that cities allow registered and certified child care homes in all residential units.

2. *Can developers or Home Owner’s Associations prevent the location of child care facilities in a neighborhood through the use of Covenants, Conditions and Restrictions (CC&Rs)?*

Answer: Yes, unless the state regulations expressly prohibit that ability to restrict land uses through CC&Rs, developers and/or Home Owner’s Associations can restrict the presence of child cares in neighborhoods through the use of CC&Rs.

3. *What is the number of children allowed per square foot of space for registered and certified child care homes and child care centers?*

Answer: This is a variable determination based upon the age of the children and the number of adults present. Please see attached Oregon Department Early Learning Division Rule Handbooks for Register Child Care Homes, Certified Child Care Homes and Child Care Centers.

Changes Made to the Proposed Amendments Since the Public Hearing:

- Added the provision of allowing child care centers as outright permitted uses in the residential zones when located in a City-owned park or recreation facility, public school or conforming private school, as many as those facilities are located in residential zones and provide after-school child care.
- Revised the language for the number of children allowed for registered and certified child care homes per the recommendation of the Department of Land Conservation and Development.
- Added “on-site” employee parking to the parking standards per the Planning Commission recommendation.

Attachments:

- Exhibit A: Decision Document
- Exhibit B: Proposed Amendments
- Exhibit C: Oregon Dept Early Learning Division, Rules for Registered Family Child Care Homes
- Exhibit D: Oregon Dept Early Learning Division, Rules for Certified Family Child Care Homes
- Exhibit E: Oregon Dept Early Learning Division, Rules for Family Child Care Centers

Fiscal Impact:

There is no immediate fiscal impact to the City of McMinnville with this action.

Recommendation:

Staff recommends the Planning Commission recommend the proposed code amendments to the McMinnville City Council for adoption.

“THAT BASED ON THE FINDINGS OF FACT, THE CONCLUSIONARY FINDINGS FOR APPROVAL, AND THE MATERIALS SUBMITTED BY STAFF, THE PLANNING COMMISSION RECOMMENDS THAT THE CITY COUNCIL APPROVE THE PROPOSED ZONING ORDINANCE TEXT AMENDMENTS PRESENTED IN DOCKET G 1-21.”



**CITY OF MCMINNVILLE
PLANNING DEPARTMENT**
231 NE FIFTH STREET
MCMINNVILLE, OR 97128

503-434-7311
www.mcminnvilleoregon.gov

**DECISION, CONDITIONS OF APPROVAL, FINDINGS OF FACT AND CONCLUSIONARY FINDINGS
FOR THE APPROVAL OF LEGISLATIVE AMENDMENTS TO THE MCMINNVILLE CITY CODE,
TITLE 17, CHAPTER 17.03, GENERAL PROVISIONS.**

DOCKET: G 1-21

REQUEST: The City of McMinnville is proposing to amend Title 17, Chapter 17.06 (Definitions), Chapter 17.12 (R-1 Single Family Residential Zone), Chapter 17.15 (R-2 Single Family Residential Zone), Chapter 17.18 (R-3 Two Family Residential Zone), Chapter 17.21 (R-4 Multiple Family Residential Zone), Chapter 17.22 (R-5 Multiple Family Residential Zone), Chapter 17.24 (O-R Office Residential Zone), Chapter 17.27 (C-1 Neighborhood Business Zone), Chapter 17.30 (C-2 Travel Commercial Zone), Chapter 17.33 (C-3 General Commercial Zone), Chapter 17.36 (M-L Limited Light Industrial Zone), Chapter 17.39 (M-1 Light Industrial Zone), Chapter 17.42 (M-2 General Industrial Zone), and Chapter 17.60 (Off-Street Parking and Loading) in order to remove regulatory barriers for child care providers within the City of McMinnville and to bring the City's Municipal Code into compliance with Oregon statutory regulations and guidelines relative to child care.

LOCATION: N/A

ZONING: R1, R2, R3, R4, R5, OR, C1, C2, C3, ML, M1, M-2

APPLICANT: City of McMinnville

STAFF: Heather Richards, Planning Director

HEARINGS BODY: McMinnville Planning Commission

DATE & TIME: April 15, 2021. Public hearing held virtually via Zoom meeting software, Zoom Online Meeting ID 942 3599 8716.

DATE & TIME: May 20, 2021. Meeting held virtually via Zoom meeting software, Zoom Online Meeting ID 960 2576 9049

DECISION-MAKING BODY: McMinnville City Council

DATE & TIME: TBD

PROCEDURE: The application is subject to the legislative land use procedures specified in Sections 17.72.120 - 17.72.160 of the McMinnville Municipal Code.

CRITERIA: Amendments to the McMinnville Zoning Ordinance must be consistent with the Goals and Policies in Volume II of the Comprehensive Plan and the Purpose of the Zoning Ordinance.

APPEAL: The Planning Commission will make a recommendation to the City Council. The City Council's decision on a legislative amendment may be appealed to the Oregon Land Use Board of Appeals (LUBA) within 21 days of the date written notice of the City Council's decision is mailed to parties who participated in the local proceedings and entitled to notice and as provided in ORS 197.620 and ORS 197.830, and Section 17.72.190 of the McMinnville Municipal Code.

DECISION

Based on the findings and conclusions, the McMinnville Planning Commission recommends **APPROVAL** of the legislative zoning text amendments (G 1-21) to the McMinnville City Council.

////////////////////////////////////
DECISION: APPROVAL
////////////////////////////////////

City Council: _____
Scott Hill, Mayor of McMinnville

Date: _____

Planning Commission: _____
Roger Hall, Chair of the McMinnville Planning Commission

Date: _____

Planning Department: _____
Heather Richards, Planning Director

Date: _____

I. Application Summary:

The City of McMinnville is proposing to amend Title 17, Chapter 17.06 (Definitions), Chapter 17.12 (R-1 Single Family Residential Zone), Chapter 17.15 (R-2 Single Family Residential Zone), Chapter 17.18 (R-3 Two Family Residential Zone), Chapter 17.21 (R-4 Multiple Family Residential Zone), Chapter 17.22 (R-5 Multiple Family Residential Zone), Chapter 17.24 (O-R Office Residential Zone), Chapter 17.27 (C-1 Neighborhood Business Zone), Chapter 17.30 (C-2 Travel Commercial Zone), Chapter 17.33 (C-3 General Commercial Zone), Chapter 17.36 (M-L Limited Light Industrial Zone), Chapter 17.39 (M-1 Light Industrial Zone), Chapter 17.42 (M-2 General Industrial Zone), and Chapter 17.60 (Off-Street Parking and Loading) in order to remove regulatory barriers for child care providers within the City of McMinnville and to bring the City's Municipal Code into compliance with Oregon statutory regulations and guidelines relative to child care. The City is adding definitions for "Child Care Center", "Child Care Home (Registered or Certified Family Child Care Home)" and "Day Care Facility (Adult)". The City is identifying "Child Care Home", and "Day Care Facility (Adult)" when the day care facility is located in a residential dwelling unit and has twelve or fewer people present at any one time, as outright permitted uses R1, R2, R3, R4, R5 and OR zones. "Child Care Center" as an outright permitted use when located in a City-owned park or recreation facility, public school and conforming private school, and "Child Care Center" when not located in a City-owned park or recreation facility, public school or conforming private school as a conditional use in the R1, R2, R3, R4, R5 and OR zones. And "Day Care Facility (Adult) when the structure is not a residence as a conditional use in the R1, R2, R3, R4, R5 and OR zones. The City is also proposing that "Child Care Homes: and "Child Care Center" be a permitted use in the C1, C2, C3, ML and M1 zones, and that "Child Care Centers" be a conditional use in the M2 zone. And finally, the city is proposing that "Child Care Center" and Child Care Facility" be required to provide one off-street parking space per on-site employee and a designated drop-off and pick-up zone for two vehicles be required.

II. CONDITIONS OF APPROVAL

None.

III. FINDINGS OF FACT

1. The City of McMinnville has received requests to reduce regulatory barriers for child care facilities to help enable the development of more child care in the community.
2. On November 19, 2020, city staff hosted a work session with the Planning Commission to discuss options for child care amendments to the McMinnville City Code. At that time, Planning Commission provided direction to move forward with a legislative effort to amend the McMinnville Municipal Code to remove regulatory barriers for child care providers as deemed appropriate.
3. Notice of the application and the April 15, 2021 Planning Commission public hearing was published in the News Register on Friday, April 9, 2021, in accordance with Section 17.72.120 of the Zoning Ordinance.
4. On April 15, 2021, the Planning Commission held a duly noticed public hearing to consider the request.
5. On April 15, 2021, the Planning Commission closed the public hearing and kept the written record open until April 30, 2021.
6. Title 17 of the MMC provides the code provisions for zoning and development regulations for the City of McMinnville.

IV. Comments Received

A letter was received from the Oregon Department of Land Conservation and Development, April 26, 2021. (Attached).

V. CONCLUSIONARY FINDINGS:

Alignment with Oregon Revised Statutes and Administrative Rules:

ORS 329A.440 – Oregon Revised Statute 329A.440 governs how cities and counties can regulate certain types of child care facilities. Per ORS 329A.440, registered family child care homes and certified family child care homes shall be considered a residential use of property for zoning purposes and shall be permitted uses in all areas zoned for residential or commercial purposes. A city cannot enact or enforce zoning ordinance prohibiting the use of a residential dwelling, located in an area zoned for residential or commercial use, as a registered or certified family child care home.

329A.440 Application of zoning ordinances to registered or certified family child care homes.

(1) A registered or certified family child care home shall be considered a residential use of property for zoning purposes. The registered or certified family child care home shall be a permitted use in all areas zoned for residential or commercial purposes, including areas zoned for single-family dwellings. A city or county may not enact or enforce zoning ordinances prohibiting the use of a residential dwelling, located in an area zoned for residential or commercial use, as a registered or certified family child care home.

(2) A city or county may impose zoning conditions on the establishment and maintenance of a registered or certified family child care home in an area zoned for residential or commercial use if the conditions are no more restrictive than conditions imposed on other residential dwellings in the same zone.

(3) A county may:

(a) Allow a registered or certified family child care home in an existing dwelling in any area zoned for farm use, including an exclusive farm use zone established under ORS 215.203;

(b) Impose reasonable conditions on the establishment of a registered or certified family child care home in an area zoned for farm use; and

(c) Allow a division of land for a registered or certified family child care home in an exclusive farm use zone only as provided in ORS 215.263 (9).

(4) This section applies only to a registered or certified family child care home where child care is offered in the home of the provider to not more than 16 children, including children of the provider, regardless of full-time or part-time status. [Formerly 657A.440]

Finding: Proposed amendments bring the McMinnville Municipal Code into compliance with ORS 329A.440 by allowing registered and certified family child care homes as allowed outright permitted uses in any residential and commercial zone if provided in a single-family dwelling unit.

OAR 414-200-0415 to OAR 414-350-0415 – Oregon Administrative Rules (OAR) 414-200-0415 to OAR 414-350-0415 govern the operational structure and licensing of child care facilities in the state of Oregon.

Finding: Proposed amendments align definitions of child care facilities in the McMinnville Municipal Code with OAR 414-200-0415 to OAR 414-350-0415, and reinforces the parameters for each type of child care facility in the allowance of the McMinnville Municipal Code.

Alignment with McMinnville's Comprehensive Plan:

The following Goals and policies from Volume II of the McMinnville Comprehensive Plan of 1981 are applicable to this request:

Citizen Involvement

GOAL X 1 TO PROVIDE OPPORTUNITIES FOR CITIZEN INVOLVEMENT IN THE LAND USE DECISION MAKING PROCESS ESTABLISHED BY THE CITY OF McMINNVILLE.

Finding: Goals X 1 is satisfied by this proposal in that the proposed modifications were reviewed at a public hearing by the McMinnville Planning Commission on April 15, 2021.



April 26, 2021

Heather Richards, Community Development Director
City of McMinnville
231 NE 5th Street
McMinnville, OR 97128
Submitted via Email: heather.richards@mcminnvilleoregon.gov



Subject: Public Hearing (Docket G 1-21) – Amending zoning ordinance to allow child care as an outright permitted use (DLCD file Amendment 002-21)

Dear Director Richards,

This letter is in reference to post acknowledgement plan amendment (PAPA) 002-21, Docket G 1-21 amending Chapter 17 of McMinnville Municipal Code to remove regulatory barriers for the development of day care facilities. Thank you for keeping the record open until April 30 for DLCD to review and offer the following comments.

Recommendations for McMinnville's child care amendments: DLCD 04/26/21

The proposed amendments are a big step forward. McMinnville should be commended for tackling this important issue. We have some suggestions for simplification that will make the code easier to use and also less likely to become outdated. There are also some required (i.e., *not* a suggestion) changes, which are highlighted in yellow.

Definition: We suggest using a simpler definition (in italics, below) for Child Care Home that more closely matches the language in ORS 329A.440. This suggested definition specifies that family child care homes are allowed in residential dwellings, not structures constructed as residential dwellings, which avoids confusion for structures that were constructed as something other than residential dwellings and then converted to that use. It also avoids attempting to write exemptions into the definition. There are quite a number of programs that are exempt from licensing, however it would be neither possible nor desirable to include all of those exemptions in the definition of Child Care Home (or Child Care Center). Therefore, it is best to simply allow the use, keep the definition and standards as simple as possible, and leave the details up to the licensing agency (the Oregon Department of Education Early Learning Division).

Child Care Home, (Registered or Certified Family Child Care Home) – A home that is registered or certified by the Oregon Department of Education Office of Child Care to provide child care in the provider's home to not more than 16 children, including children of the provider, regardless of full-time or part-time status.

Section 17.12.010(E)(3): Suggest removing this provision, or changing it to just list a maximum of 16 children. As noted above, it's enough to just allow the use and specify

that it has to be registered or certified by the State. The State will then determine what the specific requirements of the specific facility are. When the zoning code includes details like this, it is more likely to conflict with what the Early Learning Division allows either now or in the future if their standards change. The best approach is to leave the details of registering and certifying, including number children and number of families, up to the State's Early Learning Division.

Section 17.15.010(E)(3): Same comment as above.

Section 17.18.010(E)(3): Same comment as above.

Section 17.21.010(G)(3): Same comment as above. (Also, double check the lettering on this list. There are two "G's.")

Section 17.22.010(D)(3): Same comment as above.

Section 17.24.020(E)(3): Same comment as above.

Chapters 17.27, 17.30, 17.33, plus any other residential or commercial zone in the code: Child Care Homes (AKA family child care homes) must be permitted "in all areas zoned for residential or commercial purposes" (ORS 329A.440.1). So that means that any residential or commercial zone must allow family child care homes. Even if new dwellings aren't allowed in a commercial zone, this provision of the ORS requires family child care homes to be allowed in existing dwellings. The C-1, C-2, C-3, and any other commercial or residential zone that is in the code but not included in this amendment, must list "Child Care Home" as a permitted use.

Please enter these comments in your record for Docket G 1-21 and send us any revisions and staff report via email or through the PAPA database. If you have any questions or concerns, please contact me.

Kind regards,

Sarah J Marvin

Sarah Marvin, Interim Mid-Willamette Valley Regional Representative

Department of Land Conservation and Development

Cell: 503-559-1380 | Main: 503-373-0050

sarah.marvin@state.or.us



CITY OF MCMINNVILLE
PLANNING DEPARTMENT
231 NE FIFTH STREET
MCMINNVILLE, OR 97128

503-434-7311
www.mcminnvilleoregon.gov

PROPOSED AMENDMENTS TO THE MCMINNVILLE MUNICIPAL CITY CODE –
Chapter 17.03, General Provisions

New proposed language is represented by **bold font**, deleted language is represented by ~~strikethrough font~~.

Chapter 17.06

DEFINITIONS

Section 17.06.015 General Definitions

Child Care Center – Any facility that is certified to provide care to children and is located in a building constructed as other than a residential dwelling. This could include a day nursery, nursery school, preschool or similar unit operating under any name.

Child Care Home, (Registered or Certified Family Child Care Home) – A facility constructed as a residential dwelling where child care is offered in the home of the provider, on a regular basis, to more than three children from more than one family at any one time other than the provider’s children, and not more than 16 children including children of the provider, regardless of full-time or part-time status. Must be licensed through the Oregon Office of Child Care.

Day Care Facility, (Adult) – Any facility that provides community based group programs designed to meet the needs of adults with functional and cognitive impairments through individual plans of care that are structured, comprehensive and provide a variety of health, social and related support services in protective settings during part of the day but provide less than 24-hour care.

~~**Day Care Facility** – Any facility that provides care to three or more persons exclusive of family members during a limited portion of a 24-hour period, including a day nursery, family day care center, adult day care, or similar unit operating under any name or as may be licensed by the State of Oregon. This does not include educational or health care facilities, residential facilities or those offering overnight care or detention facilities. (Ord. 4128 (part), 1981; Ord. 3380 (part), 1968).~~

~~**Residential Child Care Facility** – (Repealed as per Ord. 4952 March 13, 2012).~~

Chapter 17.12

R-1 SINGLE-FAMILY RESIDENTIAL ZONE

Section 17.12.010 Permitted Uses.

- E. Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:**
 - 1. The structure is a residential dwelling unit.
 - 2. The provider resides at the dwelling.
 - 3. Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.
 - 4. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 5. Operator must have the appropriate licenses required by state regulations.
- F. Day Care Facility (Adult), under the following provisions:**
 - 1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.
 - 2. Twelve or fewer people are present at any one time at the center.
 - 3. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 4. Operator must have the appropriate licenses required by state regulations.
- G. Child Care Center, under the following provisions:**
 - 1. The facility is a City-owned park or recreation facility, a public school, or a conforming private school.
 - 2. Operator must have the appropriate licenses required by state regulations, if applicable.
- H. Residential Home as defined in Chapter 17.06 (Definitions)**
- ~~E. Day care facility, under the following provisions:~~
 - ~~6. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
 - ~~7. Twelve or fewer people are present at any one time at the center.~~
 - ~~8. Requirements of the Oregon State Structural Specialty and Fire Life Safety Code (UBC), as amended, are met.~~
 - ~~9. That a certificate of approval be obtained for facilities with seven 7 or more people as required by ORS 418.810.~~
- ~~F. Residential Home as defined in Chapter 17.06 (Definitions).~~
- ~~G. Residential Facility as defined in Chapter 17.06 (Definitions). [Deleted per Ordinance 4988.]~~

Section 17.12.020 Conditional Uses.

- C. Child Care Center, under the following provisions:**
 - 1. The facility is not a facility defined in Section 17.12.010(G)(1).
 - 2. Operator must have the appropriate licenses required by state regulations.
- D. Church;**
- E. Community building, including library;**
- F. Day Care Facility (Adult), under the following provisions**
 - 1. The structure is not a residence.

2. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
3. Operator must have the appropriate licenses required by state regulations.

~~E. Day care facility, when the following situations exist;~~

- ~~1. The structure is not used as a residence by the operators, and/or~~
- ~~2. Thirteen or more people present at any one time,~~
- ~~3. That a certificate of approval be obtained for facilities with seven or more people as required by ORS 418.810.~~

(Re-calibrate lettering for the remainder of this section as appropriate)

Chapter 17.15

R-2 SINGLE-FAMILY RESIDENTIAL ZONE

Section 17.15.010 Permitted Uses.

E. Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:

1. The structure is a residential dwelling unit.
2. The provider resides at the dwelling.
3. Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.
4. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
5. Operator must have the appropriate licenses required by state regulations.

F. Day Care Facility (Adult), under the following provisions:

1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.
2. Twelve or fewer people are present at any one time at the center.
3. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
4. Operator must have the appropriate licenses required by state regulations.

G. Child Care Center, under the following provisions:

1. The facility is a City-owned park or recreation facility, a public school, or a conforming private school.
2. Operator must have the appropriate licenses required by state regulations, if applicable.

H. Residential Home as defined in Chapter 17.06 (Definitions)

~~E. Day care facility, under the following provisions:~~

- ~~1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
- ~~2. Twelve or fewer people are present at any one time at the center.~~
- ~~3. Requirements of the Oregon State Structural Specialty and Fire Life Safety Code (UBC), as amended, are met.~~
- ~~10. That a certificate of approval be obtained for facilities with seven 7 or more people as required by ORS 418.810.~~

~~F. Residential Home as defined in Chapter 17.06 (Definitions).~~

~~G. Residential Facility as defined in Chapter 17.06 (Definitions). [Deleted per Ordinance 4988.]~~

Section 17.15.020 Conditional Uses.

- B. Child Care Center, under the following provisions:**
 - 1. The facility is not a facility defined in Section 17.15.010(G)(1).
 - 2. Operator must have the appropriate licenses required by state regulations.
- C. Church;**
- D. Community building, including library;**
- E. Day Care Facility (Adult), under the following provisions**
 - 1. The structure is not a residence.
 - 2. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 3. Operator must have the appropriate licenses required by state regulations.
- ~~D. Day care facility, when the following situations exist;~~
 - ~~1. The structure is not used as a residence by the operators, and/or~~
 - ~~2. Thirteen or more people present at any one time,~~
 - ~~3. That a certificate of approval be obtained for facilities with seven or more people as required by ORS 418.810.~~

(Re-calibrate lettering for the remainder of this section as appropriate)

Chapter 17.18

R-3 TWO-FAMILY RESIDENTIAL ZONE

Section 17.18.010 Permitted Uses.

- E. Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:**
 - 1. The structure is a residential dwelling unit.
 - 2. The provider resides at the dwelling.
 - 3. Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.
 - 4. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 5. Operator must have the appropriate licenses required by state regulations.
- F. Day Care Facility (Adult), under the following provisions:**
 - 1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.
 - 2. Twelve or fewer people are present at any one time at the center.
 - 3. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 4. Operator must have the appropriate licenses required by state regulations.
- G. Child Care Center, under the following provisions:**
 - 1. The facility is a City-owned park or recreation facility, a public school, or a conforming private school.

2. **Operator must have the appropriate licenses required by state regulations, if applicable.**

H. Residential Home as defined in Chapter 17.06 (Definitions)

~~E. Day care facility, under the following provisions:~~

- ~~1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
- ~~2. Twelve or fewer people are present at any one time at the center.~~
- ~~3. Requirements of the Oregon State Structural Specialty and Fire Life Safety Code (UBC), as amended, are met.~~
- ~~4. That a certificate of approval be obtained for facilities with seven 7 or more people as required by ORS 418.810.~~

~~F. Residential Home as defined in Chapter 17.06 (Definitions).~~

~~G. Residential Facility as defined in Chapter 17.06 (Definitions). [Deleted per Ordinance 4988.]~~

Section 17.18.020 Conditional Uses.

B. Child Care Center, under the following provisions:

1. **The facility is not a facility defined in Section 17.18.010(G)(1).**
2. **Operator must have the appropriate licenses required by state regulations.**

C. Church;

D. Community building, including library;

E. Day Care Facility (Adult), under the following provisions

1. **The structure is not a residence.**
2. **Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.**
3. **Operator must have the appropriate licenses required by state regulations.**

~~D. Day care facility, when the following situations exist;~~

- ~~1. The structure is not used as a residence by the operators, and/or~~
- ~~2. Thirteen or more people present at any one time,~~
- ~~3. That a certificate of approval be obtained for facilities with seven or more people as required by ORS 418.810.~~

(Re-calibrate lettering for the remainder of this section as appropriate)

Chapter 17.21

R-4 MULTIPLE-FAMILY RESIDENTIAL ZONE

Section 17.21.010 Permitted Uses.

E. Residential Home as defined in Chapter 17.06 (Definitions)

F. A single-family dwelling having a common wall with one or more other single-family dwelling, provided:

1. Each dwelling unit shall be situated on an individual, legally subdivided or partitioned lot.
2. The dwelling shall have a common wall at the "zero" lot line.

3. Each lot shall comprise not less than twenty-five hundred square feet in area.
 4. Lot area and setback requirements will apply to the combined dwelling units as one structure and the combined lots as one lot.
 5. Each dwelling unit must have independent services which include, but are not limited to sewer, water and electricity.
 6. The common wall shall be a fire wall, and shall be a kind of construction that will insure fire protection as per the Uniform Building Code as adopted by the State.
 7. Common wall, single-family structures shall be required to provide a sound barrier at the common wall which has a sound transmission class rating of not less than fifty (50) as per the Uniform Building Code as adopted by the State. The building technique used to achieve the sound barrier rating shall be the responsibility of the general contractor and will be accepted upon inspection if it meets the code requirements and is supported by proof of meeting sound emission controls as specified.
 8. Existing duplexes will be allowed to be converted to common wall, single-family units if they meet the provisions of this title and were constructed after January, 1974.
- G. Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:**
1. **The structure is a residential dwelling unit.**
 2. **The provider resides at the dwelling.**
 3. **Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.**
 4. **Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.**
 5. **Operator must have the appropriate licenses required by state regulations.**
- H. Day Care Facility (Adult), under the following provisions:**
1. **The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.**
 2. **Twelve or fewer people are present at any one time at the center.**
 3. **Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.**
 4. **Operator must have the appropriate licenses required by state regulations.**
- I. Child Care Center, under the following provisions:**
1. **The facility is a City-owned park or recreation facility, a public school, or a conforming private school.**
 2. **Operator must have the appropriate licenses required by state regulations, if applicable.**
- ~~F. Boardinghouse, lodginghouse, or roominghouse; [Deleted per Ordinance 5047.]~~
- ~~G. A single-family dwelling having a common wall with one or more other single-family dwelling, provided:~~
- ~~1. Each dwelling unit shall be situated on an individual, legally subdivided or partitioned lot.~~
 - ~~2. The dwelling shall have a common wall at the "zero" lot line.~~
 - ~~3. Each lot shall comprise not less than twenty-five hundred square feet in area.~~
 - ~~4. Lot area and setback requirements will apply to the combined dwelling units as one structure and the combined lots as one lot.~~
 - ~~5. Each dwelling unit must have independent services which include, but are not limited to sewer, water and electricity.~~
 - ~~6. The common wall shall be a fire wall, and shall be a kind of construction that will insure fire protection as per the Uniform Building Code as adopted by the State.~~

- ~~7. Common wall, single-family structures shall be required to provide a sound barrier at the common wall which has a sound transmission class rating of not less than fifty (50) as per the Uniform Building Code as adopted by the State. The building technique used to achieve the sound barrier rating shall be the responsibility of the general contractor and will be accepted upon inspection if it meets the code requirements and is supported by proof of meeting sound emission controls as specified.~~
- ~~8. Existing duplexes will be allowed to be converted to common wall, single-family units if they meet the provisions of this title and were constructed after January, 1974.~~
- ~~H. Day care facility, under the following provisions:~~
 - ~~1. The structure is maintained in its residential character, operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
 - ~~2. Twelve or fewer people are present at any one time at the center.~~
 - ~~3. Requirements of the Oregon State Structural Specialty and Fire Life Safety Code (UBC), as amended, are met.~~
 - ~~4. That a certificate of approval be obtained for facilities with seven or more people as required by ORS 418.810.~~

Section 17.21.020 Conditional Uses.

- C. Child Care Center, under the following provisions:**
 - 1. The facility is not a facility defined in Section 17.21.010(I)(1).**
 - 2. Operator must have the appropriate licenses required by state regulations.**
- D. Church;**
- E. Community building, including library;**
- F. Day Care Facility (Adult), under the following provisions**
 - 1. The structure is not a residence.**
 - 2. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.**
 - 3. Operator must have the appropriate licenses required by state regulations.**
- ~~E. Day care facility, when the following situations exist:~~
 - ~~4. The structure is not used as a residence by the operators, and/or~~
 - ~~5. Thirteen or more people present at any one time,~~
 - ~~6. That a certificate of approval be obtained for facilities with seven or more people as required by ORS 418.810.~~

(Re-calibrate lettering for the remainder of this section as appropriate)

Chapter 17.22

R-5 MULTIPLE-FAMILY RESIDENTIAL ZONE

Section 17.22.010 Permitted uses. In an R-5 zone, the following uses and their accessory uses are permitted:

- A. Multiple-family dwelling;
- B. Condominium;
- C. Boardinghouse, lodging house, or rooming house;
- D. **Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:**
 - 1. The structure is a residential dwelling unit.**

2. The provider resides at the dwelling.
 3. Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.
 4. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 5. Operator must have the appropriate licenses required by state regulations.
- E. **Child Care Center, under the following provisions:**
1. The facility is a City-owned park or recreation facility, a public school, or a conforming private school.
 2. Operator must have the appropriate licenses required by state regulations, if applicable.
- Day care facility, under the following provisions:
1. ~~The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
 2. ~~Twelve or fewer children are present at any one time at the center.~~
 3. ~~Requirements of the Oregon State Structural Specialty and Fire Life Safety Code, as amended, are met.~~
 4. ~~That a certificate of approval be obtained for facilities with 7 or more children as required by ORS 418.810.~~
- E. ~~Residential child care facility, under the following provisions:~~
1. ~~The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
 2. ~~Five or less children under care reside in the home at any one time.~~
 3. ~~Requirements of the Oregon State Structural Specialty and Fire Life Safety Code, as amended, are met.~~

(Re-calibrate lettering for the remainder of this section as appropriate)

Section 17.22.020 Conditional uses. In an R-5 zone, the following uses and their accessory uses may be permitted, subject to the provisions of Chapter 17.66:

- A. Campus living organization (fraternity, sorority, or dormitory);
- B. Cemetery;
- C. Church;
- D. Community building, including library;
- E. **Child Care Center, under the following provisions:**
 1. **The facility is not a facility defined in Section 17.22.010(E)(1).**
 2. **Operator must have the appropriate licenses required by state regulations.**
- E. ~~Day care facility, when the following situations exist:~~
 1. ~~The structure is not used as a residence by the operators; and/or~~
 2. ~~Thirteen or more children are present at any one time; (as amended by Ordinance 4534 April 27, 1993)~~
 3. ~~That a certificate of approval be obtained for facilities with 7 or more children as required by ORS 418.810 (as amended by Ordinance 4534 April 27, 1993).~~
- F. ~~Residential care facility, when the following situations exist:~~
 1. ~~The structure is not used as a residence by the operators; and/or~~
 2. ~~Six or more children are present at any one time.~~

Chapter 17.24

O-R OFFICE RESIDENTIAL ZONE

Section 17.24.020 Permitted Uses.

- E. Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:**
 - 1. The structure is a residential dwelling unit.
 - 2. The provider resides at the dwelling.
 - 3. Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.
 - 4. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 5. Operator must have the appropriate licenses required by state regulations.
- F. Clinic**
- G. Day Care Facility (Adult), under the following provisions:**
 - 1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.
 - 2. Twelve or fewer people are present at any one time at the center.
 - 3. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 4. Operator must have the appropriate licenses required by state regulations.
- H. Child Care Center, under the following provisions:**
 - 1. The facility is a City-owned park or recreation facility, a public school, or a conforming private school.
 - 2. Operator must have the appropriate licenses required by state regulations, if applicable.
- ~~F. Day care facility, under the following provisions:~~
 - ~~1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
 - ~~2. Twelve or fewer children are present at any one time at the center.~~
 - ~~3. Requirements of the Oregon State Structure Specialty and Fire Life Safety Code (UBC), as amended, are met.~~
 - ~~4. That a certificate of approval be obtained for facilities with seven or more children as required by ORS 418.810.~~
- ~~G. Dressmaking or tailor shop;~~
- ~~N. Residential child care facility, under the following provisions:~~
 - ~~1. The structure is maintained in its residential character; operators own, lease, or rent the property and reside therein; and the center is operated at a usage level equal to or subservient to the residential use of the structure.~~
 - ~~2. Five or less children under care reside in the home at any one time.~~
 - ~~3. Requirements of the Oregon State Structural Specialty and Fire Life Safety Code (UBC) as amended, are met;~~
- N. Dressmaking or Tailor shop;**

Section 17.24.030 Conditional Uses.

- A. Child Care Center, under the following provisions:**
 - 1. The facility is not a facility defined in Section 17.24.010(H)(1).
 - 2. Operator must have the appropriate licenses required by state regulations.
 - B. Church;**
 - C. Day Care Facility (Adult), under the following provisions**
 - 1. The structure is not a residence.
 - 2. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 3. Operator must have the appropriate licenses required by state regulations.
- ~~B. Day care facility, when the following situations exist:~~
- ~~1. The structure is not used as a residence by the operators, and/or~~
 - ~~2. Thirteen or more children are present at any one time;~~
 - ~~3. That a certificate of approval be obtained for facilities with seven or more children as required by ORS 418.810.~~
- ~~C. Residential care facility, when the following situations exist:~~
- ~~1. The structure is not used as a residence by the operators, and/or~~
 - ~~2. Six or more children are present at any one time;~~

Chapter 17.27

C-1 NEIGHBORHOOD BUSINESS ZONE

Section 17.27.010 Permitted Uses.

- M. Child Care Center, under the following provisions:**
 - 1. The operator must have the appropriate licenses required by state regulations, if applicable..
- Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:**
- 1. The structure is a residential dwelling unit.
 - 2. The provider resides at the dwelling.
 - 3. Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.
 - 4. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
 - 5. Operator must have the appropriate licenses required by state regulations

Chapter 17.30
C-2 TRAVEL COMMERCIAL ZONE

Section 17.30.010 Permitted Uses.

- ~~B. Boardinghouse, lodginghouse or roominghouse; [Deleted per Ordinance 5047.]~~
B. Child Care Center, under the following provisions:
1. **The operator must have the appropriate licenses required by state regulations, if applicable..**

[.....]

- L. Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:**
1. **The structure is a residential dwelling unit.**
2. **The provider resides at the dwelling.**
3. **Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.**
4. **Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.**
5. **Operator must have the appropriate licenses required by state regulations**

Chapter 17.33
C-3 GENERAL COMMERCIAL ZONE

Section 17.33.010 Permitted Uses.

- 74. Day Care Facility (Adult), under the following provisions**
1. **The structure is not a residence.**
2. **Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.**
3. **Operator must have the appropriate licenses required by state regulations.**

Section 17.33.020 Conditional uses. In a C-3 zone, the following uses and their accessory uses may be permitted subject to the provisions of Chapters 17.72 and 17.74:

- ~~A. Day care facility;~~
B. Social relief facility, when the following situations exist:
1. The structure is not used as a residence by the operators, and/or
2. Six or more people unrelated to the operator reside at the home at any one time.
~~C. Residential care facility;~~
D. Public or private school;
E. Public transportation passenger terminal;

Chapter 17.36

M-L LIMITED LIGHT INDUSTRIAL ZONE

Section 17.36.020 Permitted Uses.

BB. Child Care Center, under the following provisions:

1. The operator must have the appropriate licenses required by state regulations, if applicable.

CC. Child Care Home (Registered or Certified Family Child Care Home), under the following provisions:

1. The structure is a residential dwelling unit.
2. The provider resides at the dwelling.
3. Child care is offered to not more than 16 children, including children of the provider, regardless of full-time or part-time status.
4. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
5. Operator must have the appropriate licenses required by state regulations

DD. Day Care Facility (Adult), under the following provisions

1. The structure is not a residence.
2. Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.
3. Operator must have the appropriate licenses required by state regulations.

Section 17.36.030 Conditional uses. In the M-L zone, the following uses and their accessory uses may be permitted subject to the provisions of Chapters 17.72 and 17.74:

- A. Cable television ground receiving station;
- B. Cemetery;
- C. ~~Day care facility;~~

Chapter 17.39

M-1 LIGHT INDUSTRIAL ZONE

Section 17.39.020 Permitted Uses.

AA. Child Care Center, under the following provisions:

1. Operator must have the appropriate licenses required by state regulations, if applicable.

Section 17.39.030 Conditional uses. The following uses and their accessory uses may be permitted, subject to the provisions of Chapters 17.72 and 17.74:

- A. Agricultural supply store, wholesale or retail;
- B. Recycling collection center;
- C. Service stations;
- D. Cemetery;
- E. ~~Day care facility;~~
- F. Public uses, limited to sewage treatment plants, schools and churches;
- G. Other similar conditional uses, approved subject to the provisions of Section 17.54.010(C). (Ord. 4522 §1(part), 1992)

Chapter 17.42
M-2 GENERAL INDUSTRIAL ZONE

Section 17.42.010 Permitted uses. In an M-2 zone, the following uses and their accessory uses are permitted:

- A. A use permitted in the M-1 zone **(except for Child Care Center and Day Care Facility (Adult))**;
- B. Manufacturing, repairing, fabricating, processing, packing, or storage uses not listed in Chapter 17.39 (Light Industrial Zone) and which have not been declared a nuisance by statute, ordinance or any court of competent jurisdiction;
- C. Manufacture, processing, and storage of grains or fertilizer;
- D. Airport. (Ord. 4128 (part), 1981; Ord. 3380 (part), 1968).

Section 17.42.020 Conditional uses. In an M-2 zone, the following uses and their accessory uses may be permitted subject to the provisions of Chapters 17.72 and 17.74:

- A. Automobile wrecking yard;
- B. **Child Care Center, under the following provisions:**
 - 1. **Operator must have the appropriate licenses required by state regulations, if applicable.**
- C. **Day Care Facility (Adult), under the following provisions**
 - 1. **The structure is not a residence.**
 - 2. **Requirements of the Oregon Building Codes (including any Fire Life Safety Code) as amended, are met.**
 - 3. **Operator must have the appropriate licenses required by state regulations.**
- B. Day Care Facility;

(Re-calibrate lettering for the remainder of this section as appropriate)

Chapter 17.60
OFF-STREET PARKING AND LOADING

Section 17.60.060 Spaces—Number required

B. Institutional land use category:

- 5. Day care, **child care center**, preschool, nursery, or kindergarten **One space per on-site employee, and a designated pick-up and drop off zone for two vehicles which can be on-street parking if it is not immediately adjacent to another use.** ~~for each teacher or supervisor.~~



Rules for

Registered Family Child Care Homes

Effective 8/13/2019

Oregon Department of Education
Early Learning Division

Office of Child Care

503-947-1400 • 1-800-556-6616

Contents

414-205-0000 Purpose	2
414-205-0010 Definitions	3
414-205-0020 Application for Registration	8
414-205-0035 General Requirements	9
414-205-0040 The Provider and Other Persons in the Home	11
414-205-0055 Training Requirements	14
414-205-0065 Children in Care	16
414-205-0075 Supervision of Children.....	16
414-205-0085 Guidance and Discipline.....	17
414-205-0090 Program of Activities	18
414-205-0100 Health	20
414-205-0105 Testing for Lead in Drinking Water	25
414-205-0110 Safety.....	27
414-205-0120 Sanitation.....	31
414-205-0130 Record Keeping	32
414-205-0140 Night Care.....	33
414-205-0150 Exceptions to Rules	34
414-205-0160 Complaints.....	34
414-205-0170 Suspension, Denial, Revocation, Findings Reviews and Civil Penalties	35

DIVISION 205

REGISTERED FAMILY CHILD CARE HOMES

414-205-0000 Purpose

- (1) Oregon Administrative Rules (OAR) 414-205-0000 through 414-205-0170 are the Office of Child Care's (OCC) minimum requirements for registering family child care providers. The purpose of these rules is to protect the health, safety, and well-being of children when cared for outside their own homes.
- (2) Registration is required for persons who provide child care:
 - (a) On other than an occasional basis; and
 - (b) To more than three children from more than one family at any one time, other than the person's children subject to the limits in OAR 414-205-0065.
- (3) Individuals who are not enrolled in the Central Background Registry because of removal, denial for cause, or voluntary surrender in lieu of legal action, may only care for their own children or children related within the fourth degree as determined by civil law, pursuant to ORS 329A.252.
- (4) These rules do not apply to care provided:
 - (a) In the home of the child;
 - (b) To three or fewer children, not including the provider's children subject to the limits in OAR 414-205-0065 except as provided in 414-205-0000(2)(c);
 - (c) To children from one family, not including the provider's children except as provided in 414-205-0000(2)(f);
 - (d) On an occasional basis by a person not ordinarily engaged in providing child care except as provided in 414-205-0000(2)(e);
 - (e) By the child's parent, legal guardian, or person acting in place of a parent;
 - (f) By a person related to the child care children by blood, marriage, or adoption; or
 - (g) By a person who is a member of the child's extended family, as determined by OCC on a case-by-case basis or;

(h) By a person providing care for preschool children that is primarily educational for four hours or less per day and where no preschool age child is present at the facility for more than four hours per day, except as provided in 414-205-0000(2)(d).

(5) Any family child care provider exempt from registration may apply for registration.

(6) These rules apply only during the hours the provider is conducting the child care business.

414-205-0010 Definitions

(1) "Caregiver" means any person, including the provider, who cares for the children in the registered family child care home and works directly with the children, providing care, supervision and guidance.

(2) "Central Background Registry" (CBR) means OCC's Registry of individuals who have been approved to be associated with a child care facility in Oregon pursuant to ORS 329A.030 and OAR 414-061-0000 through 414-061-0120.

(a) "CBR Enrollment" means approval for a 5 year period to be enrolled in the CBR following an Oregon State Police criminal records check, child abuse and neglect records check, checks of adult protective services and foster care certification and an FBI records check.

(b) "CBR Conditional Enrollment" means temporary approval to be enrolled in the CBR following a Oregon State Police records check and child abuse and neglect records check but prior to receipt by OCC of the results of the required FBI records check.

(3) "Child Care" means the care, supervision and guidance on a regular basis of a child, unaccompanied by a parent, legal guardian or custodian, during a part of the 24 hours of the day, with or without compensation.

(4) "Child Care Child" means a child at least six weeks of age and under 13 years of age, or a child under 18 years of age with special needs. The child does not reside in the home and the provider has supervisory responsibility for the child in the temporary absence of the parent.

(5) "Child with Special Needs" means a child under 18 years of age who requires a level of care over and above the norm for their age due to a physical, developmental, behavioral, mental or medical disability.

(6) "Civil Penalty" means a fine imposed by OCC on a provider for violation on these rules.

(7) "Communicable Disease" means an illness caused by an infectious agent or its toxins.

- (8) "Disinfecting" means using a process for destroying or irreversibly inactivating harmful organisms, including bacteria, viruses, germs and fungi.
- (9) "Family" means a group of individuals related by blood, marriage or adoption, or individuals whose functional relationships are similar to those found in such associations.
- (10) "Infant" means a child who is at least six weeks of age up to 12 months of age.
- (11) "Kindergarten-Age Child" means a child eligible to attend kindergarten in a public school. A kindergarten-age child is considered a school-age child.
- (12) "New Application" means a registration application that has been filed by an applicant who has never had an active registration.
- (13) "Night Care" means care given to a child who sleeps at the family child care home for all or part of the night.
- (14) "OCC" means the Office of Child Care, Early Learning Division of the Department of Education.
- (15) "Occasional" means infrequently or intermittently, including but not limited to care that is provided during summer or other holiday breaks when children are not attending school, but not to exceed 70 calendar days in a year.
- (16) "Oregon Registry" means the voluntary registry at the Oregon Center for Career Development in Childhood Care and Education at Portland State University that documents the training and education of individuals who work in childhood care and education.
- (17) "Outbreak of Communicable Disease" means two cases from separate households associated with a suspected common source.
- (18) "Premises" means the structure that is identified on the application, including indoors and outdoors and space not directly used for child care.
- (19) "Preschool-Age Child" means a child who is 36 months of age up to eligible to attend kindergarten in a public school.
- (20) "Provider" means a resident of the registered family child care home who is responsible for the children in care; is the children's primary caregiver; and the person whose name is on the certificate of registration.
- (21) "Registered Family Child Care Home" means the residence of the provider, who has a current Family Child Care Registration at that address and who provides care in the family living quarters.

- (22) "Registration" means the document a family child care provider is issued by OCC to operate a family child care home where care is provided in the family living quarters of the provider's home pursuant to ORS 329A.330 and OAR 414-205-0000 through 414-205-0170. Registration is limited to one provider at one address.
- (23) "Renewal Application" means a registration application that has been filed by a currently registered family child care provider who wishes to continue registration.
- (24) "Reopen Application" means a registration application that has been filed by an applicant whose registration is expired or closed, including those closures resulting from an address change.
- (25) "Restrictable Disease" means an illness or infection that would prohibit the child from attending child care.
- (26) "Sanitizing" means using a treatment that provides enough heat or concentration of chemicals for enough time to reduce the bacterial count, including disease producing organisms, to a safe level on utensils, equipment and toys.
- (27) "School-Age Child" means a child eligible to attend kindergarten or above in public school. This includes the months from the end of the prior school year to the start of the kindergarten school year.
- (28) "Serious Complaint" means a complaint filed against:
- (a) A registered family child care provider by a person who alleges that:
 - (A) Children are in imminent danger;
 - (B) There are more children in care than allowed by law;
 - (C) Provider is engaging in behavior prohibited under OAR 414-205-0085(6);
 - (D) Children are not being supervised;
 - (E) Multiple or serious fire, health or safety hazards are present in the home;
 - (F) Extreme unsanitary conditions are present in the home; or
 - (G) Adults are in the home who are not enrolled in OCC's CBR; or
 - (b) An individual providing child care, as defined by ORS 329A.250(4), who is not a registered family child care provider by a person who has alleged that there are more children in care than allowed by law.

(29) "Serious Injury or Incident" means any of the following:

- (a) Injury requiring surgery;
- (b) Injury requiring admission to a hospital;
- (c) Injury requiring emergency medical attention;
- (d) Choking and unexpected breathing problems;
- (e) Unconsciousness;
- (f) Concussion;
- (g) Poisoning;
- (h) Medication overdose;
- (i) Broken bone;
- (j) Severe head or neck injury;
- (k) Chemical contact in eyes, mouth, skin, inhalation or ingestion;
- (l) All burns;
- (m) Allergic reaction requiring administration of Epi-Pen;
- (n) Severe bleeding or stitches;
- (o) Shock or confused state;
- (p) Near-drowning.

(30) "Serious Violation" means OCC has made a valid finding when assessing a serious complaint that alleges:

- (a) Children are in imminent danger;
- (b) There are more children in care than allowed by law;
- (c) Provider is engaging in behavior prohibited under OAR 414-205-0085(6);
- (d) Children are not being supervised;

- (e) Multiple or serious fire, health or safety hazards are present in the home;
 - (f) Extreme unsanitary conditions are present in the home; or
 - (g) Adults are in the home who are not enrolled in OCC's CBR; or
 - (h) An individual is providing child care as defined by ORS 329A.250(4) without registering with the Office of Child Care of the Department of Education.
- (31) "Substitute Provider" means a person who acts as the children's primary caregiver in the registered family child care home in the temporary absence of the provider.
- (32) "Toddler" means a child who is at least 12 months of age but is not preschool-age.
- (a) "Younger Toddler" means a child who is at least 12 months of age but is under 24 months of age.
 - (b) "Older toddler" means a child who is at least 24 months of age but is not yet preschool-age.
- (33) "Unsupervised Access to Children" means contact with children that provides the person opportunity for personal communication or touch when not under the direct supervision of a child care provider or staff with supervisory authority.
- (34) "Useable Exit" means an unobstructed door or window through which the provider and the children can evacuate the home in case of a fire or emergency. Doors must be able to be opened from the inside without a key.
- (a) For homes built before July 1, 2010, window openings must be at least 20 inches wide and at least 22 inches in height, with a net clear opening of five square feet (at least 720 square inches) and a sill no more than 48 inches above the floor.
 - (b) For homes built after July 1, 2010, window openings must be at least 20 inches wide and at least 24 inches in height, with a net clear opening of five square feet (at least 720 square inches) and a sill no more than 44 inches above the floor.

414-205-0020 Application for Registration

- (1) The applicant must apply for registration on the form(s) supplied by OCC. The original form(s) must be submitted to OCC for processing.
- (2) Persons submitting new applications must attend a family child care overview session prior to submitting their application to OCC.
- (3) Persons interested in submitting an application must meet the training requirements outlined in OAR 414-205-0055.
- (4) An application for registration is required:
 - (a) For a new registration;
 - (b) For renewing a registration; and
 - (c) For reopening a registration.
- (5) There is a non-refundable filing fee of \$30 for each application. If the provider submits documentation that the provider's family income is below 100% of the Federal Poverty Level, the fee may be reduced.
- (6) All civil penalties must be paid in full.
- (7) To determine if requirements are met, the applicant/provider may be required to supply additional information or permit OCC, a fire marshal, or a public health official to assess the home and/or review child care records.
- (8) Providers must satisfactorily complete an on-site health and safety review conducted by OCC prior to issuance of a new, renewal or reopen registration. The review will ensure that the provider is in compliance with the rules related to health, safety and sanitation.
- (9) If an application for renewal is received by OCC at least 30 days prior to the expiration date of the current registration, the current registration, unless officially revoked, remains in effect until OCC has acted on the application for renewal and has given notice of the action taken.

414-205-0035 General Requirements

- (1) The home in which child care is provided must be the residence of the provider.
- (2) The provider may not hold a medical marijuana card, grow marijuana, or be a distributor of marijuana.
- (3) Registration is limited to one provider per household.
- (4) A registration applies to only the person and address on the certificate of registration and is not transferable to another location or individual.
- (5) The registration is valid for a maximum of two years. The registration period begins with the effective date shown on the certificate of registration. A provider may not care for more than three (3) children, other than the provider's own children, at any one time prior to receiving a certificate of registration from OCC.
- (6) OCC registration records are open to the public on request. However, information protected by state or federal law will not be disclosed.
- (7) The name, address, telephone number, and registration status of providers is public information. However, OCC may withhold from the public a provider's address and telephone number if the provider makes a written request documenting that disclosure of the address and/or telephone number would endanger him/her or a family member living in the home (OAR 137-004-0800). The request must be on a form supplied by OCC.
- (8) The provider shall display the following near the entrance, or in some other area of the home where they may be clearly viewed by parent(s) of children in care:
 - (a) The Certificate of Registration; and
 - (b) Providers must post all serious valid complaint and serious non-compliance letters for 12 calendar months
- (9) The provider shall have no other employment, either in or out of the home, during the hours children are in care.
- (10) OCC staff may conduct an unannounced monitoring visit at least once during the license period.
- (11) The provider or substitute must allow a representative from the Office of Child Care access to the premises any time child care children are present.

- (12) The provider or substitute shall allow an inspection of all areas of the facility that are accessible to child care children, and a health and safety review of other areas of the facility to ensure the health and safety of child care children.
- (13) The provider must allow parents or legal guardians of child care children access to the home during the hours their child(ren) are in care.
- (14) The provider must comply with local, state and federal laws related to immunizations, child care restrictable diseases, child safety systems and seat belts in vehicles, bicycle safety, civil rights laws, and the Americans with Disabilities Act.
- (15) Any caregiver who has reason to believe that any child has suffered abuse (physical injury, mental injury, neglect that leads to physical harm, sexual abuse and/or exploitation, or threat of harm) must report the information to the Department of Human Services Child Welfare (DHS) or to a law enforcement agency. By statute, this requirement applies 24 hours per day.
- (16) The provider must notify parents if there will be a substitute provider and the caregiver's name. In the event of an emergency, a good faith effort will be made to notify parents that a substitute will be caring for the children.
- (17) The provider must notify parents if the children will be away from the home for any part of the day for visits, field trips or any other activity off the premises and the name of the caregiver.
- (18) If an applicant or a provider wishes to provide child foster care, the provider must receive approval from OCC and DHS, prior to placement of the foster child(ren).
- (19) Registered providers shall comply with all conditions placed on their license.
- (20) Information provided to OCC on applications, in records or reports, or any other written or verbal communication, shall be current, complete and accurate.
- (21) Providers shall immediately notify all parents of any closure of the active license.
- (22) Providers must have parent(s) or guardian(s) of each child enrolled in the registered family child care home, sign a declaration form approved by the Office of Child Care verifying they have reviewed a copy of the current license certificate. The declaration shall be updated any time there has been an exception or condition added to the license.
- (23) Providers must post the Early Learning Division Website [www.oregonearlylearning.com] and phone number [1-800-556-6616], and a statement advising parents that they can access information about their child care provider on the child care safety portal.

(24) The provider shall report to OCC:

- (a) Any death of a child while in care, within 24 hours;
- (b) Within 24 hours:
 - (A) Any child that is lost or missing from the premises;
 - (B) Any child that is left behind on a facility excursion;
 - (C) Any child that is left unattended on the premises;
 - (D) Any child that is left alone on the playground; or
 - (E) Any child that is left alone in a vehicle.
- (c) Any serious injury or incident, as defined in OAR 414-205-0010(29) within 5 calendar days after the occurrence. This does not include:
 - (A) Injuries for which a child is evaluated by a professional as a precaution;
 - (B) Injuries for which first aid is administered at the facility, but no further treatment by a medical professional is warranted; or
 - (C) Medical events due to routine, ongoing medical issues, such as asthma or seizures.
- (d) Any damage to the building that affects the provider's ability to comply with these requirements, within 48 hours of the occurrence.
- (e) Any animal bites to a child within 48 hours of occurrence.

(25) The written emergency plan must be given to parents of children in care.

(26) The Office of Child Care may notify parent(s) or guardian(s) of children under 12 months of age enrolled in the registered family child care home of any valid non-compliance with regulations for safe sleep included in OAR 414-205-0090(11).

414-205-0040 The Provider and Other Persons in the Home

(1) The registered provider and any substitute provider shall:

- (a) Be at least 18 years old,
- (b) Have competence, sound judgment and self-control when working with children, and

- (c) Be mentally, physically and emotionally capable of performing duties related to child care.
- (2) No one shall have access to child care children who has demonstrated behavior that may have a detrimental effect on a child. Residents of the home are considered to have access to the child care children even if they are not generally at home during child care hours.
- (3) The applicant and other residents of the home 18 years of age or older must be enrolled in OCC's CBR prior to the issuance of a registration. Residents of the home who are under 18 years of age must be enrolled in the Registry by their 18th birthday.
- (4) The provider must receive confirmation from OCC that an individual 18 years of age or over, is enrolled or conditionally enrolled in the CBR before the individual can:
 - (a) Reside on the premises;
 - (b) Stay overnight on the premises for longer than 14 consecutive days, not to exceed a total of 30 days in a calendar year;
 - (c) Assist the provider; or
 - (d) Volunteer in the child care program.
- (5) Individuals with conditional enrollment in the CBR shall not have unsupervised access to children.
- (6) If additional information is needed to assess a person's ability to care for children or to have access to children, OCC may require references, an evaluation by a physician, counselor, or other qualified person, or other information.
- (7) Any visitor to the home or other adult who is not enrolled in the CBR may not have unsupervised access to children.
- (8) The provider, substitutes and other individuals that are required to be enrolled in the CBR must maintain current enrollment in the CBR at all times while the registered family child care license is active.
- (9) Individuals whose CBR enrollment has been revoked, denied or suspended, may not live in the home; be on the premises during child care hours; or have contact with child care children.

- (10) If any person, who is enrolled in the CBR, has been charged with, arrested for, or a warrant is out for any of the crimes which OCC has determined indicate behavior which may have a detrimental effect on a child, with final disposition not yet reached, registration may be denied or suspended until the charge, arrest, or warrant has been resolved if the person continues to operate, be employed in or reside in the home, or have access to children in the home.
- (11) The provider shall have a written plan to ensure that individuals who are not enrolled or conditionally enrolled in the CBR and are on the child care premises shall not have unsupervised access to children.
- (12) The provider shall maintain a log of arrival and departure times of all individuals 18 and older who are not enrolled or conditionally enrolled in the CBR and enter the home while child care children are present, excluding persons authorized to drop off and pick up a child care child.
- (13) Prior to substituting for the provider, a caregiver must:
 - (a) Be familiar with the requirements for registration and agree to comply with them;
 - (b) Be enrolled in the CBR;
 - (c) Comply with all the requirements placed on the provider, except those in OAR 414-205-0055(1)(a), (2)(c), (3) (c);
 - (d) Have current certification in first aid and infant and child cardiopulmonary resuscitation (CPR). The certifications must be current while the caregiver is substituting for the provider. CPR training must have practical hands-on instruction. CPR courses that involve an on-line component with hands-on instruction may be accepted. Strictly on-line CPR training is not acceptable;
 - (e) Have completed a minimum of two hours of training on child abuse and neglect that is specific to Oregon law;
 - (f) Have current food handler's certification, if preparing or serving food to children;
 - (g) Have completed OCC approved health and safety training; and
 - (h) Have completed OCC approved safe sleep training.

414-205-0055 Training Requirements

- (1) When a person submits a new application for registration as a family child care provider, OCC shall, prior to approving the registration, receive evidence from the person that the person has:
 - (a) Completed the Family Child Care Overview session;
 - (b) A current certification in first aid and infant and child CPR. CPR training must have practical hands-on instruction. CPR courses that involve an on-line component with hands-on instruction may be accepted. Strictly on-line CPR training is not acceptable.
 - (c) A current food handler certification pursuant to ORS 624.570;
 - (d) Have completed a minimum of two hours of training on child abuse and neglect that is specific to Oregon law;
 - (e) Completed OCC approved health and safety training; and
 - (f) Completed OCC approved safe sleep training.

- (2) When a registered family child care provider submits a renewal application, the OCC shall, prior to approving it, receive evidence from the provider that the provider has:
 - (a) A current certification in first aid and infant and child CPR. CPR training must have practical hands-on instruction. CPR courses that involve an on-line component with hands-on instruction may be accepted. Strictly on-line CPR training is not acceptable.
 - (b) A current food handler certification pursuant to ORS 624.570; and
 - (c) Completed a minimum of ten hours of training during the two years preceding the renewal date. The training must be related to the core knowledge categories in the Oregon Registry. At least six clock hours of the ten hours of training must be in child development or early childhood education. A training on recognizing and reporting child abuse and neglect will be accepted after five years (and every five years thereafter) as part of the ten clock hours of training required for licensing, but will not be accepted as part of the required child development training hours.
 - (d) Completed OCC approved health and safety training. If the training is not complete at the time of the application, it must be completed by June 30, 2017.

- (A) OCC will accept duplicate training one additional time if it is a Set 2 (intermediate) or Set 3 (advanced) training or above as described by the Oregon Center for Career Development in Childhood Care and Education; and it is not taken within the same license period.
 - (B) The following core knowledge categories are accepted for the child development and early childhood education requirement: Diversity (D), Family and Community Systems (FCS), Human Growth and Development (HGD), Health Safety and Nutrition (HSN), Learning Environments and Curriculum (LEC), Observation and Assessment (OA), Special Needs (SN), and Understanding and Guiding Behavior (UGB).
- (3) When a person submits a reopen application, the OCC shall, prior to approving it, receive evidence from the individual that the individual has:
- (a) A current certification in first aid and infant and child CPR. CPR training must have practical hands-on instruction. CPR courses that involve an on-line component with hands-on instruction may be accepted. Strictly on-line CPR training is not acceptable.
 - (b) A current food handler certification pursuant to ORS 624.570; and
 - (c) Documentation that individual has ten hours of training related to the Oregon Registry core knowledge categories since the individual's last active child care license was issued. If the individual was previously licensed for less than two years, the training requirements will be prorated as follows: 2.5 hours of training for each six months of the previous license period. A training on recognizing and reporting child abuse and neglect will be accepted again after five years (and every five years thereafter) as part of the ten clock hours of training required for licensing, but will not be accepted as part of the required child development training hours.
 - (d) OCC will accept duplicate training one additional time if it is a Set 2 (intermediate) or Set 3 (advanced) training or above as described by the Oregon Center for Career Development in Childhood Care and Education; and it is not taken within the same license period.
 - (e) Completed OCC approved health and safety training.
 - (f) Completed OCC approved safe sleep training. If the reopen is the result of an address change, the person must complete the OCC approved safe sleep training by January 1, 2019.
- (4) While the registered family child care license is active, the provider must maintain current certification in first aid, infant and child CPR, food handler training, and must complete annual OCC approved health and safety training curriculum.
- (5) All current providers must complete OCC approved safe sleep training by January 1, 2019.

414-205-0065 Children in Care

- (1) A family child care provider may care for a maximum of 10 children under 13 years of age, or under age 18 if a child with special needs, at any one time. This includes the provider's own children, the child care children, foster children, and any other children for whom the provider is responsible.
- (2) Of the 10 children under 13 years of age or under age 18 years of age with special needs, the provider may care for:
 - (a) A maximum of 6 children preschool age or younger, including the provider's children, of which only 2 children may be under 24 months of age.
 - (b) Four school-age children, in addition to the six children preschool-age or younger.
 - (A) More school-age children if there are fewer than 6 children preschool age or younger, as long as there are no more than 10 children in the home at any one time.
- (3) Other children, including but not limited to relatives, neighborhood children or friends of the provider's children, are included in the maximum number of 10 children allowed in care if their parents or other adults responsible for supervising them are not present in the home or are not directly supervising their own child(ren).
- (4) Visiting children and their parents or others directly supervising them can be in the family child care home only on an occasional basis.
- (5) No child younger than 6 weeks of age can be in care in a family child care home. This does not include the provider's child(ren).

414-205-0075 Supervision of Children

The provider or a substitute provider is responsible for the children in care. At all times the provider or substitute provider must:

- (1) Be within sight or sound of all children;
- (2) Be aware of what each child is doing;
- (3) Be near enough to children to respond when needed;
- (4) Be physically present when there are children under the age of 36 months playing outside; and

- (5) Be physically present when kindergarten-age or younger children are playing outside, unless the outside play area is fully fenced and hazard free.

414-205-0085 Guidance and Discipline

- (1) The provider must have a written policy on guidance and discipline of child care children. The policy must be simple and understandable to the child, the parent(s) and to substitute providers.
- (2) The written guidance and discipline policy must be given to all parents.
- (3) The guidance and discipline policy shall:
 - (a) Provide for positive guidance, redirection and the setting of clear boundaries; and
 - (b) Be designed to help the child develop self-control, self-esteem and respect for others.
- (4) Only providers and substitutes shall provide guidance or discipline to child care children.
- (5) Guidance and discipline shall be fair, consistently applied, timely and appropriate to the behavior and age of the child. Positive statements or redirection of behaviors shall be used.
- (6) The following behaviors by caregivers are prohibited:
 - (a) Using any form of corporal punishment, including, but not limited to: hitting, spanking, slapping, beating, shaking, pinching or other measures that produce physical pain, or threatening to use any form of corporal punishment;
 - (b) Using inappropriate forms of restraints, including, but not limited to, tying or binding;
 - (c) Using non-prescription chemicals for discipline or to control behavior;
 - (d) Yelling harshly or using profane or abusive language;
 - (e) Using mental or emotional punishment, including, but not limited to: name calling, ridicule or threats;
 - (f) Confining a child in an enclosed area (e.g. a locked or closed room, closet or box);
 - (g) Withdrawal or the threat of withdrawal of food, rest or bathroom opportunities;

- (h) Punishing a child for toileting accidents or for refusing to eat food;
 - (i) Engaging in any form of public or private humiliation, rejecting, terrorizing, neglecting or corrupting a child or any form of emotional abuse; and
 - (j) Requiring a child to remain silent or inactive for excessive periods of time or removing a child from activities or the group for excessive periods of time.
- (7) Parental request or permission to use any form of behavior listed in subsection (6) of this rule, does not give the provider or substitute provider permission to do so.

414-205-0090 Program of Activities

- (1) The provider must give the children's needs first priority, assuring that they get adequate care and attention.
- (2) Providers must make available activities, materials, and equipment for both indoor and outdoor play that provide a variety of experiences geared to the ages and abilities of the child(ren).
- (3) The children's activities must allow choice and develop skills based on each child's age and abilities.
- (4) A balance of active and quiet play must be provided, both indoors and outdoors.
- (5) The provider must have routines for eating, napping, diapering and toileting, with flexibility to respond to the needs of each child.
- (6) An individual bed, mat or cot with individual bedding appropriate to the season shall be provided at nap time for each toddler and preschool-age child in the home and for each school-age child who wants to rest.
 - (a) Family beds or sofas may be used with individual bedding appropriate to the season.
 - (b) If the parent(s) so request, siblings may share the same bed.
 - (c) The upper level of bunk beds shall not be used for children under ten years of age.
 - (d) The upper level of bunk beds may be used for children ten years or older if the bed rail and safety ladder are in place.
- (7) Child care children shall not be exposed to more than two hours of screen time per day. All media exposure must be developmentally and age appropriate.

- (8) Throughout the day, each infant and toddler shall receive physical contact and individual attention (e.g., being held, rocked, talked to, sung to, and taken on walks inside and outside the home).
- (9) The provider must have routines for eating, napping, diapering and toileting, with flexibility to respond to the needs of each child.
- (10) Infants shall have a variety of appropriate infant toys stimulating to the senses.
- (11) The following safe sleep practices must be followed:
 - (a) Each infant shall sleep in a crib, portable crib, bassinet or playpen with a clean, non-absorbent mattress. All cribs, portable cribs, bassinets and playpens must comply with current Consumer Product Safety Commission (CPSC) standards;
 - (b) Bassinets may only be used until the infant is able to roll over on their own;
 - (c) Each mattress shall:
 - (A) Fit snugly; and
 - (B) Be covered by a tightly fitting sheet;
 - (d) A clean sheet shall be provided for each child;
 - (e) Infants must be placed on their backs on a flat surface for sleeping;
 - (f) While on the child care premises, if an infant falls asleep in a place other than their crib, portable crib, bassinet or playpen, the provider must immediately move the infant to an appropriate sleep surface;
 - (g) No child shall be routinely left in a crib, portable crib, bassinet or playpen except for sleep or rest;
 - (h) There shall be no items in the crib, portable crib, bassinet or playpen with the infant, except a pacifier (e.g. bottles, toys, pillows, stuffed animals, blankets, bumpers);
 - (i) Swaddling or other clothing or covering that restricts the child's movement is prohibited;
 - (j) Clothing or items that could pose a strangulation hazard (e.g. teething necklaces, pacifier attachments, clothing drawstrings) are prohibited; and

- (k) Car seats are to be used for transportation only. Children who are asleep in a car seat must be removed upon arrival to the home and placed in an appropriate sleep surface.

414-205-0100 Health

- (1) All caregivers shall take appropriate precautions to prevent shaken baby syndrome and abusive head trauma.
- (2) The home must be a healthy environment for children.
 - (a) No person shall smoke or carry any lighted smoking instrument, including an e-cigarette or vaporizer in the family child care home or within ten feet of any entrance, exit, or window that opens or any ventilation intake that serves an enclosed area, during child care hours or when child care children are present. No person shall use smokeless tobacco in the family child care home during child care hours or when child care children are present. No person shall smoke, carry any lighted smoking instrument, including an e-cigarette, or vaporizer or use smokeless tobacco in motor vehicles while child care children are passengers.
 - (b) No one shall consume alcohol on the family child care home premises during child care hours or when child care children are present. No one shall be under the influence of alcohol on the family child care home premises during child care hours or when child care children are present.
 - (c) Notwithstanding OAR 414-205-0000(5), no one shall possess, use or store illegal controlled substances on the family child care home premises. No one shall be under the influence of illegal controlled substances on the family child care home premises.
 - (d) Notwithstanding OAR 414-205-0000(5), no one shall grow or distribute marijuana on the premises of the registered family child care home. No adults shall use marijuana on the registered family child care home premises during child care hours or when child care children are present.
 - (e) No adult under the influence of marijuana shall have contact with child care children.
 - (f) Notwithstanding OAR 414-205-0000(5), marijuana plants shall not be grown or kept on the registered family child care home premises.
 - (g) All medical marijuana must be kept in its original container if purchased from a dispensary and stored under child safety lock. All medical marijuana derivatives and associated paraphernalia must be stored under child safety lock.

- (h) Effective July 1, 2015, all marijuana, marijuana derivatives and associated paraphernalia must be stored under child safety lock.
 - (i) There must be at least one flush toilet and one hand-washing sink available to children. Steps or blocks must be available to ensure children can use the toilet and sink without assistance. Drinking water for preparing food, infant formula, drinking or cooking shall not be obtained from bathroom sinks or diaper changing sinks.
 - (j) The room temperature must be at least 68°F during the hours the child care business is conducted.
 - (k) Rooms occupied by children must have a combination of natural and artificial lighting.
 - (l) Floors must be free of splinters, large unsealed cracks, sliding rugs and other hazards.
- (3) First aid supplies and a chart or handbook of first aid instructions shall be maintained in one identified place and kept out of reach of children.
- (a) The first aid supplies shall include: band aids, adhesive tape, sterile gauze pads, soap or sealed antiseptic towelettes or solution to be used as a wound cleaning agent, scissors, disposable plastic gloves for handling blood spills, a solution for disinfecting after a blood spill, a sanitary temperature taking device and CPR mouth guards.
 - (b) A first aid kit and a copy of each child's emergency medical information including a medical release form shall be taken any time the caregiver is transporting child care children or taking child care children on field trips.
- (4) Infants must be laid on their backs on a flat surface for sleeping.
- (5) Illness:
- (a) A provider shall not admit or retain in care, except with the written approval of the local health office, a child who:
 - (A) Is diagnosed as having or being a carrier of a child care restrictable disease, as defined in Oregon Health Authority administrative rule; or
 - (B) Has one of the following symptoms or combination of symptoms or illness;
 - (i) Fever over 100°F, taken under the arm;
 - (ii) Diarrhea (more than one abnormally loose, runny, watery or bloody stool);
 - (iii) Vomiting;

- (iv) Nausea;
 - (v) Severe cough;
 - (vi) Unusual yellow color to skin or eyes;
 - (vii) Skin or eye lesions or rashes that are severe, weeping or pus-filled;
 - (viii) Stiff neck and headache with one or more of the symptoms listed above;
 - (ix) Difficulty breathing or abnormal wheezing;
 - (x) Complaints of severe pain.
- (b) A child, who, after being admitted into child care, shows signs of illness, as defined in this rule, shall be separated from the other children, and the parent(s) notified and asked to remove the child from the provider's home as soon as possible.
- (6) If a child has mild cold symptoms that do not impair his/her normal functioning, the child may remain in the provider's home and the parent(s) notified when they pick up their child
- (7) Parents must be notified if their child is exposed to an outbreak of a communicable disease.
- (8) Prescription and non-prescription medication shall only be given to a child if the provider has written authorization from the parent, as required in OAR 414-205-0130(2)(b).
- (9) Prescription and non-prescription medications must be properly labeled and stored.
- (a) Non-prescription medications or topical substances must be labeled with the child's name.
 - (b) Prescription medications must be in the original container and labeled with the child's name, the name of the drug, dosage, directions for administering, and the physician's name.
 - (c) Medication requiring refrigeration must be kept in a separate, tightly covered container, marked "medication," in the refrigerator.
- (10) Sunscreen is considered a non-prescription medication and may be used for child care children under the following conditions:
- (a) Providers must obtain written parental authorization prior to using sunscreen.

- (b) One container of sunscreen may be used for child care children unless a parent supplies an individual container for their child. The sunscreen shall be applied in a manner that prevents contaminating the container.
 - (A) Parents must be informed of the type of product and the sun protective factor (SPF).
 - (B) Parents must be given the opportunity to inspect the product and active ingredients.
 - (c) If sunscreen is supplied for an individual child care child, the sunscreen must be labeled with the child's first and last name and must be used for only that child.
 - (d) Providers must reapply sunscreen every two hours while the child care children are exposed to the sun.
 - (e) Providers shall use a sunscreen with an SPF of 15 or higher and must be labeled as "Broad Spectrum".
 - (f) Providers shall not use aerosol sunscreens on child care children.
 - (g) Sunscreen shall not be used on child care children younger than six months.
 - (h) Child care children over six years of age may apply sunscreen to themselves under the direct supervision of the provider or staff member.
- (11) Parents must be informed daily of any medications given to their child or any injuries their child has had.
- (12) If a child with allergies is enrolled who needs a specific plan for caring for that child, such a plan shall be developed in writing between the provider, parents, and if necessary, outside specialists. All staff who come in contact with that child shall be fully aware of the plan.
- (13) The provider must provide or ensure the availability of meals and snacks appropriate for the ages and needs of the children served.
- (a) Meals and snacks must be based on the guidelines of the USDA Child Care Food Program.
 - (b) Foods must be stored and maintained at the proper temperature.
 - (c) Foods must be prepared and served according to the minimum standards for food handler certification.
 - (d) Infants must be held or sitting up for bottle feeding. Propping bottles is prohibited.

- (e) Children shall not be laid down with a bottle for sleeping.
- (14) Children who cannot feed themselves shall be held or, if able to sit alone, fed in an upright position.
- (a) Infants up to six months of age shall be held or sitting up in a caregiver's lap for bottle feeding;
 - (b) Bottles shall never be propped. The child or a caregiver shall hold the bottle.
 - (c) Infants no longer being held for feeding shall be fed in a manner that provides safety and comfort.
- (15) Children of any age shall not be laid down with a bottle.
- (16) Any animal at the family child care home shall be in good health and be a friendly companion for the children in care.
- (a) Potentially aggressive animals must not be in the same physical space as the children.
 - (b) Dogs and cats must be vaccinated according to a licensed veterinarian's recommendations.
 - (c) Dogs and cats shall be kept free of fleas, ticks and worms.
- (17) Animal litter boxes shall not be located in areas accessible to children or areas used for food storage or preparation.
- (18) Caregivers must be physically present when children are interacting with animals.
- (19) Exotic animals, including, but not limited to: reptiles (e.g. lizards, turtles, snakes) amphibians, monkeys, hook-beaked birds, baby chicks and ferrets are prohibited unless they are housed in and remain in a tank or other container which precludes any direct contact by children. Educational programs that include prohibited animals and are run by zoos, museums and other professional animal handlers are permitted.
- (20) Parents must be made aware of the presence of any animals on the premises.

414-205-0105 Testing for Lead in Drinking Water

- (1) For purposes of this rule, “drinking water faucet or fixture”
 - (a) means any plumbing fixture on the premises used to obtain water for drinking, cooking, preparing infant formula, or preparing food; and
 - (b) does not include any plumbing fixture used to obtain water for handwashing, bathing, or diaper changing.
- (2) Water obtained from fixtures identified in subsection (1)(b) of this rule cannot be used for drinking, cooking, preparing infant formula, or preparing food.
- (3) Initial Testing
 - (a) Any provider with an active registration as of September 30, 2018 must test each drinking water faucet or fixture by November 30, 2018.
 - (b) The following providers must test each drinking water faucet or fixture for lead in the water prior to being eligible to receive a license from OCC:
 - (A) Any provider with a pending registration application as of September 30, 2018; and
 - (B) Any provider applying for registration on or after September 30, 2018, including, but not limited to, initial applications, renewal applications, and reopen applications.
 - (c) A provider identified in (3)(a) or (b) does not need to conduct the initial testing if:
 - (A) All drinking water faucets or fixtures have been tested within 6 years prior to the effective date of this rule; and
 - (B) The testing was conducted in accordance with the requirements of subsection (5) of this rule.
 - (d) A provider identified in subsection (3)(a) must submit all test results to OCC no later than November 30, 2018. The test results must be accompanied by a written statement that identifies the location of each drinking water faucet or fixture tested.
 - (e) A provider identified in (3)(b) must submit test results to OCC within 10 calendar days of the facility receiving the results from the laboratory. The test results must be accompanied by a written statement that identifies the location of each drinking water faucet or fixture tested.

(4) Ongoing Testing

- (a) After a provider conducts the initial testing under subsection (3) of this rule, the provider must test all drinking water faucets or fixtures at least once every six years from the date of the last test.
- (b) All test results obtained in accordance with subsection (4)(a) of this rule must be submitted to OCC within 10 calendar days of the provider receiving the results from the laboratory. The test results must be accompanied by a written statement that identifies the location of each drinking water faucet or fixture tested.

(5) Sampling and Testing

- (a) All sample collection and testing must be in accordance with the Environmental Protection Agency (EPA)'s 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference.
- (b) All testing must be performed by a laboratory accredited by the Oregon Laboratory Accreditation Program according to standards set under OAR chapter 333, division 64 in effect as of September 30, 2018.
- (c) If a facility does not use any of the on-site plumbing fixtures to obtain water for drinking, cooking, preparing infant formula, or preparing food, the provider must:
 - (A) Submit a written statement to OCC identifying the alternative source of water and confirming that the provider does not use any on-site plumbing fixtures for drinking, cooking, preparing infant formula, or preparing food; and
 - (B) Notify OCC in writing if the alternative source of water changes.

(6) Results

- (a) If test results show that water from any drinking water faucet or fixture has 15 parts per billion (ppb) or more of lead, the provider must:
 - (A) Prevent access to that drinking water faucet or fixture immediately after receiving the test results; and
 - (B) Continue to prevent access to that drinking water faucet or fixture until mitigation is completed in accordance with subsection (6)(b) of this rule.
- (b) Following receipt of test results showing that water from any drinking water faucet or fixture has 15 parts per billion (ppb) or more of lead, the provider must:

(A) Submit a corrective action plan to OCC for approval within 60 days of receiving the test results. The corrective action plan must identify an appropriate mitigation strategy in accordance with Module 6 of the EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference; and

(B) Implement the mitigation method within 30 days of approval by OCC.

(7) Recordkeeping and Posting

(a) The provider must keep a copy of the most recent lead test results on-site at all times.

(b) The provider must post the most recent lead test results summary provided by OCC in an area of the facility where the summary can be clearly viewed by parents. The provider must post the lead test results summary immediately after receiving the summary from OCC.

(8) Providers must follow the routine practices identified in Module 6 of the EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference, at all times.

414-205-0110 Safety

(1) Children shall be protected from fire and safety hazards. Providers must have the following protections in place:

(a) All exposed electrical outlets in rooms used by preschool or younger children must have hard-to-remove protective caps or safety devices installed when the outlet is not in use.

(b) Extension cords shall not be used as permanent wiring;

(c) All appliance cords must be in good condition;

(d) Multiple connectors for cords shall not be used;

(e) A grounded power strip outlet with a built-in over-current protection may be used;

(f) A stable barrier shall be installed to prevent children from falling into hazards, including, but not limited to: fireplaces, heaters and woodstoves that are in use when child care children are present;

(g) A secure barrier shall be placed at the top and/or bottom of all stairways accessible to infants and toddlers;

- (h) A working smoke detector on each floor and in any area where children nap;
 - (i) A working fire extinguisher with a rating of at least 2-A:10-BC;
 - (j) Firearms, BB guns, pellet guns and ammunition kept under lock, with ammunition stored and locked separately. Firearms, BB guns and pellet guns must remain unloaded;
 - (k) Cleaning supplies, paints, matches, lighters, and plastic bags kept under child-safety lock;
 - (l) Other potentially dangerous items, such as medicine, drugs, sharp knives and poisonous and toxic materials kept under child-safety lock;
 - (m) Flammable and combustible liquids, such as paint thinner and gasoline, shall be stored in the original container or a safety container and, if over one gallon, kept in an unattached storage building;
 - (n) If any preschool age or younger children are in care, poisonous plants must be kept out of the reach of children; and
 - (o) All clear glass panels in doors clearly marked at child level.
- (2) All floor levels used by children must have access to two useable exits, as defined in OAR 414-205-0010(34), to the outdoors.
- (a) If a basement is used for child care purposes, the requirement for two useable exits may be met by one of the following:
 - (A) A sliding glass door or swinging door to the outside and a window that meets the definition of a useable exit; or
 - (B) A window which meets the definition of a useable exit and an internal stairway to ground level that has unobstructed and direct access to the outdoors.
 - (b) If a window, which meets the definition of a useable exit, is used:
 - (A) Steps must be placed under the window to allow children to exit without assistance; and
 - (B) The window must be kept in good working condition.
 - (c) If a window used as an exit has a window well, a mechanism must be in place to allow children to exit the window well.

- (3) Second floors (does not apply to providers registered continuously at the same address before 2009, unless the provider has moved the child care license to a new residence):
 - (a) Child care children shall not sleep on the second floor or above;
 - (b) Care shall not be provided for infants and toddlers on the second floor or above;
 - (c) Night care shall not be provided on the second floor or above;
 - (d) Children may be allowed on the second floor to use the bathroom if the only bathroom is on the second floor;
 - (e) Care can be provided for preschool and school-age children on the second floor or above, if:
 - (A) There are two staircases to the ground level and all children are mobile enough to exit safely; or
 - (B) The designated fire marshal has approved the use of the upper floor.
- (4) The provider must have a written plan for evacuating and removing children to a safe location in an emergency. The plan must be posted in the home, familiar to the children and the caregivers, and practiced at least every other month and must include:
 - (a) Procedures for notifying parents or other adults responsible for the children, of the relocation and how children will be reunited with their families;
 - (b) Procedures to address the needs of individual children, including infants and toddlers, children with special needs and children with chronic medical conditions;
 - (c) An acceptable method to ensure that all children in attendance are accounted for
 - (d) Procedures for handling natural disasters (e.g. fire, earthquake, etc.) and man-caused events, such as violence at a child-care facility;
 - (e) Procedures in the event that children must shelter-in-place or if the child-care home must be locked-down so that no one can enter or leave; and
 - (f) Procedures for maintaining continuity of child care operations.
- (5) A telephone in working condition must be in the family child care home.
 - (a) Parents must be given the telephone number so they can contact the provider if needed.

- (b) Emergency telephone numbers for fire, ambulance, police and poison control and the provider's home address must be posted in a visible location
- (6) The building, grounds, water supply, and toys, equipment and furniture used by children must be maintained in a hazard-free condition.
 - (a) Broken toys, furniture and equipment must be removed from areas accessible to children.
 - (b) Both the exterior and interior of the home must be maintained in good repair.
 - (c) Painted surfaces must be in good condition, both inside and outside, to avoid exposing children to lead paint.
 - (d) The provider shall report to OCC any damage to the building that affects the provider's ability to comply with these requirements, within 48 hours after the occurrence.
- (7) If a caregiver is transporting children, the caregiver must have a valid driver's license and proof of appropriate insurance.
- (8) The number of children transported shall not exceed the number of seat belts or child safety systems available in the vehicle
- (9) The provider must take precautions to protect children from vehicular traffic. The provider shall:
 - (a) Require drop off and pick up only at the curb or at an off-street location protected from traffic.
 - (b) Assure that any adult who supervises drop-off and loading can see and assure that children are clear of the perimeter of all vehicles before any vehicle moves.
- (10) The following vehicles may be used to transport child care children:
 - (a) A vehicle manufactured to carry fewer than ten passengers;
 - (b) A school bus or a multi-function school activity bus;
 - (c) A vehicle manufactured to carry ten or more passengers that was manufactured in 2010 or after; or
 - (d) A vehicle manufactured to carry ten or more passengers that was manufactured before 2010, with the following conditions:

- (A) Travel speed may not exceed 50 mph; and
- (B) The vehicle must have an annual safety inspection by a garage, dealership or auto repair shop. Proof of inspection must be on the form provided by the Early Learning Division or on a form provided by the inspector which contains the same information.

414-205-0120 Sanitation

- (1) Pre-mixed sanitizers and disinfectants that are EPA registered and meet Oregon Health Authority criteria may be used in all areas of the home per manufacturer instructions.
- (2) All caregivers and children must wash their hands with soap and warm, running water:
 - (a) Before handling food;
 - (b) Before assisting with feeding;
 - (c) Before and after eating;
 - (d) After diapering;
 - (e) After using the toilet;
 - (f) After assisting someone with toileting;
 - (g) After nose wiping;
 - (h) After playing outside; and
 - (i) After touching an animal or handling pet toys.
- (3) Hand sanitizers shall not replace hand washing. If hand sanitizers are present in the home, they shall be kept out of children's reach and shall not be used on children.
- (4) All toys, equipment and furniture used by children must be cleaned, rinsed and sanitized regularly and whenever soiled.
- (5) Diaper changing surfaces must be either:
 - (a) Non-absorbent and easily disinfected;

- (b) Disposed of after each use; or
- (c) Laundered after each use.
- (6) The diaper changing area shall be located so that hand washing can occur immediately after diapering without contacting other surfaces or children.
- (7) The building and grounds must be maintained in a clean and sanitary manner.
- (8) All garbage, solid waste, and refuse must be disposed of regularly, in a safe and sanitary manner.
- (9) Bio-contaminants including but not limited to bodily fluids and blood shall be disposed of in a manner that prevents exposure to children.
- (10) The home's water supply must be safe to drink.
- (11) Wading pools are prohibited for wading.

414-205-0130 Record Keeping

- (1) The following records, except those specified in OAR 414-205-0105(7)(a), shall be kept by the provider for at least one year. These records shall be available at all times to OCC:
 - (a) Information from the parent(s) for each child at the time of admission:
 - (A) Name and birth date of the child;
 - (B) Any chronic health problem(s), including allergies, the child has;
 - (C) Date child entered care;
 - (D) Names, work and home telephone numbers and addresses, and the work hours of the parent(s) or legal guardian(s);
 - (E) Name and telephone number of person(s) to contact in an emergency;
 - (F) Name and telephone number of person(s) to whom the child may be released;
 - (G) The name of the school attended by the child care child; and
 - (H) Name, address and telephone number of the child's doctor and dentist.

- (l) Health history of any problems that could affect the child's participation in child care.
 - (b) Daily attendance records, including dates each child attended and arrival and departure times for each day. Times shall be recorded as the child care children arrive and depart;
 - (c) Medications administered, including the child's name, and the date and time of dosage and the dosage amount; and
 - (d) Injuries to a child.
- (2) The provider must have a written statement from the parent(s) regarding whether or not the provider is authorized to:
- (a) Obtain emergency medical treatment for a child;
 - (b) Administer medications to a child;
 - (c) Take a child on a field trip or other activity outside the home or participate in any water activity; and
 - (d) Transport a child to or from school or allow a child to bus or walk to or from school or home.

414-205-0140 Night Care

A provider providing night care must:

- (1) Have a written plan for the care, mutually agreed upon by the parent(s) and the provider;
- (2) Have a written plan for emergency situations occurring during the night;
- (3) Be awake for the arrival and departure of each child in night care; and
- (4) Follow all other applicable Registration rules.

414-205-0150 Exceptions to Rules

- (1) A provider may request an exception to a rule.
 - (a) An exception must be requested on a form provided by OCC;
 - (b) The provider must provide a justification for the requested exception and an explanation of how the provider will ensure, through safeguards or other conditions, the health, safety and well-being of the children.
- (2) The provider must be in compliance with the rule as written until the provider has received approval for the exception from OCC.
- (3) In instances where care that is subject to registration, as defined in subsection (2) of rule 414-205-0000, will not be provided in the provider's own residence, the applicant/provider must request and receive approval for an exception prior to providing care at that location. In all respects, the location must appear and be arranged as a residence.
- (4) No exception to a rule shall be granted unless the health, safety, and well-being of the children are ensured.
- (5) An exception is valid only for the specified dates for which it is issued.
- (6) The granting of an exception to a rule shall not set a precedent, and each request shall be evaluated on its own merits.

414-205-0160 Complaints

- (1) The Office of Child Care will respond to complaints made on registered and illegal providers, and will cooperate with law enforcement or other agencies in response to allegations of child abuse or noncompliance.
 - (a) Any and all complaints may result in an on-site assessment at the family child care home;
 - (b) All serious complaints will result in an on-site assessment at the family child care home;
 - (c) Complaints alleging child abuse or neglect will be reported to the Department of Human Services Child Welfare (DHS) or local law enforcement agencies.

- (2) New applicants for registration will be given a copy of OCC's complaint procedures at the time of the on-site health and safety review. The complaint procedures are also available upon request.

414-205-0170 Suspension, Denial, Revocation, Findings Reviews and Civil Penalties

- (1) A provider has the right to a review of any finding made by OCC. New applicants for registration will be given a copy of OCC's findings review procedures at the time of the on-site inspection. Information on the OCC findings review process will be in complaint letters. The OCC findings review procedures are also available upon request.
- (2) The Office of Child Care may immediately, and without prior notice, suspend the child care registration when, in the opinion of OCC, such action is necessary to protect the children from physical or mental abuse or a substantial threat to health, safety or well-being. Such action may be taken before an investigation is completed.
- (3) A provider whose registration has been suspended must immediately notify, verbally or in writing, all parents of the suspension.
- (4) A provider whose registration has been suspended must immediately provide OCC with all names, work and home telephone numbers and addresses of the parent(s) or legal guardian(s) for each child.
- (5) A provider whose registration has been suspended must post the suspension in the home where it can be viewed by parents and others for the duration of the suspension.
- (6) If necessary to protect children, OCC may give public notice of denial, suspension or revocation action taken. The type of notice will depend on individual circumstances.
- (7) If the provider does not request a hearing and the conditions which resulted in suspension have not been corrected, the registration shall be revoked.
- (8) Registration may be denied or revoked if a registered family child care home fails to meet requirements, provide OCC with information requested, allow an inspection, correct deficiencies, or is operated or maintained in a manner which is harmful to the health, safety or well-being of children in care.
- (9) A registered family child care home whose registration has been denied or revoked must immediately notify all parents of the closure and shall post a notice of the closure where it can be viewed by parents and others. The notice shall remain posted for a minimum of 2 weeks.

- (10) The provider has the right to appeal any decision to deny, suspend, or revoke the registration, subject to the provisions of Chapter 183, Oregon Revised Statutes.
- (11) Any action taken by OCC to deny, suspend, or revoke registration may be reported to the Department of Human Services, USDA Child Care Food Programs and child care resource and referral system.
- (12) A provider whose registration has been denied for cause (e.g. health and safety concerns, criminal activity or child protective services involvement) or revoked for cause shall not be eligible to reapply for 5 years after the effective date of the closure.
- (13) If any person, who is enrolled in the CBR, has been charged with, arrested for, or a warrant is out for any of the crimes which OCC has determined indicate behavior which may have a detrimental effect on a child, with final disposition not yet reached, registration may be denied or suspended or revoked until the charge, arrest, or warrant has been resolved if the person continues to operate, be employed in or reside in the home, or have access to children in the home.
- (14) Registration may be denied, suspended or revoked if an individual listed in OAR 414-205-0075 has a child protective services history or an open child protective services or law enforcement case that would disqualify the individual from the CBR.
- (15) Violations of these rules or terms and conditions of certification under these rules may be subject to a civil penalty up to \$750 per violation.
- (16) Whenever the Office of Child Care (OCC) investigates an alleged complaint at a registered facility, or a facility that may be operating in violation of the requirements of ORS 329A.250 through 329A.450, OCC shall:
 - (a) Provide technical assistance as appropriate;
 - (b) Send written notice of the complaint visit to the facility with a finding of valid, unable to substantiate, or invalid; and
 - (c) OCC shall assess whether additional legal actions are appropriate, including but not limited to civil penalties, denials, revocations or suspensions, depending upon:
 - (A) Numbers of previous violations of the same rule; or
 - (B) Circumstances surrounding the rule violation.
- (17) For a serious violation, as defined in OAR-414-205-0010 (30), a provider may be subject to a civil penalty not to exceed \$750 for each violation.

- (18) For a non-serious violation, a provider may be subject to a civil penalty of \$250 for each violation.
- (19) Each day that a child care facility is operating in violation of any of the rules and conditions of certification is a separate violation of the rules.
- (20) An individual or entity that provides child care subject to licensing in a home or facility that is not certified with the Office of Child Care, may be subject to a civil penalty not to exceed \$1,500 per day of operation of the uncertified facility.
- (21) Notwithstanding the Office of Child Care's (OCC) decision to impose a civil penalty for one or more rule violations, OCC may also take action to deny, suspend or revoke a certification for the same rule violation or violations.
- (22) The provider has the right to appeal any decision to impose a civil penalty, subject to the provisions of chapter 183, Oregon Revised Statutes.
- (23) Failure to pay a civil penalty in which the Office of Child Care has issued a final order by default or a final order after a contested case hearing shall be grounds for denial or revocation of the facility's certification.



Rules for

Certified Family Child Care

Effective 8/13/19

Oregon Department of Education
Early Learning Division
Office of Child Care
503-947-1400 • 1-800-556-6616

Contents

DIVISION 350 CERTIFIED FAMILY CHILD CARE HOMES.....	3
414-350-0000 Applicability of Rules.....	3
414-350-0010 Definitions.....	4
414-350-0020 Application for a Child Care Certificate	9
414-350-0030 Issuance of a Child Care Certificate.....	11
414-350-0040 Exceptions to Rules.....	12
414-350-0050 General Requirements.....	13
414-350-0060 Enrollment	16
414-350-0070 Arrival and Departure.....	17
414-350-0080 Records	18
414-350-0090 General Requirements.....	19
414-350-0100 The Provider	22
414-350-0110 Assistants	24
414-350-0115 Training Requirements	25
414-350-0120 Caregiver/Child Ratios and Supervision	27
414-350-0130 General Requirements.....	31
414-350-0140 Indoor Area.....	32
414-350-0150 Outdoor Area.....	33
414-350-0160 Sanitation	34
414-350-0165 Testing for Lead in Drinking Water.....	37
414-350-0170 Home Safety.....	39
414-350-0180 Illness or Injury	42
414-350-0190 Animals in the Certified Family Child Care Home	45
414-350-0200 Food Selection, Storage, and Preparation	46
414-350-0210 Meals and Snacks	47
414-350-0220 General Requirements.....	50
414-350-0230 Equipment, Furniture, and Supplies.....	54
414-350-0235 Infant and Toddler Furniture and Equipment.....	55
414-350-0240 Guidance and Discipline	56
414-350-0250 Transportation	57
414-350-0375 Night Care	58

414-350-0380 Swimming Activities60
414-350-0390 Suspension, Denial and Revocation 65
414-350-0405 Civil Penalty.....66

DIVISION 350 CERTIFIED FAMILY CHILD CARE HOMES

414-350-0000 Applicability of Rules

- (1) OAR 414-350-0000 through 414-350-0405 set forth the Office of Child Care's (OCC) requirements for the inspection and certification of certified family child care homes subject to Oregon laws governing child care facilities (ORS 329A.030, 329A.250 through 329A.310, 329A.350 through 329A.460, and 329A.990) that:
 - (a) Care for no more than 16 children; and
 - (b) Are located in a building constructed as a single-family dwelling.
- (2) Individuals who are not enrolled in the Central Background Registry because of removal, denial for cause, or voluntary surrender in lieu of legal action, may only care for their own children or children related within the fourth degree as determined by civil law, pursuant to ORS 329A.252.
- (3) The following child care facilities are specifically excluded by law and are not required to comply with these rules:
 - (a) A registered family child care home;
 - (b) A facility providing care for preschool children that is primarily educational for four hours or less per day and where no preschool age child is present at the facility for more than four hours per day except as provided in 414-350-0000(2);
 - (c) Care provided in the home of the child; or
 - (d) A facility that provides care on an occasional basis by a person, sponsor, or organization not ordinarily engaged in providing child care except as provided in 414-350-0000(2); or
 - (e) A facility that provides care for no more than three children other than the person's own children except as provided in 414-350-0000(2);
 - (f) A facility that provides care for children from only one family other than the person's own family except as provided in 414-350-0000(2).
- (4) If any court of law finds that any clause, phrase, or provision of these rules is unconstitutional or invalid for any reason whatsoever, this finding shall not affect the validity of the remaining portion of these rules.
- (5) For purposes of these rules, the determination of compliance or noncompliance shall be made by OCC.

- (6) Providers have a right to review any action or decision affecting them. The OCC grievance procedures are available upon request to all applicants for child care certification or operators of certified family child care homes.
- (7) These rules apply only during the hours the provider is conducting the certified family child care business.

414-350-0010 Definitions

The following words and terms, when used in OAR 414-350-0000 through 414-350-0405, have the following meanings:

- (1) “Activity Area” means the area of the home that is available, during all the hours of operation, for the children’s activities. This area excludes the food preparation area of the kitchen, bathrooms, storage areas, and those parts of rooms occupied by heating stoves, furniture and stationary equipment not used by children.
- (2) “Attendance” means children actually present in the home at any given time.
- (3) “Capacity” means the total number of children allowed in the certified family child care home at any one time, based on the available square footage, the ages of the children to be served and the total number of staff.
- (4) “Caregiver” means any person, including the provider, who cares for the children in the certified family child care home and works directly with the children, providing care, supervision and guidance.
- (5) “Central Background Registry” means OCC’s Registry of individuals who have been approved to be associated with a child care facility in Oregon pursuant to ORS 329A.030 and OAR 414-061-0000 through 414-061-0120.
 - (a) “CBR Enrollment” means approval for a 5 year period to be enrolled in the CBR following an Oregon State Police criminal records check, child abuse and neglect records check, checks of adult protective services and foster care certification and an FBI records check.
 - (b) “CBR Conditional Enrollment” means temporary approval to be enrolled in the CBR following a Oregon State Police records check and child abuse and neglect records check but prior to receipt by OCC of the results of the required FBI records check.
- (6) “Certificate” means the document that is issued by OCC to a certified family child care home pursuant to ORS 329A.280.

- (7) “Certified Family Child Care Home” or “Home” means: a child care facility located in a building constructed as a single family dwelling that has a certificate to care for a maximum of 16 children at any one time.
- (8) “Child Care” means the care, supervision, and guidance on a regular basis of a child, unaccompanied by a parent, guardian, or custodian, during a part of the 24 hours of the day, with or without compensation. Child care does not include the care provided:
- (a) In the home of the child;
 - (b) By the child’s parent or guardian, or person acting in loco parentis;
 - (c) By a person related to the child by blood or marriage within the fourth degree as determined by civil law;
 - (d) On an occasional basis by a person, sponsor, or organization not ordinarily engaged in providing child care;
 - (e) By providers of medical services; or
 - (f) By a person who is a member of the child’s extended family, as determined by OCC on a case-by-case basis.
- (9) “Child Care Child” means any child six weeks of age or older and under 13 years of age, or a child with special needs under the age of 18 who requires a level of care over and above the norm for his/her age, and for whom the provider has supervisory responsibility in the temporary absence of the parent.
- (10) “Child with Special Needs” means a child under the age of 18 who requires a level of care over and above the norm for his/her age due to a physical, developmental, behavioral, mental or medical disability.
- (11) “Child Care Facility” means any facility that provides child care to children, including a child care center, certified family child care home, and registered family child care home. It includes those known under a descriptive name, such as nursery school, preschool, kindergarten, child play school, before and after school care, or child development center, except those excluded under ORS 329A.250. This term applies to the total child care operation. It includes the physical setting, equipment, staff, provider, program, and care of children.
- (12) “Civil Penalty” means a fine imposed by OCC on a provider for violation of these rules.
- (13) “Enrollment” means all children registered to attend the certified family child care home.

- (14) "Guidance and Discipline" means the on-going process of helping children develop self control and assume responsibility for their own acts.
- (15) "Infant" means a child who is at least 6 weeks of age but is not yet walking alone.
- (16) "Night Care" means care given to children who sleep at the home for all or part of the night.
- (17) "Nonserious violation" means OCC has made a valid finding when assessing a complaint alleging a violation not listed in OAR 414-350-0010(33).
- (18) "OCC" means the Office of Child Care of the Department of Education or the Administrator or staff of the Office of Child Care.
- (19) "Occasional" means infrequently or sporadically, including but not limited to care that is provided during summer or other holiday breaks when children are not attending school, but not to exceed 70 calendar days in a year.
- (20) "Operator" means the person responsible for the overall operation of the home and who has the authority to perform the duties necessary to meet certification requirements. In a certified family child care home, the operator is the provider.
- (21) "Oregon Registry" means Pathways for Professional Recognition in Childhood Care and Education is a voluntary, statewide program to document and recognize the professional achievements of people who work in the childhood care and education profession.
- (22) "Owner" means the person who holds the certified family child care business as property and has a major financial stake in the operation of the home.
- (23) "Parent" means parent(s), custodian(s), or guardian(s) exercising physical care and legal custody of the child.
- (24) "Potentially hazardous food" means any food or beverage containing milk or milk products, eggs, meat, fish, shellfish, poultry, cooked rice, beans or pasta, and all other previously cooked foods, including leftovers.
- (25) "Preschool Age Child" means a child 36 months of age to eligible to attend kindergarten or above in public school.
- (26) "Program" means all activities and care provided for the children during their hours of attendance at the certified family child care home.
- (27) "Provider" means the person in the certified family child care home who is responsible for the children in care, is the children's primary caregiver, and in whose name the certificate is issued. In a certified family child care home, the provider is the operator.

- (28) "Qualifying Teaching Experience" means 1,500 hours, gained in at least three-hour blocks, within a 36-month period, with a group of children in an on-going group setting. Such a setting includes a kindergarten, preschool, child care center, certified or registered family child care home, Head Start program, or equivalent. Qualifying teaching experience must be documented. Time spent in a college practicum or practice teaching is considered qualifying teaching experience. The following does not constitute qualifying teaching experience: leader of a scout troop; Sunday school teacher; and coaching.
- (29) "Sanitizing" means using a bactericidal treatment that provides enough heat or concentration of chemicals for enough time to reduce the bacterial count, including disease-producing organisms, to a safe level on utensils, equipment, and toys.
- (30) "School-Age Child" means a child eligible to attend kindergarten or above in public school. This includes the months from the end of the prior school year to the start of the kindergarten school year.
- (31) "Serious complaint" means a complaint filed against a certified child care home by a person who has alleged that:
- (a) Children are in imminent danger;
 - (b) There are more children in care than allowed by certified capacity;
 - (c) Corporal punishment is being used;
 - (d) Children are not being supervised;
 - (e) Multiple or serious fire, health or safety hazards are present in the home;
 - (f) Extreme unsanitary conditions are present in the home; or
 - (g) Adults are in the home who are not enrolled in the Central Background Registry.
- (32) "Serious Injury or Incident" means any of the following:
- (a) Injury requiring surgery;
 - (b) Injury requiring admission to a hospital;
 - (c) Injury requiring emergency medical attention;
 - (d) Choking and unexpected breathing problems;
 - (e) Unconsciousness;

- (f) Concussion;
- (g) Poisoning;
- (h) Medication overdose;
- (i) Broken bone;
- (j) Severe head or neck injury;
- (k) Chemical contact in eyes, mouth, skin, inhalation or ingestion;
- (l) All burns;
- (m) Allergic reaction requiring administration of Epi-Pen;
- (n) Severe bleeding or stitches;
- (o) Shock or confused state;
- (p) Near-drowning.

(33) “Serious Violation” means OCC has made a valid finding when assessing a complaint that alleges:

- (a) Children are in imminent danger;
- (b) There are more children in care than allowed by law;
- (c) Corporal punishment is being used;
- (d) Children are not being supervised;
- (e) Multiple or serious fire, health or safety hazards are present in the home;
- (f) Extreme unsanitary conditions are present in the home; or
- (g) Adults are in the home who are not enrolled in the Office of Child Care’s Central Background Registry

(34) “Substitute Caregiver” means a person who acts as the children’s primary caregiver in the certified family child care home in the temporary absence of the provider.

- (35) “Supervision” means the act of caring for a child or group of children. This includes awareness of and responsibility for the ongoing activity of each child. It requires a caregiver to be within sight and/or sound of the children, knowledge of children’s needs, and accountability for children’s care and well-being. Supervision also requires that staff be near and have ready access to children in order to intervene when needed.
- (36) “Toddler” means a child who is able to walk alone but is under 36 months of age. “Younger toddler” means a child who is able to walk alone but is under 24 months of age; “older toddler” means a child who is at least 24 months of age but under 36 months of age.
- (37) “Unsupervised Access to Children” means contact with children that provides the person opportunity for personal communication or touch when not under the direct supervision of a child care provider or staff with supervisory authority.
- (38) “Useable Exit” means an unobstructed door or window through which caregivers and children can evacuate the home in case of a fire or emergency. Doors must be able to be opened from the inside without a key, and window openings must be at least 20 inches wide and 22 inches in height, with a net clear opening of 5 square feet and a sill no more than 48 inches above the floor.

414-350-0020 Application for a Child Care Certificate

- (1) No person, unless exempted by Oregon laws governing child care facilities, shall operate a certified family child care home without a valid certificate issued by OCC.
- (2) Application for a certificate shall be made on forms provided by OCC.
- (3) A completed application is required:
 - (a) For the initial certificate;
 - (b) For the annual renewal of a certificate; and
 - (c) Whenever there is a change of provider or location.
- (4) The applicant shall complete and submit an application to OCC at least:
 - (a) 45 days before the planned opening date of the certified family child care home; and
 - (b) For renewal of a certificate, 30 days prior to the expiration of the certificate.
 - (A) The expiration date of the current certificate, unless officially revoked, remains in force until OCC has acted on the application for renewal and has given notice of the action taken.

- (B) If an application for renewal and payment of the required fee is not received by OCC at least 30 days prior to the expiration date of the current certificate, the certificate will expire as of the date stated on the certificate and child care must cease at the facility, unless the renewal is completed before the expiration date.
 - (C) An application for a certificate shall be accompanied by a non-refundable filing fee.
 - (D) For the initial application, a change of provider, the reopening of a facility after a lapse in the certificate, or a change of location, the fee is \$25 plus \$2 for each certified space (e.g., the fee for a certified family child care home certified to care for 12 children is $\$24 + \$25 = \$49$).
 - (E) For a renewal application, the fee is \$2 for each certified space.
- (5) All civil penalties must be paid in full.
 - (6) An application for a certificate must be completed by the applicant and approved by OCC within 12 months of submission or the application will be denied. If an application is denied, an applicant will be required to submit a new application for a certificate.
 - (7) The applicant shall submit with the initial application or when the home is being remodeled a drawing showing the dimensions of all rooms to be used (length and width), the planned use of each room, the location of required exits, and the placement of the kitchen and bathrooms.
 - (8) The applicant shall provide verification to OCC that the home meets all applicable building codes and zoning requirements that apply to certified family child care homes:
 - (a) Before the initial certificate is issued; and
 - (b) Whenever the home is remodeled.
 - (9) The home shall be approved by an environmental health specialist registered under ORS Chapter 700 or an authorized representative of the Department of Human Services before a certificate is issued by OCC.
 - (10) The home may be inspected by the local fire jurisdiction when local ordinances require a fire life safety survey as part of a business license or when OCC determines there is a need to do so.
 - (11) If the provider applies to care for more than 12 children, the provider must complete a fire life safety self evaluation. OCC staff and the provider will review the self evaluation. If fire

safety concerns are identified, OCC staff may consult with the fire marshal and after consultation, may request that the fire marshal complete a fire life safety inspection.

- (12) Upon receipt of a completed application, a representative of OCC shall evaluate the home and all aspects of the proposed operation to determine if certification requirements (OAR 414-350-0000 through 414-350-0405) are met.

414-350-0030 Issuance of a Child Care Certificate

- (1) A certificate shall not be issued by OCC to an applicant who holds a medical marijuana card. A certificate shall not be issued to an applicant who grows marijuana or distributes marijuana.
- (2) A certificate shall be issued by OCC when it has been determined the home is in compliance with OAR 414-350-0000 through 414-350-0405. There are two types of certification. These are:
 - (a) A regular certificate which, except as provided in OAR 414-350-0020(4)(b)(A), is valid for no more than one year; and
 - (b) A temporary certificate. A certified family child care home may not operate under a temporary certificate for more than 180 days in any 12-month period. A temporary certificate is issued when:
 - (A) The home is in compliance with most requirements;
 - (B) There are no deficiencies identified by OCC that are hazardous to children; and
 - (C) The provider demonstrates an effort to be in full compliance.
- (3) A certificate is not transferable to any other location or to another organization or individual.
- (4) A certificate is granted in the name of the operator/provider. An operator/provider is limited to one certificate at one address.
- (5) An owner can have multiple sites under the following conditions:
 - (a) If the owner is the provider/operator in one of the homes, the owner can have two certified family child care homes; or
 - (b) If the owner does not directly care for any children, the owner can have more than two certified family child care homes.

- (c) If the owner is the provider/operator in a home certified for more than 12 children, the owner may be the provider for only that certified family child care home. The provider may be the owner of other facilities. See OAR 414-350-0030(5).
- (6) Any changes in the conditions of certificate shall be requested in writing to OCC and approved by OCC before the condition(s) of the current certificate may be changed. Changes include, but are not limited to, facility capacity, age range of children, or hours of operation.

414-350-0040 Exceptions to Rules

- (1) OCC may grant an exception to an individual rule (OAR 414-350-0000 through 414-350-0405) for a specified period of time when:
 - (a) A requirement does not apply to the home; or
 - (b) The intent of the requirement can be met by a method not specified in the applicable rule.
- (2) The provider shall request an exception to a rule on a form provided by OCC. The request shall include:
 - (a) A justification for the requested exception; and
 - (b) An explanation of how the provider plans to meet the intent of the rule.
- (3) No exception to a rule shall be granted:
 - (a) If the requirement is established by statute;
 - (b) To any home safety requirement (OAR 414-350-0170);
 - (c) Unless the health, safety, and well-being of the children are ensured; or
 - (d) That would place the facility in violation of local zoning or state building codes.
- (4) Exceptions may not be implemented until approval is received from OCC.
- (5) The granting of an exception to a rule shall not set a precedent, and each request shall be considered on its own merits.
- (6) OCC may withdraw approval of an exception at any time, if deemed necessary to ensure the health, safety and well-being of the children.

414-350-0050 General Requirements

- (1) The following items shall be posted in the certified family child care home where they may be clearly viewed by parents:
 - (a) The most current certificate issued by OCC;
 - (b) Notification of a communicable disease outbreak at the home;
 - (c) The evacuation plan and the location where parents may be reunited with their children in the event of an evacuation;
 - (d) A notice that the following items are available for parents to review:
 - (A) The guidance/discipline policy;
 - (B) The current week's menus, with substitutions recorded;
 - (C) The description of the general routine;
 - (D) Information on how to report a complaint to OCC regarding certification requirements; and
 - (E) The most recent OCC and sanitation inspection reports and, if applicable, fire life safety self-evaluation (or fire marshal inspection report if completed).
 - (e) The Early Learning Division Website [www.oregonearlylearning.com] and phone number [1-800-556-6616], and a statement advising parents that they can access information about their child care provider on the child care safety portal.
 - (f) Providers must post all serious valid complaint and serious non-compliance letters for 12 calendar months.
- (2) Providers shall immediately notify all parents of any closure of the active license.
- (3) The provider shall ensure that a copy of these administrative rules is available in the certified family child care home to all parents and staff.
- (4) Caregivers shall report suspected child abuse or neglect immediately, as required by the Child Abuse Reporting Law (ORS 419B.005 through 419B.055) to the Department of Human Services Child Welfare (DHS) or to a law enforcement agency. By statute, this requirement applies 24 hours per day.

- (5) The certified family child care home shall comply with state and federal laws related to child safety systems and seat belts in vehicles, bicycle safety, civil rights laws, and the Americans with Disabilities Act (ADA).
- (6) Representatives of all agencies involved in certification shall have immediate access to all parts of the home whenever the provider is conducting the child care business:
 - (a) OCC staff shall have the right to inspect all areas of the facility that are accessible to child care children, and to conduct a health and safety review of other areas of the facility to ensure the health and safety of child care children. This includes access to all caregivers, records of children enrolled in the home, and all records and reports related to the child care operation regarding compliance with these rules; and
 - (b) Representatives of the Department of Human Services Child Welfare (DHS) and the State Fire Marshal have the right to enter and inspect the home when an inspection has been requested by OCC.
- (7) Custodial parents of all children enrolled shall have access to the home during the hours their child(ren) are in care.
- (8) The provider shall develop the following information in writing and shall make it available to OCC, to staff, and to parent(s) at the time of enrollment:
 - (a) Guidance and discipline policy;
 - (b) Information on transportation, when provided by the provider or other caregiver; and
 - (c) The plan for handling emergencies and/or evacuations, including, but not limited to, acute illness of a child or staff, natural disasters (e.g. fire, earthquake, etc.), man-caused events, such as violence at a child care facility, power outages, and situations which do not allow reentry to the home after evacuation.
- (9) The provider shall comply with the Department of Human Services' administrative rules relating to:
 - (a) Immunization of children (OAR 333-019-0021 through 333-019-0090);
 - (b) Reporting communicable diseases (OAR 333-019-0215 through 333-019-0415); and
 - (c) Child care restrictable diseases (OAR 333-019-0010).
- (10) The provider shall report to OCC:
 - (a) Any death of a child while in care, within 24 hours;

- (b) Within 24 hours:
 - (A) Any child that is lost or missing from the premises;
 - (B) Any child that is left behind on a facility excursion;
 - (C) Any child that is left unattended on the premises;
 - (D) Any child that is left alone on the playground; or
 - (E) Any child that is left alone in a vehicle.
- (c) Any serious injury or incident, as defined in OAR 414-350-0010(32) within 5 calendar days after the occurrence. This does not include:
 - (A) Injuries for which a child is evaluated by a professional as a precaution;
 - (B) Injuries for which first aid is administered at the facility, but no further treatment by a medical professional is warranted; or
 - (C) Medical events due to routine, ongoing medical issues, such as asthma or seizures.
- (d) Any damage to the building that affects the provider's ability to comply with the rules for Certified Family Child Care Homes within 48 hours of the occurrence.
- (e) Any animal bites to a child within 48 hours of occurrence.
- (f) Any change in provider prior to being on site. Such notification must include the replacement person's qualifications for the position and documentation that the person is enrolled in the Central Background Registry. A phone call, followed by written documentation, an e-mail or a FAX will serve as notification.
- (11) Documentation of meals and snacks provided by the certified family child care home shall be made available to OCC upon request, if the home does not participate in the USDA Child and Adult Care Food Program. Documentation is limited to the three weeks prior to the request.
- (12) The provider is responsible for compliance with these requirements (OAR 414-350-0000 through 414-350-0405).
- (13) Facilities must have parent(s) or guardian(s) of each child enrolled in the certified family child care home, sign a declaration form approved by the Office of Child Care verifying they

have reviewed a copy of the current license certificate. The declaration shall be updated any time there has been an exception or condition added to the license.

- (14) Parental request or permission to waive any of the rules for certified family child care homes does not give the provider permission to do so.
- (15) The written emergency plan must be given to parents of children in care.
- (16) The Office of Child Care may notify parent(s) or guardian(s) of children under 12 months of age enrolled in the certified family child care home of any valid non-compliance with regulations for safe sleep included in OAR 414-350-0220(7).

414-350-0060 Enrollment

- (1) Children shall be admitted only in accordance with the conditions of the certificate, including, but not limited to, capacity, hours of operation, age range, and special conditions.
- (2) As required by state and federal civil rights laws and the Americans with Disabilities Act (ADA), the certified family child care home shall not discriminate against any child on the basis of race, religion, color, national origin, gender, marital status of parent, or because of a need for special care.
 - (a) Refusal by the provider to care for a child with a need for special care because of lack of related skills and degree of competence or because of structural barriers in the certified family child care home, shall not in itself establish a prima facie case of discrimination. The decision to enroll/not enroll a child shall be made on an individual basis after the child's child care needs have been assessed using information from parents and professionals who are knowledgeable about the specific disability. The provider shall record the assessment that was made for each child with special needs.
 - (b) If a child with special needs is enrolled who needs a specific plan for caring for that child, such a plan shall be developed in writing between the provider, parent(s) and, if necessary, outside specialists. The provider shall be responsible for ensuring that all caregivers have knowledge of the plan and act in compliance with the plan.
- (3) The provider shall obtain the following information in writing from parent(s) of each child before admission. The information shall be kept current at all times.
 - (a) Name and birth date of child;
 - (b) Name(s), home and business addresses and telephone numbers, and the working hours of custodial parent(s) or guardian(s);
 - (c) The school attended by a school-age child;

- (d) Name and telephone number of child's medical provider(s) and dentist, if applicable.
 - (e) Name and telephone number of person to be called in an emergency if the parent cannot be located; and
 - (f) Name and telephone number of person(s) to whom the child may be released.
 - (g) Any chronic health problem(s), including allergies, the child has.
- (4) The provider shall obtain the following written authorizations from parent(s) of each child before admission. The authorizations shall be kept current at all times.
- (a) Permission for the provider to obtain emergency medical treatment for the child. The emergency medical release shall be on a form accepted by the medical treatment facility used by the provider for emergency medical services;
 - (b) Permission for the provider to call an ambulance or take a child to an available physician or medical treatment facility;
 - (c) If applicable, permission for the child to participate in field trips; and
 - (d) If applicable, permission for the child to participate in swimming or wading activities, both on and off the premises of the home.
- (5) No child under six weeks of age shall be enrolled in the certified family child care home.

414-350-0070 Arrival and Departure

- (1) The provider shall require that the person bringing the child to the certified family child care home remain with the child until the child is accepted by a caregiver.
- (2) The provider shall release a child only to a parent or another person named and identified by the parent. The provider shall verify the identification of any person who picks up a child.
- (3) If a school-age child arrives at or leaves the home without a parent, there shall be arrangements in advance, in writing, from the parent for the arrival and departure times and what the provider will do if the child has not arrived by the expected time.
- (4) The provider must notify parents if there will be a substitute caregiver and the caregiver's name or if the children will be away from the home for any part of the day for visits, field trips, or any other activity off the premises. In the event of an emergency, a good faith effort will be made to notify parents that a substitute will be caring for the children.

414-350-0080 Records

- (1) The provider shall keep the following records:
 - (a) Complete and current information on each child, as required in OAR 414-350-0060(3) and (4);
 - (b) Daily attendance record for each child, including dates each child attended and arrival and departure times each day;
 - (c) Daily attendance record for the provider and each caregiver, including dates worked and arrival and departure times each day;
 - (d) Medication administered, as specified in OAR 414-350-0180(9);
 - (e) Emergency plan practice sessions and evacuations, as specified in OAR 414-350-0170(15);
 - (f) An injury to or death of a child, as specified in OAR 414-350-0180(8);
 - (g) Child abuse reports made to the Department of Human Services Child Welfare (DHS) or a law enforcement agency;
 - (h) The general routine, as specified in OAR 414-350-0220(3);
 - (i) Verification of the provider's and each caregiver's:
 - (A) Qualifications for the position, as specified in OAR 414-350-0100 and 414-350-0110;
 - (B) Current health-related training, such as CPR and First Aid, as specified in OAR 414-350-0100(3);
 - (C) Training as required in OAR 414-350-0115;
 - (D) Current enrollment in the Central Background Registry;
 - (E) Current food handler's certification pursuant to ORS 624.570, when required; and
 - (F) Caregiver participation in an orientation to the provider's policies and practices and these administrative rules.
- (2) A provider shall allow custodial parent(s), upon request, to review all records and reports, except for child abuse reports, maintained on their own children.

- (3) Records, except those specified in OAR 414-350-0165(7)(a), shall be kept for at least two years, and caregivers' and children's records for two years after termination of employment or care. These records shall be available at all times to OCC.

414-350-0090 General Requirements

- (1) As required by Oregon civil rights law, ORS Chapter 659, the provider shall not discriminate in employment on the basis of race, color, gender, marital status, religion, national origin, age, or because of a mental or physical handicap unrelated to specific job performance.
- (2) All caregivers, including the provider, shall:
 - (a) Have competence, sound judgment, and self-control in working with children;
 - (b) Be mentally, physically, and emotionally capable of performing duties related to child care; and
 - (c) Have the required training and/or experience for the positions they hold, as specified in OAR 414-350-0100 and 0110.
- (3) If additional information is needed to assess a person's ability to care for children or to have access to children, OCC may require references, an evaluation by a physician, counselor, or other qualified person, or other information.
- (4) No one shall have access to child care children who has demonstrated behavior that may have a detrimental effect on a child. Residents of the home are considered to have access to the child care children even if they are not generally at home during hours of operation. This does not apply to persons authorized to drop off and pick up a child care child.
 - (a) The owner, the provider, all caregivers and other residents of the premises 18 years of age or older must be enrolled in OCC's Central Background Registry prior to the issuance of an initial or renewal certificate.
 - (b) The provider must receive confirmation from OCC that an individual 18 years of age or over, is enrolled or conditionally enrolled in the CBR before the individual can:
 - (A) Reside on the premises;
 - (B) Stay overnight on the premises for longer than 14 consecutive days, not to exceed a total of 30 days in a calendar year;
 - (C) Assist the provider; or
 - (D) Volunteer in the child care program.

- (c) If any person listed in section (4)(a) & (b) of this rule has been charged with, arrested for, or a warrant is out for any of the crimes which OCC has determined indicate behavior which may have a detrimental effect on a child, with final disposition not yet reached, certification may be denied or suspended until the charge, arrest, or warrant has been resolved if the person continues to operate, be employed in or reside in the home, or have access to children in the home.
 - (d) If a criminal record check shows that a warrant has been issued for any person checked, OCC will inform the originating law enforcement agency of the person's name, employment address and telephone number.
 - (e) Any visitor to the home or other adult who is not enrolled in the Central Background Registry shall not have unsupervised access to children.
- (5) Individuals conditionally enrolled in the CBR shall not have unsupervised access to children until the provider has confirmed with OCC the individual is enrolled, but may count in staff to child ratio.
 - (6) The provider shall have a written plan to ensure that individuals who are not enrolled or conditionally enrolled in the CBR and are on the child care premises shall not have unsupervised access to children.
 - (7) The provider shall maintain a log of arrival and departure times of all individuals 18 and older who are not enrolled or conditionally enrolled in the CBR and enter the home while child care children are present, excluding persons authorized to drop off and pick up a child care child.
 - (8) The provider, caregivers and other individuals that are required to be enrolled in the CBR and are on-site must maintain current enrollment in the CBR at all times while the certified family child care license is active.
 - (9) Individuals whose CBR enrollment has been revoked, denied or suspended, may not live in the home; be on the premises during child care hours; or have contact with child care children.
 - (10) If additional information is needed to assess a person's ability to care for children or to have access to children, OCC may require references, an evaluation by a physician, counselor, or other qualified person, or other information.
 - (11) Volunteers must meet the following requirements:
 - (a) If volunteers are counted in determining the staff/child ratios, they must meet the qualifications of the position they are filling and be enrolled in the Central Background Registry.

- (b) If volunteers may have unsupervised access to children, they must be enrolled in the Central Background Registry.
 - (c) If volunteers do not have unsupervised access to children at any time, including during emergencies, the provider must have a written policy to this effect, the policy must be known to all caregivers and volunteers, and the volunteers do not have to be enrolled in the Central Background Registry.
- (12) No person shall smoke or carry any lighted smoking instrument, including an e-cigarette or vaporizer in the certified family child care home or within ten feet of any entrance, exit, or window that opens or any ventilation intake that serves an enclosed area, during child care hours or when child care children are present. No person shall use smokeless tobacco in the certified family child care home during child care hours or when child care children are present. No person shall smoke, carry any lighted smoking instrument, including an e-cigarette or vaporizer or use smokeless tobacco in motor vehicles while child care children are passengers.
 - (13) No one shall consume alcohol on the certified family child care home premises during the hours the child care business is conducted or when child care children are present. No one shall be under the influence of alcohol on the family child care home premises during the hours the child care business is conducted or when child care children are present.
 - (14) Notwithstanding OAR 414-350-0000(6), no one shall possess, use or store illegal controlled substances on the certified family child care home premises. No one shall be under the influence of illegal controlled substances on the certified family child care home premises.
 - (15) Notwithstanding OAR 414-350-0000(6), no one shall grow or distribute marijuana on the premises of the certified family child care home. No adult shall use marijuana on the certified family child care home premises during child care hours or when child care children are present.
 - (16) No adult under the influence of marijuana shall have contact with child care children.
 - (17) Secure Storage:
 - (a) All medical marijuana obtained from a dispensary must be kept in its original container and stored under child safety lock. All medical marijuana derivatives and associated paraphernalia must be stored under lock.
 - (b) Effective July 1, 2015 all marijuana, marijuana derivatives and associated paraphernalia must be stored under child safety lock.
 - (18) Notwithstanding OAR 414-350-0000(6), marijuana plants shall not be grown or kept on the certified family child care home premises.

414-350-0100 The Provider

(1) The provider shall be:

- (a) At least 18 years of age if the facility is certified for 12 children; or at least 21 years of age if the facility is certified for more than 12 children; and
- (b) Responsible for the operation of the certified family child care home, including those duties ordinarily considered to be administrative. These include, but are not limited to, financial management, maintaining records, maintenance of the building and grounds, meal planning and preparation, compliance with certification requirements, communication with OCC, and correcting deficiencies.

(2) The provider shall have:

- (a) At least one year of qualifying teaching experience, as specified in OAR 414-350-0010(28), in the care of a group of children in an ongoing group setting such as a kindergarten, preschool, child care center, certified family child care home, registered family child care home, or Head Start program; or prior to applying to be certified for up to 16 children, completed one year of successful operation as a certified family child care facility for 12 children if the qualifying teaching experience is based on registered family child care; or
- (b) Completion of 20 credits (semester system) or 30 credits (quarter system) of training in a college or university in early childhood education or child development; or
- (c) Documentation of attaining at least step eight in the Oregon Registry.

(3) The provider shall provide evidence of the following training prior to being certified:

- (a) A current certification in first aid and infant and child cardiopulmonary resuscitation. CPR training must have practical hands-on instruction, therefore, strictly online training is not acceptable. CPR courses that involve an on-line component with hands-on instruction may be acceptable.
- (b) A current food handler certification;
- (c) Have completed a minimum of two hours of training on child abuse and neglect that is specific to Oregon law; and
- (d) Completed OCC approved safe sleep training.

- (4) Prior to a facility providing care to more than two children under 24 months of age, the provider shall have at least 30 clock hours of training specific to infant and toddler care. The provider of facilities certified on October 15, 2002, who are providing care for more than two children under 24 months of age must have documentation of 30 hours of prior training in infant and toddler care or a plan, approved by OCC, that shows how the training will be attained.
- (5) The provider/operator shall be on-site at least half of the hours of operation that are reflected on the certificate. If the facility is certified for more than 12 children, the provider shall be on site at least 2/3 of the hours of operation that are reflected on the certificate. The hours shall be calculated on a weekly basis, except for planned vacations and emergency absences.
- (6) The provider shall have no other employment, either in or out of the home, during the hours the provider is directly caring for children.
- (7) The provider, or a substitute caregiver, shall be present during all the hours the certified family child care business is conducted.
- (8) A caregiver substituting for the provider shall:
 - (a) Be at least 18 years old;
 - (b) Have current certification in first aid and infant and child cardiopulmonary resuscitation (CPR). Training must have practical hands-on instruction; therefore, online training is not acceptable.
 - (c) Have current food handler certification pursuant to ORS 624.570, if the substitute will be preparing or serving food;
 - (d) Be familiar with the provider's policies and procedures and with these requirements (OAR 414-350-0000 through 414-350-0405);
 - (e) Be authorized and able to correct a deficiency that might be an immediate threat to children; and
 - (f) Have on file documentation of an orientation and training in these administrative rules and the functions and duties of a provider;
 - (g) Have completed a minimum of two hours of training on child abuse and neglect that is specific to Oregon law before they can have unsupervised access to children; and
 - (h) Have worked in the home at least 60 hours when substituting for the provider in a home certified to care for more than 12 children.

414-350-0110 Assistants

- (1) Assistants may be included in the caregiver/child ratio calculation.
- (2) An Assistant I shall:
 - (a) Be at least 15 years of age;
 - (b) Have current certification in first aid and pediatric CPR;
 - (A) CPR courses must have practical hands-on instruction;
 - (B) CPR courses that involve an on-line component with hands-on instruction may be accepted;
 - (C) Strictly on-line CPR training is not acceptable; and
 - (D) New Assistant I's must complete the training within 90 days of employment.
 - (c) Have on file documentation of an orientation and be familiar with the provider's policies and procedures and these requirements (OAR 414-350-0000 through 414-350-0405).
 - (d) Have completed a minimum of 2 hours of training on child abuse and neglect that is specific to Oregon law within 30 days of employment;
 - (e) Have a current food handler certification approved by the Oregon Health Authority or OCC before preparing or serving food;
 - (f) Have completed OCC approved health and safety training within 30 days of employment; and
 - (g) Have completed OCC approved safe sleep training within 30 days of employment.
- (3) An Assistant I, who is not enrolled in the CBR because they are under the age of 18, must be supervised within sight AND sound of the provider or substitute provider.
- (4) An assistant I, who is enrolled in the CBR, must be supervised within sight OR sound of the provider or substitute provider.
- (5) An Assistant II shall:
 - (a) Be at least 18 years of age;

- (b) Have on file documentation of an orientation and be familiar with the provider's policies and procedures and these requirements (OAR 414-350-0000 through 414-350-0405);
- (c) Have worked at least 60 hours at the certified family child care home, in a minimum of 3–4 hour blocks of time;
- (d) Have current certification in first aid and CPR. Training must have practical hands-on instruction; therefore, online training is not acceptable;
- (e) With the approval of the provider, may be out of sight and sound of the provider with a group of children; and
- (f) Have completed OCC approved safe sleep training.

414-350-0115 Training Requirements

- (1) All staff shall receive an orientation within the first two weeks of employment and before they can have unsupervised access to children. Orientation shall ensure that staff are familiar with the contents of the orientation, as described below, and shall include, but is not limited to:
 - (a) Individual responsibilities in the event:
 - (A) The home must be evacuated (e.g. fire);
 - (B) An emergency requiring staff and children to remain inside under unusual circumstances (e.g. power outage, environmental hazard); or
 - (C) A child or staff is injured or becomes ill;
 - (b) These requirements (OAR 414-350-0000 through 414-350-0405);
 - (c) The facility policies, as required in OAR 414-350-0050; and
 - (d) Procedures for reporting suspected child abuse or neglect.
- (2) The provider and all caregivers who function as substitute providers and Assistant II staff, including volunteers, shall participate yearly in at least 15 clock hours of training related to child care, of which at least eight clock hours shall be in child development or early childhood education. The annual 15 clock hours of training or education must include OCC approved health and safety training curriculum. Substitute providers and volunteers who provide care in the home for less than 20 hours in a calendar year are not required to participate in the 15 clock hours of training. If an individual has worked in the facility less than a year, the training requirements will be prorated as follows: At least 1.25 clock hours

for each month worked in the current license period.

- (a) The following core knowledge categories are accepted for the child development and early childhood education requirement: Diversity (D), Family and Community Systems (FCS), Human Growth and Development (HGD), Health Safety and Nutrition (HSN), Learning Environments and Curriculum (LEC), Observation and Assessment (OA), Special Needs (SN), and Understanding and Guiding Behavior (UGB).
 - (b) Training may include correspondence courses, conferences, workshops and audio-visual programs.
 - (c) An approved planned reading program of professional materials may count for up to six hours of the 15 clock hours of training and must include a written assessment of reading materials completed by each participating staff person.
 - (d) OCC will accept duplicate training one additional time if it is a Set 2 (intermediate) or Set 3 (advanced) training or above as described by the Oregon Center for Career Development in Childhood Care and Education; and it is not taken within the same license period.
- (3) During the first year of certification and the first year of employment staff may count up to two hours of orientation and their most recent training in first aid and CPR, food handler's and recognizing and reporting child abuse and neglect training, as part of the 15 clock hours of training required in OAR 414-350-0115(2), but may not use these toward the eight hours required in child development or early childhood education.
- (a) Recognizing and reporting child abuse and neglect training must be based on Oregon law and practice so information is relevant to reporting in Oregon.
 - (b) Recognizing and reporting child abuse and neglect training must be two clock hours or more in duration to be accepted.
- (4) During subsequent years of certification and subsequent years of employment staff may count five hours of first aid and CPR training or food handler's training as part of the 15 clock hours of training. Duplicate training on recognizing and reporting child abuse and neglect training can be accepted again after three years, and every three years thereafter towards the 15 clock hours of staff training required for licensing.
- (5) The provider shall document each caregiver's training, showing the subject matter, the date completed, and the number of clock hours of training in each certification year.
- (6) The provider and all staff, with the exception of Assistant I's, who count in staff to child ratios must complete OCC approved training on recognizing and reporting child abuse and neglect and health and safety, prior to having unsupervised access to children and functioning in their position. Assistant I's must complete the training within the first 30 days

of employment.

- (7) The provider and all staff, with the exception of Assistant I's, who count in staff to child ratios must complete OCC approved training on safe sleep prior to having unsupervised access to children. Assistant I's must complete the training within the first 30 days of employment.
- (8) All current staff must complete OCC approved safe sleep training by January 1, 2019.
- (9) When a reopen or address change application is submitted, OCC shall, prior to approving it, receive evidence that the provider and all staff have completed OCC approved safe sleep training. If the reopen is a result of an address change, the person must complete the OCC approved safe sleep training by January 1, 2019.

414-350-0120 Caregiver/Child Ratios and Supervision

- (1) The number of caregivers and group size shall be determined by the number and ages of the children in attendance:
 - (a) All children in the home, including the provider's or other caregivers' own children, shall be counted in determining the caregiver/child ratio and group size;
 - (b) All children visiting the home on a regular basis will count in capacity. Children attending with a parent do not count as enrolled as long as the parent remains with and is responsible for non-enrolled children;
 - (c) The required caregiver/child ratios shall be met at all times.
- (2) Children shall at all times have the full attention of and be supervised by the required number of caregivers:
 - (a) Children shall be within sight and/or sound of a caregiver at all times;
 - (b) A caregiver shall be near enough to children to respond when needed. Children out of direct visual contact shall be monitored regularly and frequently and must be in approved activity areas;
 - (c) Children may not be on a floor level of the home unless a caregiver is on the same floor level, except as specified in OAR 414-350-0120(2)(d);
 - (d) When bathroom facilities are not on the same floor level, a written plan for adequate supervision of both bathroom and child care areas shall be developed and implemented.

(3) The number of caregivers is determined by the age and number of the youngest child(ren) in the group. If the provider is certified to care for more than 12 children and plans to care for more than 8 infants and/or toddlers, the provider must develop a plan showing how infants and toddlers will be limited to a group size of not more than eight. The plan must be approved by OCC:

(a) If all children are in the same age group, the following table determines the staff/child ratio;

TABLE A

When All Children in Care Are:	No Group May Exceed:	With a Caregiver to Child Ratio of:	Notes
Six Weeks to 24 Months	12	1:4	If more than 12 children are in care, the groups must be separated, and if more than eight of the 13 children in care are infants or toddlers, the group size may not exceed eight.
24 Months to Eligible for First Grade	12	1:10	If more than 12 children are in care, the groups must be separated.
Eligible for First Grade to Age 13	16	1:15	May be one group; must have second provider if over 15 school-age children are in care.

(b) If children in care include any infants and/or toddlers, the following table determines the staff/child ratio;

TABLE B

When Children in Care Include:	No Group May Exceed:	With a Caregiver to Child Ratio of:	Notes
One Child under 24 Months	12	1:8	If more than 12 children are in care and one is under 24 months, the group must be separated. Each group must meet the appropriate adult to child ratio. Practice Note: Groups may be arranged to have the younger child in a separate group with 1:8 ratio. For other group, use ratios in Table A if all children are the same age; Table C if mixed-ages.
Two Children under 24 Months	12	1:7	If more than 12 children are in care and two are under 24 months, the group must be separated.

			<p>Each group must meet the appropriate adult to child ratio.</p> <p>Practice Note: Groups may be arranged to have the younger children in a separate group with 1:7 ratio. For other group, use ratios in Table A if all children are the same age; Table C if mixed-ages.</p>
Three Children under 24 Months	12	1:6	<p>If more than 12 children are in care and over three are under 24 months, the group must be separated. Each group must meet the appropriate adult to child ratio.</p> <p>Practice Note: Groups may be arranged to have the younger children in a group with 1:6 ratio. For other group, use ratios in Table A if all children are the same age; Table C if mixed-ages.</p>
Four or More Children under 24 Months	12	1:4	<p>If more than 12 children are in care and four are under 24 months, the group must be separated. Each group must meet the appropriate adult to child ratio and if more than eight infants or toddlers are in care, group size may not exceed eight.</p> <p>Practice Note: Groups may be arranged to have the younger children in a separate group with 1:4 ratios in Table A if all children are the same age; Table C if mixed-ages.</p>

(c) If children in care include a mix of only preschool and school aged children, the following table determines the staff/child ratio;

TABLE C

When All Children in Care Are:	No Group May Exceed:	With a Caregiver to Child Ratio of:	Notes
One Child in Care Age 24 Months to Eligible for First Grade; The rest of children in care are school-age	12	1:12	If more than 12 children are in care, the groups must be separated to create groups of 12 or fewer children.
Between two and 12 Children are Between 24 Months and Eligible for First Grade; The rest of the children in care are school-age	12	1:10	If more than 12 children are in care, the groups must be separated to create groups of 12 or fewer children.

(d) Even though staff/child ratios are specified in (a) and (b) above, a certified family child care provider may care for 10 children ages 6 weeks to school-age if:

(A) No more than 6 children are pre-school age or younger, including the provider's own children and any staff children;

(B) Of the 6, only 2 children are under 24 months of age; and

(C) Four of the children are school-age.

(4) The maximum number of children allowed in a certified family child care home at anyone time is 16.

(5) If the home is certified to care for more than 12 children and the age blend is such that group separation is required:

(a) Groups may be joined for: meals, naps, outdoor play, and limited quiet activities such as a video or circle time;

- (b) Provider must develop a plan that shows how the groups will be separated without requiring remodeling of the home. The plan must be approved by OCC.
- (6) If the facility provides care to more than two children under 24 months of age, the provider shall meet the requirements specified in OAR 414-350-0100(4).
- (7) Prior to a facility providing care to more than four children under 24 months of age, at least one caregiver other than the provider shall meet the requirements specified in OAR 414-350-0100(4). In addition, the provider shall have an extra 20 clock hours of training specific to infant and toddler care above and beyond the original requirements. If the facility is certified to care for more than 12 children, there must be someone who meets the training requirements of OAR 414-350-100(4) on site at all times that five or more children under 24 months of age are in care.

414-350-0130 General Requirements

- (1) The certified family child care home shall be:
 - (a) Located in an area zoned residential or commercial:
 - (A) "Residential zone" means any zone within an acknowledged urban growth boundary or an acknowledged residential exception area that allows a dwelling unit as a use permitted outright.
 - (B) "Commercial Zone" means any zone within an acknowledged urban growth boundary or an acknowledged commercial exception area that allows sales or service or commercial and professional offices as uses permitted outright.
 - (b) A building constructed as a single family dwelling; and
 - (c) In space designed or remodeled for living quarters.
- (2) A home that is not the residence of the provider or a home located in a zone other than residential or commercial shall meet all state and local planning and zoning, occupancy, and building code requirements for a child care facility.
- (3) If there is a structural or maintenance problem that could present a health or safety hazard to children, OCC may request that the provider have the home inspected by the appropriate authority and the provider shall comply with the request.
- (4) The provider is responsible for payment of any applicable fees for inspections.

414-350-0140 Indoor Area

- (1) The indoor area used for child care shall meet the following requirements:
 - (a) If the provider is certified to care for 12 children or fewer, there shall be a minimum of 35 square feet of indoor activity area, as defined by OAR 414-350-0010(1), per child. If the provider is certified to care for more than 12 children, there shall be a minimum of 35 square feet of indoor activity area per child for 12 or fewer children, and 50 square feet of indoor activity area available per child for each of the additional four children. This space, considered in determining capacity of the home, shall be available for use by children at all times. The following shall not be counted as part of the 35 square feet per child requirement: heating units, storage areas; large permanent equipment; any space not useable by children.
 - (b) There shall be a designated area for children under 24 months of age that is developmentally appropriate and safe.
 - (c) If the facility is certified to care for more than 12 children, the provider must develop a written plan showing that the space accessible to the children meets their safety needs, there is adequate supervision and there is adequate availability of toileting and hand washing for the children in care. OCC must approve the plan.
 - (d) Activity areas shall be adequately lighted and ventilated. Room temperature shall be at least 68 degrees F. (20 degrees C.) and not so warm as to be dangerous or unhealthy to children in care.
- (2) Indoor fixtures and equipment shall meet the following requirements:
 - (a) There shall be at least one flush toilet and one hand washing sink with mixing faucets available to the children at all times. If the facility is certified to care for more than 12 children, the provider must have a second flush toilet somewhere in the facility if: there are more than 15 children in care or if there are more than 12 toddlers in care. Homes with certification in effect on September 15, 2002, shall comply with the requirement for mixing faucets when bathroom facilities are remodeled.
 - (b) Easily cleanable steps or blocks shall be provided so that children can use the toilets and sinks without adult assistance.
 - (c) If bathroom facilities are not on the same floor level as the activity areas, the provider must comply with OAR 414-350-0120(2)(d).
 - (d) Telephone service shall be available in the home at all times when children are in care.

- (e) Telephone numbers for fire, emergency medical care, and poison control, as well as the facility address, shall be posted on or near the telephone. Portable telephones must have emergency numbers and the facility address on the phone.
- (f) There must be a system in place to ensure that parents can have contact with the provider and staff when children are in care.

414-350-0150 Outdoor Area

- (1) There shall be an outdoor activity area that children can reach safely. If the outdoor activity area is not under the control of the provider during the hours of operation of the home, written approval to use the area by OCC is required.
- (2) A home shall have an outdoor play area of no less than 75 square feet for each child using the area at one time.
- (3) The outside activity area shall be:
 - (a) Suitably surfaced and well drained. Playground equipment, such as slides, swings, climbing structures and other elevated equipment, shall be surrounded by a resilient surface of an acceptable depth or by rubber mats manufactured for such use, according to standards of the US Consumer Product Safety Commission;
 - (b) Kept free of litter, solid waste and refuse, ditches, or other conditions presenting a potential hazard; and
 - (c) Equipped to provide age-appropriate activities for gross motor development.
- (4) The outdoor activity area of the home designated for use by child care children shall be enclosed by a barrier (fence, wall, or building) at least four feet high. Certified family child care homes with certification in effect on September 15, 2002, must comply with a barrier at least three feet high until such time as the existing barrier is replaced. Spacing between vertical slats of a fence shall be no greater than 4 inches. Fences must meet applicable local codes.
- (5) The provider shall be aware of and protect children from any toxic or other harmful plants, shrubs, or trees.
- (6) The use of swimming pools shall comply with OAR 414-350-0380. As specified in 414-350-0380(2)(h), portable-style wading pools are not permitted.

414-350-0160 Sanitation

(1) Water Supply:

- (a) The home's water supply shall be continuous in quantity and from a water supply system approved by the Department of Human Services.
- (b) If drinking water is from a private source, the provider shall provide evidence of bacterial and chemical analysis which establish safety of the water;
- (c) The tests shall be conducted by the local health department, the Department of Human Services, or an approved commercial laboratory;
- (d) The bacterial analysis shall be done quarterly;
- (e) The chemical analysis shall be done only once for a well and yearly for other water sources;
- (f) The provider shall have drinking water available to children that is supplied in a safe and sanitary manner. Drinking water for preparing food, infant formula, drinking or cooking shall not be obtained from bathroom sinks or diaper changing sinks.

(2) Hand Washing:

- (a) Caregivers and children shall wash their hands with soap and warm running water after nose wiping, after using the toilet, and before and after eating;
- (b) Caregivers shall wash their hands with soap and warm running water before and after changing a diaper, before and after feeding a child or handling food, and after assisting a child with toileting and nose wiping;
- (c) Infants' and children's hands shall be washed with soap and warm running water after diaper changing;
- (d) Staff shall immediately and thoroughly wash their hands after handling animals or cleaning cages;
- (e) Commercial products labeled "hand sanitizers" shall not replace hand washing. If hand sanitizers are present in the home, they shall be kept under child-proof lock and shall not be used by children;
- (f) When hand washing is not possible, e.g., on field trips or the neighborhood park, moist towelettes shall be used.

(3) Maintenance:

- (a) The building, toys, equipment, and furniture shall be maintained in a clean, sanitary, and hazard-free condition:
 - (A) Kitchen and bathrooms shall be cleaned when soiled and at least daily;
 - (B) Floors, walls, ceilings, and fixtures of all rooms shall be kept clean and in good repair;
 - (C) All kitchen counters, shelves, tables, refrigeration equipment, sinks, drain boards, cutting boards, and other equipment or utensils used for food preparation shall be kept clean and in good repair;
 - (D) All food storage areas shall be kept clean and free of food particles, dust, dirt and other materials;
 - (E) Cloths, both single use and multiple use, used for wiping food spills on utensils and food-contact surfaces shall be kept clean and used for no other purpose. Cloths that are reused shall be stored in a sanitizing solution between uses.
 - (F) The isolation area shall be thoroughly cleaned after use and all bedding laundered after each use;
 - (G) A diaper-changing table shall:
 - (i) Have a surface that is non-absorbent and easily cleaned;
 - (ii) Be cleaned and sanitized after each use;
 - (iii) Not be used for any purposes other than diapering, including food or drink preparation or storage, dish washing, storage of food service utensils, arts and crafts supplies or products, etc.; and
 - (iv) Comply with the requirements for diaper changing area specified in OAR414-350-0235(2)(b).
 - (H) Bathtubs, showers, sinks, bathinettes, or other receptacles used for bathing children shall be cleaned and sanitized after each use and shall not be used to obtain water for preparing food, infant formula, drinking or cooking.
 - (I) Bedding shall be cleaned when soiled, with change of occupant, or at least once a week.

- (b) Tableware, kitchenware (pots, pans and equipment), and food-contact surfaces of equipment shall be washed, rinsed, sanitized, and air-dried after each use. The cleaning and sanitizing of tableware and kitchenware shall be accomplished by using:
 - (A) A dishwasher that is operated according to the manufacturer's instructions; or
 - (B) A three-step manual process as follows:
 - (i) Washing in the first compartment;
 - (ii) Rinsing in a second compartment; and
 - (iii) Immersion in a third compartment or large dishpan or tub for at least two minutes in a sanitizing solution containing at least 2 teaspoons of household chlorine bleach in each gallon of warm water.
 - (c) A sink used for diapering or bathing activities shall not be used for any part of preparing food, infant formula, drinking, cooking or dish washing.
 - (d) Soap, paper towels dispensed in a sanitary manner, and mixing faucets with hot and cold running water shall be provided at each hand washing sink.
 - (e) The home and grounds shall be kept clean and free of litter or rubbish and unused or inoperable equipment, utensils, and vehicles.
 - (f) All garbage, solid waste, and refuse shall be disposed of at least once a week.
 - (A) All garbage shall be kept in watertight, non-absorbent, and easily washable containers with close-fitting lids;
 - (B) All garbage storage areas and garbage containers shall be kept clean; and
 - (C) All garbage storage shall be inaccessible to children.
 - (g) Bio-contaminants including, but not limited to bodily fluids and blood shall be disposed of in a manner that prevents exposure to children.
- (4) Insect and Rodent Control:
- (a) The home shall be in such condition as to prevent the infestation of rodents and insects.
 - (b) Doors and windows which are opened for ventilation shall be equipped with fine-meshed screens.

(c) Automatic insecticide dispensers, vaporizers, or fumigants shall not be used.

414-350-0165 Testing for Lead in Drinking Water

(1) For purposes of this rule, “drinking water faucet or fixture”

(a) means any plumbing fixture on the premises used to obtain water for drinking, cooking, preparing infant formula, or preparing food; and

(b) does not include any plumbing fixture used to obtain water for handwashing, bathing, or diaper changing.

(2) Water obtained from fixtures identified in subsection (1)(b) of this rule cannot be used for drinking, cooking, preparing infant formula, or preparing food.

(3) Initial Testing

(a) Any provider with an active certificate as of September 30, 2018 must test each drinking water faucet or fixture for lead by November 30, 2018.

(b) The following providers must test each drinking water faucet or fixture for lead in the water prior to being eligible to receive a license from OCC:

(A) Any provider with a pending certificate application as of September 30, 2018; and

(B) Any provider applying for a certificate on or after September 30, 2018, including, but not limited to, initial applications, renewal applications, and reopen applications.

(c) A provider identified in subsection (3)(a) or (b) does not need to conduct the initial testing if:

(A) All drinking water faucets or fixtures have been tested within 6 years prior to the effective date of this rule; and

(B) The testing was conducted in accordance with the requirements of subsection (5) of this rule.

(d) A provider identified in subsection (3)(a) must submit all test results to OCC no later than November 30, 2018. The test results must be accompanied by a floor plan or map of the facility that identifies the location of each drinking water faucet or fixture tested.

(e) A provider identified in (3)(b) must submit test results to OCC within 10 calendar days of the facility receiving the results from the laboratory. The test results must be

accompanied by a floor plan or map of the facility that identifies the location of each drinking water faucet or fixture tested.

(4) Ongoing Testing

- (a) After a provider conducts the initial testing under subsection (3) of this rule, the provider must test all drinking water faucets or fixtures at least once every six years from the date of the last test.
- (b) All test results obtained in accordance with subsection (4)(a) of this rule must be submitted to OCC within 10 calendar days of the provider receiving the results from the laboratory. The test results must be accompanied by a floor plan or map of the facility that identifies the location of each drinking water faucet or fixture tested.

(5) Sampling and Testing

- (a) All sample collection and testing must be in accordance with the Environmental Protection Agency (EPA)'s 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference.
- (b) All testing must be performed by a laboratory accredited by the Oregon laboratory Accreditation Program according to standards set under OAR chapter 333, division 64 in effect as of September 30, 2018.
- (c) If a facility does not use any of the on-site plumbing fixtures to obtain water for drinking, cooking, preparing infant formula, or preparing food, the provider must:
 - (A) Submit a written statement to OCC identifying the alternative source of water and confirming that the provider does not use any on-site plumbing fixtures for drinking, cooking, preparing infant formula, or preparing food; and
 - (B) Notify OCC in writing if the alternative source of water changes.

(6) Results

- (a) If test results show that water from any drinking water faucet or fixture has 15 parts per billion (ppb) or more of lead, the provider must:
 - (A) Prevent access to that drinking water faucet or fixture immediately after receiving the test results; and
 - (B) Continue to prevent access to that drinking water faucet or fixture until mitigation is completed in accordance with subsection (6)(b) of this rule.

(b) Following receipt of test results showing that water from any drinking water faucet or fixture has 15 parts per billion (ppb) or more of lead, the provider must:

(A) Submit a corrective action plan to OCC for approval within 60 days of receiving the test results. The corrective action plan must identify an appropriate mitigation strategy in accordance with Module 6 of the EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference; and

(B) Implement the mitigation method within 30 days of approval by OCC.

(7) Recordkeeping and Posting

(a) The provider must keep a copy of the most recent lead test results on-site at all times.

(b) The provider must post the most recent lead test results summary provided by OCC in an area of the facility where the summary can be clearly viewed by parents. The provider must post the lead test results summary immediately after receiving the summary from OCC.

(8) Providers must follow the routine practices identified in Module 6 of the EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference, at all times.

414-350-0170 Home Safety

(1) All floor levels used by children for play and napping shall have two usable exits to ground level.

(2) All rooms used by children for play and napping shall have two usable exits.

(3) Obstructions, including furniture, storage of supplies, or any other items shall not be placed in a manner that blocks usable exits.

(4) There shall be at least one 2-A-10 BC-rated fire extinguisher on each floor of the home. Fire extinguishers shall be easily accessible, kept out of the reach of children, and located along the path of emergency exiting.

(5) Smoke alarms shall be:

(a) Installed on each floor level of the home and in any area where children nap; and

(b) Maintained in operating order.

- (6) Candles or other open flame decorative devices are prohibited, except for the brief use of celebratory candles.
- (7) Matches and lighters shall be kept in locked storage when not in use.
- (8) A portable light source, to be used in emergencies, shall be:
 - (a) Available in all activity areas used by children;
 - (b) In working condition; and
 - (c) Stored in an easily accessible place.
- (9) Items of potential danger (e.g., cleaning supplies and equipment, paints, poisonous and toxic materials, plastic bags, aerosols, detergents) shall be:
 - (a) Kept in the original container or labeled;
 - (b) Stored under child-proof lock; and
 - (c) Kept away from food service supplies.
- (10) The provider shall protect children from safety hazards, including but not limited to:
 - (a) A rigid screen or guard shall be installed to prevent children from falling into a fireplace or against a heater or wood stove;
 - (b) A movable barrier, such as mesh-type gate, shall be placed at the top and/or bottom of all stairways accessible to infants and toddlers. Gates and enclosures should have the Juvenile Products Manufacturers Assn. (JPMA) certification seal to ensure safety;
 - (c) Child-proof latches shall be installed on all cupboards, closets, and drawers that contain hazardous objects and may be accessible to preschool-age and younger children;
 - (d) Firearms, ammunition, and other potentially hazardous equipment, such as darts, other projectiles, power tools, and knives shall be kept under lock:
 - (A) Firearms, pellet or BB guns must be unloaded and kept in areas not used by child care children; and
 - (B) Ammunition shall be stored separately from firearms;
 - (e) Hot water heaters shall be equipped with a safety release valve and an overflow pipe that directs water to the floor or to another approved location;

- (f) Unused appliances, such as old refrigerators or freezers, that present a risk for entrapment, shall be secured so as to prevent entry by children;
 - (g) Clear glass panels in doors shall be clearly marked at child level;
 - (h) All exposed electrical outlets in rooms used by preschool or younger children shall have hard-to-remove protective caps or safety devices when not in use;
 - (i) Extension cords shall not be used as permanent wiring. All appliance cords will be in good condition and multiple connectors for cords will not be used. A grounded power strip outlet with built-in over-current protection may be used;
 - (j) Floors shall be free of splinters, large unsealed cracks, sliding rugs, and other hazards;
 - (k) Devices which generate heat and are hot from recent use shall be inaccessible to children; and
 - (l) After painting or laying carpet, the certified home must be aired out completely for at least 24 hours with good ventilation before children are allowed to return.
- (11) The provider shall have written evidence that any wood stove in the home has been inspected and approved for use by the local building official.
- (12) All wood stove and fireplace flues shall be cleaned as needed or, at a minimum, once a year. A written record of cleaning shall be maintained on site.
- (13) The use of unvented, fuel-fired space heaters is prohibited.
- (14) Flammable and combustible liquids, such as paint thinner and gasoline, shall be stored in the original container or a safety container and, if over one gallon, kept in an unattached storage building.
- (15) All caregivers and children shall practice at least one aspect of the emergency plan, as described in OAR 414-350-0050(9)(c), once per month.
- (a) Evacuating the home shall be practiced at least eight times per year. If the facility is certified to care for more than 12 children and more than 4 children regularly in care are under 24 months of age, evacuating the home shall be practiced monthly.
 - (b) The provider shall maintain a written record showing the date, time of day, participants, and type of emergency of each emergency plan practice session.

- (16) The written plan for evacuating and removing children to a safe location in an emergency must be posted in the home and must be familiar to the children and the caregivers. The plan must include:
- (a) Procedures for notifying parents or other adults responsible for the children, of the relocation and how children will be reunited with their families;
 - (b) Procedures to address the needs of individual children, including infants and toddlers, children with special needs, and children with chronic medical conditions;
 - (c) An acceptable method to ensure that all children in attendance are accounted for;
 - (d) Procedures in the event that children must shelter-in-place or if the child-care home must be locked-down so that no one can enter or leave; and
 - (e) Procedures for maintaining continuity of child-care operations.
- (17) The provider must take precautions to protect children from vehicular traffic. The provider shall:
- (a) Require drop off and pick up only at the curb or at an off-street location protected from traffic.
 - (b) Assure that any adult who supervises drop-off and loading can see and assure that children are clear of the perimeter of all vehicles before any vehicle moves.
- (18) Other hazards observed in the certification process must be corrected.

414-350-0180 Illness or Injury

- (1) A provider shall not admit, or retain in care, a child who:
- (a) Is diagnosed as having or being a carrier of a child care-restrictable disease, as defined in Department of Human Services administrative rules, OAR 333-019-0010; or
 - (b) Has one of the following symptoms, or combination of symptoms, of illness:
 - (A) Diarrhea (more than one abnormally loose, runny, watery or bloody stool);
 - (B) Vomiting;
 - (C) Fever over 100 degrees F taken under the arm;
 - (D) Severe cough;

- (E) Unusual yellow color to skin or eyes;
 - (F) Skin or eye lesions or rashes that are severe, weeping, or pus-filled;
 - (G) Stiff neck and headache with one or more of the symptoms listed above;
 - (H) Difficult breathing or abnormal wheezing; or
 - (I) Complaints of severe pain.
- (2) A child who, after being admitted, shows signs of illness, as defined in subsection (1) of this rule, shall be isolated and the parent(s) notified and asked to remove the child from the home as soon as possible.
- (3) If a child has mild cold symptoms that do not impair his/her functioning, the child may remain in the home and the parent(s) notified when they pick up the child.
- (4) A specific place for isolating a child who becomes ill shall be provided. The isolation area shall be:
- (a) Located where the child can be seen and heard by a caregiver; and
 - (b) Equipped with a cot, mat, or bed for each sick child.
- (5) All caregivers shall take appropriate precautions to prevent shaken baby syndrome and abusive head trauma.
- (6) The provider shall identify a licensed physician, hospital, or clinic to be used for emergency medical care:
- (a) The provider shall have written procedures for taking a child to emergency medical care;
 - (b) In the event of an illness or injury which requires immediate medical care, the provider is responsible for securing such care and notifying the parent(s).
- (7) First aid supplies and a chart or handbook of first aid instructions shall be maintained in one identified place but kept out of reach of children:
- (a) The first aid supplies shall include bandaids, adhesive tape, sterile gauze pads, soap or sealed antiseptic towelettes or solution to be used as a wound cleaning agent, scissors, disposable plastic gloves for handling blood spills, chlorine bleach for sanitizing after a blood spill, a sanitary temperature taking device, and CPR mouthguards; and
 - (b) First aid supplies shall be taken on all field trips.

- (8) Injuries or accidents shall be reported to the child's parent(s) on the day of occurrence:
- (a) A written report of the injury or accident shall be maintained on file;
 - (b) The report shall include the date, child's full name, nature of the injury, witnesses, action taken, and the signatures of the provider and parent(s); and
 - (c) The injury to or death of a child shall be reported to OCC in accordance with OAR414-350-0050(11)(a) and (c).
- (9) No prescription or non-prescription medication, including, but not limited to, pain relievers, sunscreen, cough syrup, diapering and first aid ointments or nose drops, shall be given to a child except under the following conditions:
- (a) A signed, dated, written authorization from the parent(s) is on file;
 - (b) Prescription medication is in the original container and labeled with the child's name, the name of the drug, dosage, directions for administering, date and physician's name;
 - (c) Non-prescription medication is in the original container, labeled with the child's name, the dosage, and directions for administering;
 - (d) A written record of all medications administered, listing, as a minimum, the name of the child, type of medication, the signature of the caregiver administering the medication, date, time, and dosage given, shall be kept;
 - (e) All medications shall be secured in a tightly-covered container with a child-proof lock or latch and stored so that they are not accessible to children;
 - (f) Medications requiring refrigeration shall be kept in the refrigerator in a separate, tightly-covered container, with a child-proof lock or latch, clearly marked "medication"; and
 - (g) Parent(s) shall be informed daily of medication administered to their child.
- (10) Sunscreen is considered a non-prescription medication and may be used for child care children under the following conditions:
- (a) Providers must obtain written parental authorization prior to using sunscreen.
 - (b) One container of sunscreen may be used for child care children unless a parent supplies an individual container for their child. The sunscreen shall be applied in a manner that prevents contaminating the container.

- (A) Parents must be informed of the type of product and the sun protective factor (SPF).
 - (B) Parents must be given the opportunity to inspect the product and active ingredients.
 - (c) If sunscreen is supplied for an individual child care child, the sunscreen must be labeled with the child's first and last name and must be used for only that child.
 - (d) Providers must reapply sunscreen every two hours while the child care children are exposed to the sun.
 - (e) Providers shall use a sunscreen with an SPF of 15 or higher and must be labeled as "Broad Spectrum".
 - (f) Providers shall not use aerosol sunscreens on child care children.
 - (g) Sunscreen shall not be used on child care children younger than six months.
 - (h) Child care children over six years of age may apply sunscreen to themselves under the direct supervision of the provider or staff member.
- (11) Parents of all children enrolled in the certified family child care home shall be informed of any outbreak of communicable disease within the facility.
- (12) If a child with allergies is enrolled who needs a specific plan for caring for that child, such a plan shall be developed in writing between the provider, parents, and if necessary, outside specialists. All staff who come in contact with that child shall be fully aware of the plan.

414-350-0190 Animals in the Certified Family Child Care Home

- (1) Any animal at the certified family child care home must be in good health and show no evidence of carrying a disease.
- (a) Dogs and cats must be vaccinated according to a licensed veterinarian's recommendations. Proof of current compliance with immunizations shall be kept on file in the home.
 - (b) Animals shall be cared for as recommended by a veterinarian. The provider shall have and follow written procedures for the care and maintenance of the animals.
- (2) Potentially aggressive animals must not be in the same physical space as the children.
- (3) Reptiles (e.g., lizards, turtles, snakes, iguanas), frogs, monkeys, hook-beaked birds, baby chicks, and ferrets are prohibited, unless they are housed in and remain in a tank or other container which precludes any direct contact by children. Educational programs that include

prohibited animals and are run by zoos, museums and other professional animal handlers are permitted.

- (4) Any animals other than cats and dogs shall be kept in an approved cage for the type of animal. Cages shall have removable bottoms and shall be kept clean and sanitary.
- (5) All animals shall be kept away from food preparation surfaces. If animals have access to food preparation surfaces, the surfaces shall be cleaned and sanitized prior to meal preparation.
- (6) Litter boxes shall not be located in any part of the home used by children or for food storage, preparation, or eating.
- (7) Caregivers must be physically present when children are interacting with animals.
- (8) Handwashing, as specified in OAR 414-350-0160(2), shall be practiced.
- (9) Parents must be made aware of the presence of any animals in the child care home.

414-350-0200 Food Selection, Storage, and Preparation

- (1) All food and drink served by the provider shall be selected, stored, prepared, and served in a sanitary manner.
- (2) All staff who prepare or serve food must have and maintain a current food handler certification pursuant to ORS 624.570.
- (3) All food products served by the provider shall be obtained from commercial food suppliers, except that:
 - (a) Fresh fruits and vegetables may be served;
 - (b) Frozen fruits, frozen vegetables, and canned and frozen jams and jellies processed in the certified family child care home may be served; and
 - (c) Home-canned or home-processed food, other than those described in OAR 414-350-0200(3)(b), may be served to an individual child only when supplied by that child's parent(s).
- (4) Only pasteurized and fortified milk shall be served to children.
 - (a) Powdered milk may be used only in cooking; and

- (b) The serving of unpasteurized milk is prohibited.
- (5) Only pasteurized 100% fruit or vegetable juice shall be served.
- (6) A certified family child care home shall have at least one refrigerator, in good operating condition, that is adequate to store all potentially hazardous foods.
- (7) All potentially hazardous food shall, except when being prepared, be kept at 41° Fahrenheit or below, or 140° F or above.
- (a) A temperature-measuring device (TMD) in working condition shall be affixed to the door or the front edge of the top shelf of all refrigerators.
 - (b) Foods requiring refrigeration after preparation shall be covered and rapidly cooled to a temperature of 41° F or below.
 - (c) Extra care shall be taken to ensure that, after pouring milk, any unused portion left in the container is returned to the refrigerator immediately.
 - (d) Refrigerated storage space at 41° F or less shall be used to store lunches that contain potentially hazardous food that children bring from home.
 - (e) Leftover food prepared but not served by the provider shall be covered, dated, labeled, and either refrigerated promptly and used within 36 hours or frozen immediately for later use.
 - (f) Foods that have been cooked and then refrigerated shall be reheated rapidly according to food handler certification standards.
- (8) Children shall not be in the kitchen or food preparation areas when foods are being prepared unless they are protected from such hazards as hot foods, sharp utensils, etc.

414-350-0210 Meals and Snacks

- (1) The provider shall provide or ensure the availability of adequate and nutritious meals and snacks appropriate for the ages and needs of the children served. USDA guidelines will be used to determine if meals and snacks are adequate and nutritious. Foods of minimal nutritional value (e.g., Jell-O, popcorn, desserts, potato chips) shall only be served occasionally and not replace nutritious foods.
- (a) Every meal shall meet USDA guidelines and shall include at least one serving from each of the following food groups: fluid milk; breads and grains; meat, fish, poultry or meat alternatives (e.g., dried beans, peanut butter, yogurt or cheese). Each meal shall include two servings of fruits or vegetables. No liquids other than milk and 100% fruit juice shall be counted as part of the daily nutrition.

- (b) Snacks shall meet USDA guidelines and shall consist of food or beverage from at least two of the following food groups: fluid milk, breads and grains; meat, fish, poultry or meat alternatives (e.g., dried beans, peanut butter, yogurt or cheese); vegetables and fruits. No liquids other than milk and 100% fruit juice shall be counted as part of the daily nutrition. A snack shall not consist of only two beverages.
- (c) Nutrient concentrates and supplements (protein powders, liquid proteins, vitamins, minerals, and other nonfood substances) shall not be served to a child without a written statement of parental consent and written instructions from a medical practitioner. Special diets, not including vegetarian diets, shall not be served to a child without written instructions from a registered dietician or medical practitioner and written parental consent.

(2) Meals and snacks provided to children shall meet the following requirements:

- (a) In certified family child care homes open morning through afternoon, lunch and morning and afternoon snacks shall be served to the children in care. If breakfast is served to all children, a midmorning snack is not required;
- (b) School-age children arriving after school shall be served a snack;
- (c) When the planned attendance is prior to 7 a.m. or after 6:30 p.m., a child shall be offered a complete meal if it is not provided by the parent(s); and
- (d) There shall be no more than 3-1/2 hours between meals and snacks.

(3) Meals and snacks for children shall be:

- (a) Prepared by the provider;
- (b) Prepared by the parent of the child; or
- (c) Prepared from a source approved by the Department of Human Services.

(4) When the parent of a child provides food for the child's meal:

- (a) The provider shall be responsible for at least one serving of milk or a milk product to each child at meals;
- (b) Each child's food shall be monitored daily by a caregiver to ensure that the food meets nutritional requirements as defined in section (1) of this rule; and
- (c) The provider shall have sufficient food available to supplement any meal that does not meet nutritional requirements as defined in section (1) of this rule.

- (5) Meals shall be served in a manner that supports safe and sanitary eating and allows socialization to occur.
- (6) Nutrient concentrates and supplements shall not be served to a child without a written statement of consent from the parent and a medical practitioner. Special diets, not including vegetarian diets, shall not be served to a child without a written statement of consent from the parent and a registered dietician or medical practitioner.
- (7) To serve family style meals, where food is brought to the table in larger quantities and served to the plates from the table, a certified home must have a written plan, approved by the environmental health specialist and OCC, which includes at least the following elements:
 - (a) Provision for handwashing immediately prior to eating;
 - (b) Separate serving portions for each table, if more than one table is used;
 - (c) Serving utensils distinct from eating utensils;
 - (d) Provision for serving mildly ill children so as to prevent the spread of the illness;
 - (e) The discarding of any food brought to the table and not eaten; and
 - (f) Food brought to the table must be covered until a caregiver is seated with the children.
- (8) A certified family child care home serving children under 12 months of age shall comply with the following requirements for those children:
 - (a) Each child shall be fed on his/her own feeding schedule.
 - (b) When formula is furnished by the provider, it shall be either the commercially prepared, iron-enriched, ready-to-feed type or shall be prepared from powder or concentrate and diluted according to manufacturers' instructions. When formula is prepared on site, the provider must have a written plan for mixing formula and sanitizing bottles and nipples. The plan must be approved in writing by the environmental health specialist.
 - (c) Formula, breast milk, and food provided by the parent shall be clearly marked with the child's name and refrigerated if required.
 - (d) No liquids, other than milk, formula, water, and 100 percent fruit juice, shall be served.
 - (e) Whole milk, skim milk, 1%, and 2% milk shall not be served unless requested in writing by the child's parent(s) and with a medical provider's written permission.

- (f) Solid foods fed to infants shall be selected from the USDA Infant Food Chart.
 - (A) Solid foods shall not be fed to infants less than four months of age without parental consent.
 - (B) Solid food shall not be served directly from the container unless the child consumes the entire contents of the container or any remaining food in the container is discarded.
 - (C) If a portion of solid food from a container is placed in a clean, sanitized dish and served from the dish, any food remaining in the dish shall be discarded.
 - (D) Open containers of food, from which a portion has been removed, must immediately be refrigerated at 41 degrees F or less.
 - (E) Solid foods, with the exception of finger foods, shall be fed with a spoon.
- (g) Honey or foods containing honey shall not be served; and
- (h) Children who cannot feed themselves shall be held or, if able to sit alone, fed in an upright position.
 - (A) Infants up to six months of age shall be held or sitting up in a caregiver's lap for bottle feeding.
 - (B) Bottles shall never be propped. The child or a caregiver shall hold the bottle.
 - (C) Infants no longer being held for feeding shall be fed in a manner that provides safety and comfort.
- (9) Children of any age shall not be laid down with a bottle.

414-350-0220 General Requirements

- (1) The provider and any caregivers must give the children's needs first priority, ensuring they get adequate care and attention.
- (2) There shall be activities for children according to their ages, interests, and abilities. If the provider is certified to care for more than 12 children the provider shall have a written program of activities for each age group.
- (3) A description of the general routine, covering all hours of operation, shall be in writing and shall provide:

- (a) Regularity of such activities as eating, napping, and toileting with flexibility to respond to the needs of individual children;
 - (b) A balance of active and quiet activities;
 - (c) Individual and group activities;
 - (d) Daily indoor and outdoor activities in which children use both large and small muscles;
 - (e) Periods of outdoor play each day when weather permits; and
 - (f) Opportunities for a free choice of activities by children.
- (4) The provider and other caregivers shall use the written description of the general routine as a guide, allowing flexibility to respond to the needs of individual children and/or groups of children and to appropriate variations in daily activities.
- (5) No child may view television or videos or play computer or electronic games for more than two hours per day.
- (6) Infant and toddler program of activities. The following apply to infant and toddlers in care at the certified home.
- (a) Infants shall be allowed to form and follow their own patterns of sleeping and waking periods.
 - (b) Children shall be given opportunities during each day to move freely by creeping and crawling in a safe, clean, warm, and uncluttered area.
 - (c) Throughout the day, each infant and toddler shall receive physical contact and individual attention (e.g., being held, rocked, talked to, sung to, and taken on walks inside and outside the home).
 - (d) The provider must have routines for eating, napping, diapering and toileting, with flexibility to respond to the needs of each child.
 - (e) Infants shall have a variety of appropriate infant toys stimulating to the senses.
 - (f) Children shall be given appropriate opportunities to use the five senses through sensory play.
 - (g) Infants shall be put to sleep on their backs.

- (h) Immediate attention shall be given to the emotional and physical needs of the children. No child shall be routinely left in a crib except for sleep or rest.
 - (i) Caregivers shall encourage the development of self-help skills (dressing, toileting, washing, eating) as children are ready.
 - (j) In addition, toddlers shall be given opportunities to participate in:
 - (A) A variety of activities encouraging creative expression through the arts; and
 - (B) Running, climbing, and other vigorous physical activities.
- (7) The following safe sleep practices must be followed:
- (a) Each infant shall sleep in a crib, portable crib, bassinet or playpen with a clean, non-absorbent mattress. All cribs, portable cribs, bassinets and playpens must comply with current Consumer Product Safety Commission (CPSC) standards;
 - (b) Bassinets may only be used until the infant is able to roll over on their own;
 - (c) Each mattress shall:
 - (A) Fit snugly; and
 - (B) Be covered by a tightly fitting sheet;
 - (d) A clean sheet shall be provided for each child;
 - (e) Infants must be placed on their backs on a flat surface for sleeping;
 - (f) While on the child care premises, if an infant falls asleep in a place other than their crib, portable crib, bassinet or playpen, the provider must immediately move the infant to an appropriate sleep surface;
 - (g) No child shall be routinely left in a crib, portable crib, bassinet or playpen except for sleep or rest;
 - (h) There shall be no items in the crib, portable crib, bassinet or playpen with the infant, except a pacifier (e.g. bottles, toys, pillows, stuffed animals, blankets, bumpers);
 - (i) Swaddling or other clothing or covering that restricts the child's movement is prohibited;

- (j) Clothing or items that could pose a strangulation hazard (e.g. teething necklaces, pacifier attachments, clothing drawstrings) are prohibited; and
 - (k) Car seats are to be used for transportation only. Children who are asleep in a car seat must be removed upon arrival to the home and placed in an appropriate sleep surface.
- (8) Preschool-age program of activities. In addition to the daily routine specified in OAR 414-350-0220(2), preschool-age children shall have opportunities, on a daily basis, to choose from a variety of activities and experiences, which shall include:
- (a) Creative expression through the arts;
 - (b) Dramatic play;
 - (c) Gross (large) motor development;
 - (d) Fine (small) motor development;
 - (e) Music and movement;
 - (f) Opportunities to listen and speak;
 - (g) Concept development;
 - (h) Appropriate sensory play; and
 - (i) A supervised nap or rest period. Children who do not sleep after 20–45 minutes of quiet time must be provided with an alternative quiet activity. The activity may be in the same room where children are sleeping if it is not distracting to sleeping children.
- (9) School-age program of activities. In addition to the daily routine specified in OAR 414-350-0220(2), school age children shall have opportunities to choose from a variety of activities, including:
- (a) Individual or group projects and activities, including homework; and
 - (b) Rest or relaxation.
- (10) A home providing swimming or other water activities to children shall meet all of the requirements set forth in OAR 414-350-0380.
- (11) Spa pools on the grounds of the certified family child care home shall be enclosed by a barrier at least 48 inches high, with a lockable gate or door, and have a lockable pool cover.

The enclosure and cover shall be locked whenever the child care business is being conducted.

414-350-0230 Equipment, Furniture, and Supplies

- (1) The certified family child care home shall have indoor and outdoor play equipment, materials, and furniture that are:
 - (a) Appropriate to the developmental needs and interests of children;
 - (b) Safe, clean, durable, well constructed, in good repair, and made from lead-free, non-toxic materials;
 - (c) Child-sized or appropriately adapted for infants, toddlers, and preschool age children's use; and
 - (d) Easily accessible to the children.
- (2) The quantity of play materials (i.e., toys, books and games) shall be sufficient to:
 - (a) Avoid excessive competition;
 - (b) Provide a variety of choices to each child;
 - (c) Provide a balance of active/quiet and individual/group activities; and
 - (d) Provide the variety of activities required in OAR 414-350-0220(2), (3), and (4).
- (3) An individual bed, mat or cot, appropriate to the cultural background of the child, with individual bedding appropriate to the season shall be provided for each toddler and preschool age child in the home at nap time and for each school-age child who wants to rest.
 - (a) Family beds may be used.
 - (b) If the parent(s) so request, siblings may share the same bed.
 - (c) The upper level of bunk beds shall not be used for children under 10 years of age.
 - (d) The upper level of bunk beds may be used for children 10 years or older if a bed rail and safety ladder are provided.

414-350-0235 Infant and Toddler Furniture and Equipment

- (1) Each infant shall have a crib, portable crib, or playpen with a clean, non-absorbent mattress that meets the following requirements:
 - (a) Each crib shall be of sturdy construction with vertical slats no more than 2 3/8" apart;
 - (b) Locks and latches on the dropside of the crib shall be safe and secure from accidental release or release by the infant inside the crib;
 - (c) Each mattress shall fit snugly; and
 - (d) Sleeping arrangements shall be appropriate to the cultural background of the infant, with individual bedding appropriate to the season.
- (2) If infants and toddlers are in care there shall be:
 - (a) A bathtub, bathinette, plastic basin, or similar size shallow sink available for bathing children; and
 - (b) A diaper-changing area. The area shall be located so that handwashing can occur immediately after diapering without contact with other surfaces or other children.
 - (c) If the provider is certified to care for more than 12 children and more than 8 infants and toddlers are regularly in care, there must be a second diaper-changing area available.
- (3) The diaper-changing table or area shall comply with the requirements specified in OAR 414-350-0160(3)(a)(G).
- (4) If high chairs are used, they shall have:
 - (a) A broad base to prevent tipping;
 - (b) A latch to keep a child from raising the tray; and
 - (c) Straps to prevent a child from sliding out.
- (5) Cribs, portable cribs, playpens, and high chairs must meet US Consumer Product Safety Commission or equivalent standards.
- (6) The use of baby equipment shall not substitute for providing a variety of stimulating experiences.
- (7) The use of infant walkers is prohibited.

- (8) The use of potty chairs must be approved by the environmental health specialist and/or by OCC.

414-350-0240 Guidance and Discipline

- (1) A provider shall have a written policy on guidance and discipline of children.
- (2) The provider shall make these policies known to all caregivers and parents.
- (3) The guidance and discipline policy shall:
 - (a) Provide for positive guidance, redirection, and the setting of clear boundaries; and
 - (b) Be designed to help the child develop self-control, self-esteem, and respect for others.
- (4) Only a caregiver shall provide guidance or discipline to a child.
- (5) Guidance and discipline shall be fair, consistently applied, timely, and appropriate to the behavior and age of the child. Positive statements or redirection of behaviors shall be used.
- (6) Prohibited punishment includes, but is not limited to:
 - (a) Hitting, slapping, shaking, striking with hand or instrument, pinching, tying or binding, or inflicting any other form of corporal punishment;
 - (b) Mental or emotional punishment including, but not limited to, name calling, ridicule, yelling, or threats;
 - (c) Non-prescription chemical restraints used for discipline or to control behavior;
 - (d) Confining a child in an enclosed area, (e.g., a locked or closed room, closet, box);
 - (e) Forcing or withholding meals, snacks, rest, or necessary toilet use; or
 - (f) Belittling a child for or forcing a child to clean up after toileting accidents.
- (7) The provider shall not accept parental permission to use any form of punishment listed in subsection (6) of this rule.

414-350-0250 Transportation

When transportation is provided by or arranged for by the certified family child care home, the following requirements must be met.

- (1) Drivers shall be at least 18 years of age and hold a current driver's license.
- (2) The vehicle shall be:
 - (a) In compliance with all applicable state and local motor vehicle laws, and
 - (b) Maintained in a safe operating condition.
- (3) If transportation is provided between the certified family child care home and the child's school or other destination, the provider shall have in writing an acknowledgment from the parent(s) that they are aware of the time of day their child is to be picked up and/or delivered by the provider. If the pick-up schedule results in children being unsupervised at school or other location, the provider shall notify parents of this fact.
- (4) When transporting children:
 - (a) The emergency information for each child who is being transported shall be in the vehicle.
 - (b) Children shall be transported only in sections of vehicles designed for and equipped to carry passengers.
 - (c) A seat that fully supports the passenger shall be provided for each child.
 - (d) The number of children transported shall not exceed the number of seat belts or child safety systems available in the vehicle.
 - (e) All children shall be transported in accordance with ORS 811.210. The child safety system and safety belts shall comply with ORS 815.055 and the standards adopted by the Oregon Department of Transportation. A child under four years of age and weighing 40 pounds or less shall be in an approved child safety system. A child between the ages of 4 and 6 years AND children who weigh between 40 and 60 pounds, regardless of age, must use a booster seat.
 - (f) Staff/child ratios, as specified in OAR 414-350-0120, shall be maintained in vehicles, as well as in the certified family child care home, when one caregiver is transporting children.

- (g) Infants, toddlers, and preschool age children shall leave the vehicle on the same side of the street as the building they will enter.
 - (h) Drivers delivering children to their homes shall not depart until the child has been received by an authorized person.
 - (i) No child shall be left unattended inside or outside a vehicle.
 - (j) If firearms and ammunition are stored in a vehicle, they must be stored as specified in OAR 414-350-0170(10)(d).
- (5) The following vehicles may be used to transport child care children:
- (a) A vehicle manufactured to carry fewer than ten passengers;
 - (b) A school bus or a multi-function school activity bus;
 - (c) A vehicle manufactured to carry ten or more passengers that was manufactured in 2010 or after; or
 - (d) A vehicle manufactured to carry ten or more passengers that was manufactured before 2010, with the following conditions:
 - (A) Travel speed may not exceed 50 mph; and
 - (B) The vehicle must have an annual safety inspection by a garage, dealership or auto repair shop. Proof of inspection must be on the form provided by the Early Learning Division or on a form provided by the inspector which contains the same information.

414-350-0375 Night Care

When a certified family home provides night care to child care children, the provider shall meet all of the requirements for certified family child care homes contained in OAR 414-350-0000 through 414-350-0405, except for 414-350-0150 and 414-350-0220. In addition, the home shall comply with the following requirements, and the certification shall reflect that regulated night care is offered.

- (1) Staffing:
 - (a) During the hours of night care, the required staff/child ratios, as specified in OAR 414-350-0120 shall be maintained.
 - (b) A caregiver must be present on the same floor level as the child care children who are sleeping.

- (c) A caregiver must be awake for the arrival and departure of each child in night care. A caregiver must be awake during night care hours if more than six(6) children are in care.
- (d) All persons 18 years of age and older, inclusive of guests sleeping in the home during night care hours, shall comply with OAR 414-350-0090(4).

(2) Activities:

- (a) There shall be quiet activities, such as story-time, games, arts and crafts, and reading, for each child arriving before bedtime. These activities shall be appropriate to the child's age, interests and abilities.
- (b) The use of television, videos, and computer or electronic games shall comply with OAR 414-350-0220(5).
- (c) The provider shall have a written plan for night care which includes:
 - (A) Regular routines;
 - (B) Supervision of children;
 - (C) Evacuation procedures for awake and sleeping children;
 - (D) Sleeping arrangements; and
 - (E) Arrival and departure procedures.
- (d) If 24-hour care is provided, the provider shall have a written plan for self care, i.e., how her/his own needs will be met.

(3) Sleeping Arrangements:

- (a) Space shall be available so that children may go to sleep at various times, based on their age and need for rest.
- (b) All sleeping rooms used by children shall have two useable exits. A sliding door or window can be considered a useable exit if it meets the definition, as specified in OAR 414-350-0010(38).
- (c) Beds and bedding shall comply with OAR 414-350-0230(3) and 414-350-0235(1).

(4) Personal Hygiene:

- (a) When bathing is provided, there shall be:

- (A) Individual washcloths and towels for each child;
 - (B) Individual bathing opportunities for each child, unless a parent(s) has given permission for siblings to bath together;
 - (C) Safety glass in glass shower doors or glass tub enclosures;
 - (D) Appropriate cleaning and sanitizing procedures implemented after each child has used the shower or tub; and
 - (E) Appropriate equipment in bathtubs and showers to prevent slipping.
- (b) Children spending the night shall have the opportunity to brush their teeth with an individual toothbrush and toothpaste labeled with his/her name.
 - (c) When bathing, showering or brushing teeth, children shall be supervised by a caregiver. For school-age children, privacy shall be maintained.

414-350-0380 Swimming Activities

The following requirements apply to swimming/water activities provided on the premises of a certified family child care home, or off premises by another organization, public or private, when part of the facility's program.

(1) Definitions:

- (a) "Beginning swimmer" means a child who has mastered the skills required to:
 - (A) Hold his breath with his head submerged;
 - (B) Perform a front and back float;
 - (C) Perform the flutter kick on his front and back;
 - (D) Be able to level off from a vertical entry into a float position; and
 - (E) Do a combined stroke (front or back) for at least 20 feet without stopping.
- (b) "Non-swimmer" means a child who does not meet the definition of beginning swimmer.
- (c) "Lifeguard" means a person holding current certification and meeting the requirements OAR 333-060 of -0015(13).

- (d) "Swimming pool" means a swimming or wading pool licensed by the Oregon Department of Human Services or one of its delegated agents under the requirements of OAR 333-060-0005 through 333-060-0225.
- (e) "Wading" means water activities in which the water's depth is no higher than the child's knee.

(2) General Health and Safety:

- (a) Children with diarrhea or who have had diarrhea within the last two weeks shall not use the pool.
- (b) Children who are not toilet trained shall wear swim diapers.
- (c) Children shall use the toilet and shower before entering the pool.
- (d) Proper supervision shall be maintained, as specified in OAR 414-350-0380(3)(e), (f) and (g) and 414-350-0380(d) and (e).
- (e) The pool operator shall maintain water quality as required in OAR 333-060-0200 or pool use shall cease until the water quality is restored.
- (f) Children using the pool shall participate in basic water safety instruction based on their ages and developmental levels.
 - (A) All adults counted in the staff/child ratios in Table 4 shall be able to swim if the water is more than 48 inches deep and, regardless of the water depth, shall be dressed for swimming.
 - (B) For children 6 weeks to 36 months, one of the required staff must be in the water. Other staff may be on deck.
- (g) Recreational swimming is not allowed for non-swimmers ages 6 weeks to 36 months in swimming pools with water depth 24 inches and over.
- (h) Portable-style wading pools are not permitted.

(3) On-Premises Pool Facilities:

- (a) On-premises pool facilities shall be licensed by the Oregon Department of Human Services or its delegated agent and shall comply with the requirements in OAR 333-060-0005 through 333-060-0225.
- (b) On-premises pool facilities shall have toilets and showers for use by the swimmers.

- (c) All new pools or pools at certified family child care homes certified after September 15, 2002, shall have dressing areas for each sex, with storage for the children's clothes.
- (d) All activities occurring in a pool shall be under the direction and direct supervision of lifeguards.
- (e) Center staff/child ratios shall be maintained at all times children are in the pool area, as specified in Table 4 of this rule.
- (f) Lifeguard/child ratios shall be maintained at all times children are in the pool area:
 - (A) For children not yet attending kindergarten, there shall be one lifeguard for every 20 children;
 - (B) For children attending kindergarten and older, there shall be one lifeguard for every 40 children; and
 - (C) For mixed age groups of children, the age of the youngest child shall determine the lifeguard/child ratio.
- (g) During all periods of pool operation, the appropriate number of lifeguards shall be on duty in the pool area. During periods of recreational swimming, at least one of the required number of lifeguards shall be stationed on the pool deck.
- (h) Water activities that involve a sprayer or spray feature using potable water that is not re-circulated or collected may be conducted by the home.

Staffing Requirements for Swimming

Wading Pools- Water Depth under 24 Inches

Age of Child	Non-Swimmer		Beginning Swimmer	
	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio
	<u>Lessons</u>	<u>Recreation</u>	<u>Lessons</u>	<u>Recreation</u>
Six Wks – 36 Mo	1:1	1:1	1:4	1:1
36 Mo – Not Yet Attending Kindergarten	1:6	1:6	1:8	1:8
Attending Kindergarten +	1:10	1:10	1:10	1:15

Swimming Pools- Water Depth from 24 – 48 Inches

	Non-Swimmer		Beginning Swimmer	
Age of Child	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio
	<u>Lessons</u>	<u>Recreation</u>	<u>Lessons</u>	<u>Recreation</u>
Six Wks – 36 Mo	1:1	Not Allowed	1:4	1:1
36 Mo – Not Yet Attending Kindergarten	1:5	1:2	1:7	1:7
Attending Kindergarten +	1:10	1:10	1:10	1:15

Swimming Pools- Water Depth over 48 Inches

	Non-Swimmer		Beginning Swimmer	
Age of Child	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio
	<u>Lessons</u>	<u>Recreation</u>	<u>Lessons</u>	<u>Recreation</u>
Six Wks – 36 Mo	1:1	Not Allowed	1:4	1:1
36 Mo – Not Yet Attending Kindergarten	1:4	Not Allowed	1:6	1:6
Attending Kindergarten +	1:5	1:5	1:10	1:15

- (i) A written plan for pool emergencies shall be available to all staff. The plan shall cover procedures for medical emergencies, chemical emergencies and severe weather.
 - (A) Staff shall be familiar with emergency procedures, the use of safety equipment and emergency contacts.
 - (B) The certified home shall provide in-service training and/or drills of the emergency procedures for the pool at least every six months. The provider shall keep a written record of the type, date, time and duration of the training/drills.

(C) Emergency telephone numbers shall be posted near the telephone in the pool area and near a centrally-located and accessible telephone in the certified home.

(j) Safety equipment shall be provided and comply with OAR 333-060-0005 through 333-060-0225. In addition:

(A) All pools shall have an emergency telephone located in the pool area. The telephone shall be able to dial directly for emergency assistance, unless otherwise approved by the Oregon Department of Human Services.

(B) A bodily-fluid spill clean-up kit shall be provided in the pool area. The kit shall consist, at a minimum, of protective gloves, disinfectant, clean-up materials (e.g., bucket, sponge, paper towels), and a biohazard waste bag, be stored in a complete condition, and be replaced or restocked immediately after use.

(C) A rescue tube, of the type required by the lifeguard certifying agency, shall be provided for each lifeguard on duty.

(4) Off-Premises Pool Facilities:

(a) Off-premises pool facilities used by the center shall be licensed by the Oregon Department of Human Services as public swimming pools.

(b) The off-premises pool management shall be made aware of the certified family child care home rules regarding swimming activities.

(c) Certified family child care home staff and children shall comply with the rules and regulations of the public swimming pool.

(d) Certified family child care home staff shall comply with the staff/child ratios in Table 4 of this rule. Lifeguard/child ratios shall be determined by the public swimming pool.

(e) Children shall be within sight and sound of certified family child care home staff at all times.

(f) First aid supplies and a copy of each child's medical release form shall be taken to off-premises pool facilities.

(5) Natural Bathing Areas:

(a) The certified family child care home shall not conduct swimming activities in areas with flowing water.

(b) Wading is the only water activity permitted in shallow surf, lakes, rivers and streams.

414-350-0390 Suspension, Denial and Revocation

- (1) Certification may be denied or revoked if a certified family child care home fails to meet requirements, provide OCC with information requested, allow an inspection, correct deficiencies, or is operated or maintained in a manner which is harmful to the health, safety or well-being of children in care.
- (2) The provider has the right to appeal any decision to suspend, deny or revoke the certification, subject to the provisions of Chapter 183, Oregon Revised Statutes.
- (3) A provider whose certification has been denied for cause (e.g. health and safety concerns, criminal activity or child protective services involvement) or revoked shall not be eligible to reapply for 5 years after the effective date of the closure.
- (4) If necessary to protect children, OCC may give public notice of denial, suspension or revocation action taken. The type of notice will depend on individual circumstances.
- (5) OCC may immediately, and without prior notice, suspend the child care certification when, in the opinion of OCC, such action is necessary to protect the children from physical or mental abuse or a substantial threat to health, safety or well-being. Such action may be taken before an investigation is completed.
- (6) A provider whose certification has been suspended must immediately notify, verbally or in writing, all parents of the suspension.
- (7) A provider whose certification has been suspended must post the suspension in the home where it can be viewed by parents and others for the duration of the suspension.
- (8) If the provider does not request a hearing and the conditions which resulted in suspension have not been corrected, the certification shall be revoked.
- (9) An owner whose certification has been suspended must immediately provide OCC with all names, work and home telephone numbers and addresses of the parent(s) or legal guardian(s) for each child.
- (10) A certified family child care home whose certification has been denied or revoked must immediately notify all parents of the closure and shall post a notice of the closure where it can be viewed by parents and others. The notice shall remain posted for a minimum of 2 weeks.
- (11) Any action taken by OCC to deny, suspend, or revoke certification may be reported to the Department of Human Services, USDA Child Care Food Programs, child care resource and referral system.

- (12) If any person, who is enrolled in the CBR, has been charged with, arrested for, or a warrant is out for any of the crimes which OCC has determined indicate behavior which may have a detrimental effect on a child, with final disposition not yet reached, certification may be denied or suspended or revoked until the charge, arrest, or warrant has been resolved if the person continues to operate, be employed in or reside in the home, or have access to children in the home.
- (13) Certification may be denied, suspended or revoked if an individual listed in OAR 414-350-0080(5) has a child protective services history or an open child protective services or law enforcement case that would disqualify the individual from the CBR.

414-350-0405 Civil Penalty

- (1) Violations of these rules or terms and conditions of certification under these rules may be subject to a civil penalty up to \$1200 per violation.
- (2) Whenever the Office of Child Care (OCC) investigates an alleged complaint at a certified facility, or a facility that may be operating in violation of the requirements of ORS 329A.250 through 329A.450, OCC shall:
 - (a) Provide technical assistance as appropriate;
 - (b) Send written notice of the complaint visit to the facility with a finding of valid, unable to substantiate, or invalid; and
 - (c) OCC shall assess whether additional legal actions are appropriate, including but not limited to civil penalties, denials, revocations or suspensions, depending upon:
 - (A) Numbers of previous violations of the same rule; or
 - (B) Circumstances surrounding the rule violation.
- (3) For a serious violation, as defined in OAR-414-350-0010 (33), an owner may be subject to a civil penalty not to exceed \$1200 for each violation.
- (4) For a non-serious violation, an owner may be subject to a civil penalty of \$400 for each violation.
- (5) Each day that a child care facility is operating in violation of any of the rules and conditions of certification is a separate violation of the rules.
- (6) An individual or entity that provides child care subject to licensing in a home or facility that is not certified with the Office of Child Care, may be subject to a civil penalty not to exceed \$1,500 per day of operation of the uncertified facility.

- (7) Notwithstanding the Office of Child Care's (OCC) decision to impose a civil penalty for one or more rule violations, OCC may also take action to deny, suspend or revoke a certification for the same rule violation or violations.
- (8) The provider has the right to appeal any decision to impose a civil penalty, subject to the provisions of Chapter 183, Oregon Revised Statutes.
- (9) Failure to pay a civil penalty in which the Office of Child Care has issued a final order by default or a final order after a contested case hearing shall be grounds for denial or revocation of the facility's certification.



Rules for

CERTIFIED CHILD CARE CENTERS

Effective 8/13/19

Oregon Department of Education
Early Learning Division
Office of Child Care
503-947-1400 • 1-800-556-6616

CRT-132 | Updated 11/2/2020

Contents

GENERAL PROVISIONS	1
414-300-0000 Applicability of Rules.....	1
414-300-0005 Definitions	2
CERTIFICATE.....	9
414-300-0010 Application for a Child Care Certificate.....	9
414-300-0015 Issuance of a Child Care Certificate.....	11
414-300-0020 Exceptions to Rules.....	12
CENTER MANAGEMENT	13
414-300-0030 General Requirements	13
414-300-0040 Enrollment.....	16
414-300-0050 Arrival and Departure.....	18
414-300-0060 Record Keeping.....	19
PERSONNEL	20
414-300-0070 General Requirements	20
414-300-0080 Director Qualifications and Duties.....	23
414-300-0090 Head Teacher Qualifications and Duties.....	25
414-300-0100 Teacher	27
414-300-0110 Teacher Aides.....	28
414-300-0115 School-Age Multi-Site Programs - Additional Staff.....	29
414-300-0120 Staff Training	30
414-300-0130 Staff/Child Ratios and Group Size	32
PHYSICAL SETTING	34
414-300-0140 Indoor Space.....	34
414-300-0150 Outdoor Space	35
414-300-0160 Fire Protection	36
414-300-0170 Hazards and Emergencies.....	36
414-300-0180 Sanitation.....	39
414-300-0190 Toilet Facilities.....	42
414-300-0200 Kitchens.....	43
414-300-0205 Testing for Lead in Drinking Water	44
414-300-0210 Furniture	47
414-300-0215 Infant and Toddler Furniture and Equipment.....	47

HEALTH	48
414-300-0220 Illness or Injury	48
414-300-0230 Medications	51
414-300-0240 Animals in the Center.....	52
414-300-0250 Food Selection, Storage, and Preparation.....	53
414-300-0260 Cleaning, Sanitizing, and Storage of Food Service Equipment and Utensils.....	55
414-300-0270 Nutrition	56
414-300-0280 Meals and Snacks	57
PROGRAM OF CARE OF CHILDREN.....	60
414-300-0290 Program Plan	60
414-300-0295 Program of Activities for All Children.....	60
414-300-0300 Infant and Toddler Program of Activities.....	61
414-300-0310 Preschool-Age Program of Activities.....	63
414-300-0320 School-Age Program of Activities	63
414-300-0330 Guidance and Discipline.....	64
414-300-0340 Equipment and Materials.....	65
414-300-0350 Transportation	66
SPECIAL PROGRAMS	68
414-300-0360 Night Care	68
414-300-0380 Swimming Activities.....	70
414-300-0390 Drop-in Care.....	75
SANCTIONS	75
414-300-0400 Suspension, Denial and Revocation	75
414-300-0415 Civil Penalty	76

GENERAL PROVISIONS

414-300-0000 Applicability of Rules

- (1) OAR 414-300-0000 through 414-300-0415 set forth the Office of Child Care's (OCC) requirements for inspecting and certifying those child care facilities subject to Oregon laws governing child care facilities, ORS 329A.030, 329A.250 through 329A.310, 329A.350 through 329A.460 and 329A.990, that:
 - (a) Serve thirteen or more children; or
 - (b) Serve twelve or fewer children and are located in a building constructed as other than a single-family dwelling.
- (2) Individuals who are not enrolled in the Central Background Registry because of removal, denial for cause, or voluntary surrender in lieu of legal action, may only care for their own children or children related within the fourth degree as determined by civil law, pursuant to ORS 329A.252.
- (3) These rules do not apply to child care facilities specifically excluded by law. Excluded facilities are those that:
 - (a) Provide care for preschool children that is primarily educational for four hours or less per day and where no preschool age child is present at the facility for more than four hours per day except as provided in 414-300-0000(2); or
 - (b) Provide care for school-age children that is primarily a single enrichment activity, for eight hours or less a week; or
 - (c) Provide care in which youth development activities are provided to school-age children during hours that school is not in session and which does not take the place of a parent's care; or
 - (d) Provide care that is primarily an incident of group athletic or social activities sponsored by or under the supervision of an organized club or hobby group; or. This exclusion applies only to the time engaged in the group athletic or social activities and if the children can come and go as they please; or
 - (e) Are operated by a school district, political subdivision of this state, or a government agency; or
 - (f) Are operated on an occasional basis by a person, sponsor, or organization not ordinarily engaged in providing child care except as provided in 414-300-0000(2); or
 - (g) Operate as a parent cooperative for no more than four hours a day; or

- (h) Provide care while the child's parent remains on the premises and is engaged in an activity offered by the facility or in other nonwork activity; or
 - (i) Provide care for three children other than the person's own children except as provided in 414-300-0000(2); or
 - (j) Provide care for children from only one family other than the person's own family except as provided in 414-300-0000(2).
- (4) If any court of law finds that any clause, phrase, or provision of these rules is unconstitutional or invalid for any reason whatsoever, this finding shall not affect the validity of the remaining portion of these rules.
- (5) For purposes of these rules, the determination of compliance or noncompliance shall be made by OCC.
- (6) Providers have a right to review any action or decision affecting them. The OCC grievance procedures are available upon request to all applicants for child care certification or operators of centers.

414-300-0005 Definitions

The following words and terms, when used in OAR 414-300-0000 through 414-300-0415, have the following meanings:

- (1) "Activity Area" means the area of the center that is available, during all the hours of operation, for the children's activities. This area excludes kitchens, hallways, toilet rooms, multi-purpose areas used by all children, lockers, office, storage areas, isolation quarters, staff room, furnace room, and that part of rooms occupied by heating stoves, or stationary equipment not used by children. Additional exclusions may apply for specific age groups.
- (2) "Attendance" means children actually present in the center at any given time.
- (3) "Capacity" means the total number of children allowed in the center at any one time, based on the available indoor and outdoor square footage, the number of toilets in the center and the number of qualified staff.
- (4) "Caregiver" means any person in the child care center who works directly with the children, providing care, supervision, and guidance.
- (5) "Central Background Registry" means OCC's Registry of individuals who have been approved to be associated with a child care facility in Oregon pursuant to ORS 329A.030 and OAR 414-061-0000 through 414-061-0120.

- (a) "CBR Enrollment" means approval for a 5 year period to be enrolled in the CBR following an Oregon State Police criminal records check, child abuse and neglect records check, checks of adult protective services and foster care certification and an FBI records check.
 - (b) "CBR Conditional Enrollment" means temporary approval to be enrolled in the CBR following a Oregon State Police records check and child abuse and neglect records check but prior to receipt by OCC of the results of the required FBI records check.
- (6) "Certificate" means the document that is issued by OCC to a child care center pursuant to ORS 329A.280.
- (7) "Child Care" means the care, supervision, and guidance on a regular basis of a child, unaccompanied by a parent, guardian, or custodian, during a part of the 24 hours of the day, with or without compensation. Child care does not include the care provided:
- (a) In the home of the child;
 - (b) By the child's parent or guardian, or person acting in loco parentis;
 - (c) By a person related to the child by blood or marriage within the fourth degree as determined by civil law;
 - (d) On an occasional basis by a person, sponsor, or organization not ordinarily engaged in providing child care; or
 - (e) By providers of medical services.
- (8) "Child Care Area" means that indoor and outdoor area specifically certified for use by the center and includes all activity areas and other areas of the facility used to provide child care, such as kitchen, toilet rooms, offices, storage areas, and rooms used solely for napping or eating. This may be a specific portion or portions of the building and grounds of a larger facility or one or more buildings at the same location.
- (9) "Child Care Child" means any child six weeks of age or older and under 13 years of age, or a child with special needs under the age of 18 who requires a level of care over and above the norm for his/her age, for whom the child care center has supervisory responsibility in the temporary absence of the parent.
- (10) "Child Care Center" or "Center" means a child care facility that is certified to care for thirteen or more children, or a facility that is certified to care for twelve or fewer children and located in a building constructed as other than a single family dwelling.
- (11) "Child with Special Needs" means a child under the age of 18 who requires a level of care over and above the norm for his/her age due to a physical, developmental, behavioral, mental or medical disability.

- (12) "Child Care Facility" means any facility that provides child care to children, including a child care center, certified family child care home, and registered family child care home. It includes those known under a descriptive name, such as nursery school, preschool, kindergarten, child play school, before or after school care, or child development center, except those excluded under ORS 329A.250. This term applies to the total child care operation and includes the physical setting, administration, staff, equipment, program, and care of children.
- (13) "Civil Penalty" means a fine imposed by OCC on a facility for violation of these rules.
- (14) "Comparable group care program" means a program which has the following elements:
 - (a) Staff are supervised by knowledgeable professionals;
 - (b) Training of staff is provided or required annually;
 - (c) Group size is similar to a certified child care facility;
 - (d) Curriculum is age appropriate; and
 - (e) The program is not providing uncertified drop-in care.
- (15) "Contracted services" means activities (e.g., tumbling, music) provided by an organization or program other than the center, where non-center staff come into the center or the children are transported to another location.
- (16) "Director" means a person who is designated by the operator as director or administrator of the center and who meets the qualifications of director pursuant to OAR 414-300-0080.
- (17) "Drop-in Care" means care provided on an unscheduled, irregular basis, any time of the day or night, exclusively for drop-in children in a child care center.
- (18) "Enrollment" means all children registered to attend the center.
- (19) "Group" means a specific number of children assigned to specific staff.
- (20) "Guidance and discipline" means the on-going process of helping children develop self control and assume responsibility for their own acts.
- (21) "Head Teacher" means the person(s) who is responsible for the development and implementation of the program of activities for each infant and toddler, preschool age, and school-age program in the center.
- (22) "Infant" means a child who is at least six weeks of age but is not yet walking alone.

- (23) "Infant and Toddler Age Program" means care and education provided in a center, or part of a center, to children between the ages of six weeks and thirty-six months.
- (24) "Night Care" means care given to children who sleep at the child care center for all or part of the night.
- (25) "Non-serious Violation" means OCC has made a valid finding when assessing a complaint alleging a violation not listed in OAR 414-300-0005(44)
- (26) "OCC" means the Office of Child Care of the Department of Education or the Administrator or staff of the Office of Child Care.
- (27) "Occasional" means infrequently or sporadically, including but not limited to care that is provided during summer or other holiday breaks when children are not attending school, but not to exceed 70 calendar days in a year.
- (28) "Operator" means the person, group, corporation, partnership, governing body, association, or other public or private organization legally responsible for the overall operation of the center and who has the authority to perform the duties necessary to meet certification requirements. If the operator is other than the owner, an individual must be appointed as the operator by the owner.
- (29) "Oregon Registry" means the voluntary registry at the Oregon Center for Career Development in Childhood Care and Education at Portland State University that documents the training, education and experience of individuals who work in childhood care and education.
- (30) "Outbreak of a communicable disease" means two cases from separate households associated with a suspected common source.
- (31) "Owner" means the person, group, corporation, partnership, governing body, association, or other public or private organization which holds the child care center as property and has a major financial stake in the operation of the center. The owner may or may not be active in the operation of the center; the owner may also be the operator.
- (32) "Parent" means parent(s), custodian(s), or guardian(s), exercising physical care and legal custody of the child.
- (33) "Parent cooperative" means a child care program in which:
- (a) Care is provided by parents on a rotating basis;
 - (b) Membership in the cooperative includes parents;
 - (c) There are written policies and procedures; and

- (d) A board of directors that includes parents of the children cared for by the cooperative controls the policies and procedures of the program.
- (34) "Premises" means the structure that is identified on the application, including indoors and outdoors and space not directly used for child care under the direct control of the child care facility.
- (35) "Preschool-Age Child" means a child who is 36 months of age to eligible to attend kindergarten or above in public school.
- (36) "Preschool-Age Program" means care and education provided in a center, or part of a center, to children 36 months of age to eligible to attend kindergarten.
- (37) "Program" means all activities and care provided for the children during their hours of attendance at the center.
- (38) "Qualifying Teaching Experience" means:
- (a) For infant/toddler and preschool age groups, 1,500 hours, gained with a group of the same age children in at least three-hour blocks, within a 36-month period;
 - (b) For school-age groups, 600 hours, gained with a group of the same age children in at least three-hour blocks, within a 36-month period. Qualifying teaching experience must be documented. Time spent in a college practicum or practice teaching is considered qualifying teaching experience. The following does not constitute qualifying teaching experience: leader of a scout troop; Sunday school teacher; and coaching.
- (39) "Sanitizing" means using a bactericidal treatment that provides enough heat or concentration of chemicals for enough time to reduce the bacterial count, including disease-producing organisms, to a safe level on utensils, equipment, and toys.
- (40) "School-Age Child" means a child eligible to attend kindergarten or above in public school. This includes the months from the end of the prior school year to the start of the kindergarten school year.
- (41) "School-Age Program" means care and education provided in a center, part of a center, school or other facility to children attending kindergarten or eligible to be enrolled in the first grade or above and, during the months of summer vacation from school, eligible to be enrolled in the first grade or above in the next school year.
- (42) "Serious complaint" means a complaint filed against:
- (a) A certified child care center by a person who has alleged that:
 - (A) Children are in imminent danger;

- (B) There are more children in care than allowed by certified capacity;
 - (C) Corporal punishment is being used;
 - (D) Children are not being supervised;
 - (E) Multiple or serious fire, health or safety hazards are present in the center;
 - (F) Extreme unsanitary conditions are present in the center; or
 - (G) Adults are in the center who are not enrolled in the Central Background Registry; or
- (b) A facility providing child care, as defined ORS 329A.250(3), which is not a certified child care center by a person who has alleged that there are more children in care than allowed by law.

(43) "Serious Injury or Incident" means any of the following:

- (a) Injury requiring surgery;
- (b) Injury requiring admission to a hospital;
- (c) Injury requiring emergency medical attention;
- (d) Choking and unexpected breathing problems;
- (e) Unconsciousness;
- (f) Concussion;
- (g) Poisoning;
- (h) Medication overdose;
- (i) Broken bone;
- (j) Severe head or neck injury;
- (k) Chemical contact in eyes, mouth, skin, inhalation or ingestion;
- (l) All burns;
- (m) Allergic reaction requiring administration of Epi-Pen;
- (n) Severe bleeding or stitches;

- (o) Shock or confused state;
 - (p) Near-drowning.
- (44) "Serious Violation" means OCC has made a valid finding when assessing a complaint that alleges:
- (a) Children are in imminent danger;
 - (b) There are more children in care than allowed by law;
 - (c) Corporal punishment is being used;
 - (d) Children are not being supervised;
 - (e) Multiple or serious fire, health or safety hazards are present in the center;
 - (f) Extreme unsanitary conditions are present in the center;
 - (g) Adults are in the center who are not enrolled in the Central Background Registry; or
 - (h) A facility is providing child care as defined in ORS 329A.250(4) which is not a certified child care center, by a person who has alleged that there are more children in care than allowed by law.
- (45) "Site Director/Supervisor" means the person in charge of the facility at a site which is part of a larger multi-site program.
- (46) "Site Coordinator" means the person responsible for coordinating over-all management and operation of a number of sites in a multi-site program.
- (47) "Staff" means an individual who is the director, an employee, or a volunteer who is in the center for more than a single activity.
- (48) "Substitute Director" means the person in charge of the center during the hours of operation when the director is not on site.
- (49) "Supervision" means the act of caring for a child or group of children. This includes awareness of and responsibility for the ongoing activity of each child. It requires physical presence, knowledge of program requirements and children's needs, and accountability for their care and well-being. Supervision also requires that staff be near and have ready access to children in order to intervene when needed.
- (50) "Teacher" means a caregiver who plans and implements daily activities for a designated group of children and who meets the qualifications of teacher pursuant to OAR 414-300-0100.

- (51) "Teacher Aide" means a caregiver who works under the direct supervision of a teacher and who meets the qualifications of Aide I or Aide II pursuant to OAR 414-300-0110.
- (52) "Toddler" means a child who is able to walk alone but is under 36 months of age. "Younger toddler" means a child who is able to walk alone but is under 24 months of age; "older toddler" means a child who is 24 months of age but under 36 months of age.
- (53) "Unsupervised Access to Children" means contact with children that provides the person opportunity for personal communication or touch when not under the direct supervision of a child care provider or staff with supervisory authority.
- (54) "Usable Exit" means an unobstructed door or window through which caregivers and children can evacuate the center in case of a fire or emergency. Doors must be able to be opened from the inside without a key, and window openings must be at least 20 inches wide and 22 inches in height, with a net clear opening of 5 square feet and a sill no more than 48 inches above the floor.

CERTIFICATE

414-300-0010 Application for a Child Care Certificate

- (1) Unless exempted by Oregon laws governing child care facilities, no person or organization shall operate a child care center without a valid certificate issued by the Office of Child Care.
- (2) Application for a certificate shall be made on forms provided by OCC.
- (3) A completed application is required:
 - (a) For the initial certificate;
 - (b) For the annual renewal of the certificate; and
 - (c) Whenever there is a change of owner, operator or location.
- (4) The applicant shall complete and submit an application to OCC at least:
 - (a) 45 days before the planned opening date of a new center; and
 - (b) For renewal of certification, 30 days prior to the expiration of the certificate.
 - (A) If an application for renewal and payment of the required fee is received by OCC at least 30 days prior to the expiration date of the current certificate, the current

certificate, unless officially revoked, remains in force until OCC has acted on the application for renewal and has given notice of the action taken.

- (B) If an application for renewal and payment of the required fee is not received by OCC at least 30 days prior to the expiration date of the current certificate, the certificate will expire as of the date stated on the certificate and child care must cease at the facility, unless the renewal is completed before the expiration date.
- (5) An application for a certificate shall be accompanied by a non-refundable filing fee.
- (a) For the initial application, a change of owner/operator, the reopening of a center after a lapse in certification, or a change of location (except when a facility is forced to move due to circumstances beyond the control of the operator), the fee is \$100 plus \$2 for each certified space (e.g., the fee for a child care center certified to care for 30 children is $\$60 + \$100 = \$160$).
- (b) For a renewal application, the fee is \$2 for each certified space.
- (6) An application for a certificate must be completed by the applicant and approved by OCC within 12 months of submission or the application will be denied. If an application is denied, an applicant must submit a new application for a certificate.
- (7) All civil penalties must be paid in full.
- (8) Floor plans shall be submitted to the environmental health specialist, the fire marshal and the buildings department prior to initial construction or remodel.
- (9) If the facility is located within or attached to a building used for purposes other than child care, the floor plan shall describe the other activities which are carried out in adjoining rooms or buildings.
- (10) If the applicant is a firm, association, corporation, public agency, or governmental entity, the application shall be signed by the chief executive officer or a person designated in writing to have the authority to sign for the applicant. If the applicant is a partnership, the application shall be signed by each partner.
- (11) A management list shall be submitted with the application and updated annually. The list must specify who is responsible for each of the following:
- (a) Financial management;
- (b) Maintaining records;
- (c) Budgeting;
- (d) Policy Development;

- (e) Staff management, orientation and training;
- (f) Maintenance of building and grounds;
- (g) Meal planning and preparation;
- (h) Transportation of children, if provided; and
- (i) Ensuring the appropriateness of program activities according to age and development of the children.

(12) An operator shall provide verification to OCC that the center meets all applicable building codes and zoning requirements that apply to child care facilities:

- (a) Before the initial certificate is issued; and
- (b) Whenever the facility is remodeled.

(13) The center shall be approved by an environmental health specialist registered under ORS chapter 700, or an authorized representative of the Health Division, and by a state or local fire marshal, before a certificate is issued by OCC.

- (a) If structural, emergency or permit problems occur, OCC may request that the operator have the center inspected by the appropriate authority; and
- (b) The operator is responsible for payment of any applicable fees for fire safety and sanitation inspections.

(14) Upon receipt of a completed application, a representative of OCC shall evaluate the center and all aspects of the proposed operation to determine if the center meets certification requirements (OAR 414-300-0000 through 414-300-0415).

414-300-0015 Issuance of a Child Care Certificate

- (1) A certificate shall not be issued by OCC to an applicant who holds a medical marijuana card. A certificate shall not be issued to an applicant who grows marijuana or distributes marijuana.
- (2) A certificate shall be issued by OCC when it has been determined the center is in compliance with OAR 414-300-0000 through 414-300-0415. There are two types of certifications. These are:

- (a) A regular certificate, which, except as provided in OAR 414-300-0010(4)(b)(A), is valid for no more than one year; and
- (b) A temporary certificate. A child care center may not operate under a temporary certification for more than 180 days in any 12-month period. A temporary certificate is issued when:
 - (A) The center is in compliance with most requirements;
 - (B) There are no deficiencies identified by OCC that are hazardous to children; and
 - (C) The operator demonstrates an effort to be in full compliance.
- (3) A certificate is not transferable to any other location or to another organization or individual.
- (4) Any changes in the conditions of certificate shall be requested in writing to OCC and approved by OCC before the condition(s) of the current certificate may be changed. Changes include, but are not limited to, facility capacity, age range of children, or hours of operation.

414-300-0020 Exceptions to Rules

- (1) OCC may grant an exception to an individual rule (OAR 414-300-0000 through 414-300-0415) for a specified period of time when:
 - (a) A requirement does not apply to the facility; or
 - (b) The intent of the requirement can be met by a method not specified in the applicable rule.
- (2) The operator shall request an exception to a rule on a form provided by OCC. The request shall include:
 - (a) A justification for the requested exception; and
 - (b) An explanation of how the center will meet the intent of the rule.
- (3) No exception to a rule shall be granted:
 - (a) If the requirement is established by statute; or
 - (b) Unless the health, safety, and well-being of the children are ensured.
- (4) Exceptions may not be implemented until approval is received from OCC.

- (5) The granting of an exception to a rule shall not set a precedent, and each request shall be evaluated on its own merits.
- (6) OCC may withdraw approval of an exception at any time, if deemed necessary to ensure the health, safety and well-being of the children.

CENTER MANAGEMENT

414-300-0030 General Requirements

- (1) The operator shall display the following near the entrance, or in some other area of the center, where they may be clearly viewed by parent(s) of children in care:
 - (a) The most current certificate issued by OCC;
 - (b) Name of the director and/or the substitute director;
 - (c) Notice of planned field trips away from the immediate neighborhood, showing the date and place of each excursion;
 - (d) The current week's menu for all meals and snacks, if meals are provided by the center. Any substitution shall be recorded on the menu;
 - (e) A notice that the items identified in section (2) of this rule are available for review on request;
 - (f) Information on how to report a complaint to OCC regarding certification requirements;
 - (g) Notice that custodial parents have access to the center during the hours of operation and without advance notice;
 - (h) Notice of center closures (vacation days, holidays, etc.);
 - (i) The Early Learning Division Website [www.oregonearlylearning.com] and phone number [1-800-556-6616], and a statement advising parents that they can access information about their child care provider on the child care safety portal; and
 - (j) Centers must post all serious valid complaints and serious non-compliance letters for 12 calendar months.
- (2) The certified child care center shall immediately notify all parents of any closure of the active license.
- (3) The operator shall have available for review on request:

- (a) A copy of OAR 414-300-0000 through 414-300-0415, Rules for the Certification of Child Care Centers; and
 - (b) The most recent OCC, sanitation, and fire safety inspection reports.
- (4) The operator shall report to OCC:
- (a) Any death of a child while in care, within 24 hours;
 - (b) Within 24 hours:
 - (A) Any child that is lost or missing from the premises;
 - (B) Any child that is left behind on a facility excursion;
 - (C) Any child that is left unattended on the premises;
 - (D) Any child that is left alone on the playground; or
 - (E) Any child that is left alone in a vehicle.
 - (c) Any serious injury or incident, as defined in OAR 414-300-0010(43) within 5 calendar days after the occurrence. This does not include:
 - (A) Injuries for which a child is evaluated by a professional as a precaution;
 - (B) Injuries for which first aid is administered at the center, but no further treatment by a medical professional is warranted: or
 - (C) Medical events due to routine, ongoing medical issues, such as asthma or seizures.
 - (d) Damage to the building which affects the operator's ability to comply with these requirements, within 48 hours after the occurrence;
 - (e) Any animal bites to a child within 48 hours of occurrence; and
 - (f) Any change in director prior to the director being on site. Such prior notification must include the replacement person's qualifications for the position and documentation that the person is enrolled in the Central Background Registry. An e-mail or a phone call, followed by written documentation, or a FAX will serve as notification.
- (5) Information provided to OCC on applications, in records or reports, or any other written or verbal communication, shall be current, complete, and accurate.
- (6) Staff shall report suspected child abuse or neglect immediately, as required by the Child Abuse Reporting Law (ORS 419B.005 through 419B.050), to the Department of Human

Services Child Welfare (DHS) or to a law enforcement agency. By statute, this requirement applies 24 hours per day.

- (7) The child care center shall comply with state and federal laws related to child safety systems and seat belts in vehicles, bicycle safety, civil rights laws, and the Americans With Disabilities Act (ADA).
- (8) The following information shall be in writing and made available to staff, OCC, and to parent(s) at the time of enrollment:
 - (a) Name, business address, and business telephone number of the person(s) who have immediate responsibility for the daily operation of the center;
 - (b) Guidance and discipline policy;
 - (c) Arrival and departure procedures;
 - (d) Emergency plan, as specified in OAR 414-300-0170(3);
 - (e) Procedures for field trips; and
 - (f) Information on transportation, when provided by the center;
- (9) Representatives of all agencies involved in certification and custodial parents shall have immediate access to all parts of the center during hours of operation. OCC staff shall have the right to enter and inspect the center, including access to all staff, records of children enrolled in the center, and all records and reports related to the center operation regarding compliance with these rules.
- (10) The center shall comply with the Health Division's administrative rules relating to:
 - (a) Immunization of children (OAR 333-050-0010 through 333-050-0140);
 - (b) Reporting communicable diseases (OAR 333-018-0000);
 - (c) Child care restrictable diseases (OAR 333-019-0010); and
 - (d) Dishwashing (OAR 333-150-0000).
- (11) Facilities must have parent(s) or guardian(s) of each child enrolled in the center, sign a declaration form approved by the Office of Child Care verifying they have reviewed a copy of the current license certificate. The declaration shall be updated any time there has been an exception or condition added to the license.
- (12) The written emergency plan must be given to parents of children in care.

- (13) A center shall have written health policies and procedures approved by the Health Division or the county health department which cover, but are not limited to, the following:
- (a) Storage and handling of food;
 - (b) Diaper changing and disposal, if applicable. The diaper changing procedure must be posted in the diaper changing area;
 - (c) Bathing infants, if the center cares for infants;
 - (d) Care of bed linen;
 - (e) Hand washing procedures. The hand washing procedures must be posted at hand washing sinks; and
 - (f) Serving formula, storage and handling of bottles, and feeding infants, if the center cares for infants.
- (14) Parental request or permission to waive any of the rules for the certification of child care centers does not give the center permission to do so.
- (15) The Office of Child Care may notify parent(s) or guardian(s) of children under 12 months of age enrolled in the center of any valid non-compliance with regulations for safe sleep included in OAR 414-300-0300(6).

[Publications: Publications referenced are available from the agency.]

414-300-0040 Enrollment

- (1) Children shall be admitted only in accordance with the conditions of the certificate, including, but not limited to, capacity, hours of operation, age range, and special conditions.
- (2) All children visiting the center on a regular basis will count in capacity. Children attending with a non-staff parent do not count as enrolled as long as the parent remains with and is responsible for non-enrolled children.
- (3) As required by state and federal civil rights laws and the Americans with Disabilities Act (ADA), the center shall not discriminate against any child on the basis of race, religion, color, national origin, gender, marital status of parent, or because of a need for special care.
 - (a) Refusal by the operator to care for a child with a need for special care because of lack of related skills and degree of competence, or because of structural barriers in the center, shall not in itself establish a prima facie case of discrimination. The decision to enroll/not enroll a child shall be made on an individual basis after the child's child care needs have been assessed using information from parents and professionals who are

knowledgeable about the specific disability. The operator shall record the assessment that was made for each child with special needs.

- (b) If a child with special needs is enrolled who needs a specific plan for caring for that child, such a plan shall be developed in writing between center staff, parent(s), and if necessary, outside specialists. All staff who come in contact with that child shall be fully aware of the plan.
- (4) The operator shall obtain the following information in writing from parent(s) of each child before admission. The information shall be kept current at all times.
- (a) Name and birth date of child;
 - (b) Date child entered care;
 - (c) Name(s), home and business address(es) and telephone number(s) of the custodial parent(s);
 - (d) The school attended by a school-age child;
 - (e) Name and telephone number of child's medical provider(s) and dentist, if applicable;
 - (f) Name and telephone number of person to be called in an emergency if the parent cannot be located;
 - (g) Name and telephone number of person(s) to whom the child may be released; and
 - (h) Any chronic health problem(s) the child has, including allergies.
- (5) The operator shall obtain the following information in writing from parent(s) of each infant and toddler before admission:
- (a) Schedule of feeding;
 - (b) Types of food introduced and timetable for new foods;
 - (c) Toilet and diapering schedule;
 - (d) Sleep schedule;
 - (e) Child's way of communicating and being comforted; and
 - (f) Developmental and health history of any problems that could affect the child's participation in child care.

- (6) The operator shall obtain the following written authorizations from parent(s) of each child before admission:
 - (a) Permission for the center to obtain emergency medical treatment for the child. The emergency medical release shall be:
 - (A) On a form accepted by the medical treatment facility used by the operator for emergency medical services; and
 - (B) Immediately accessible to all staff.
 - (b) Permission for the center to call an ambulance or take a child to an available physician or medical treatment facility; and
 - (c) Approval when applicable for:
 - (A) Participation in field trips; and
 - (B) Participation in swimming or wading activities, both on and off the premises of the center.
- (7) A center shall maintain separate information and authorization forms on each child in care.
- (8) An opportunity shall be given for each child, with his/her parent(s), to have a pre-placement visit to the center and for the center staff to exchange information with the parent(s).
- (9) No child under six weeks of age shall be enrolled in a center.

[Publications: Publications referenced are available from the agency.]

414-300-0050 Arrival and Departure

- (1) A center shall require that the person bringing a child to the center remain with the child until the child is accepted by staff.
- (2) A center shall release a child only to a parent or another person named and identified by the parent(s). The operator shall verify the identification of any person, other than the parent, who picks up a child.
- (3) If a school-age child arrives at or leaves the center without a parent, there shall be arrangements in advance, in writing, from the parent(s) for the arrival and departure times and what to do if a child has not arrived at the center by the expected time.

414-300-0060 Record Keeping

- (1) The operator shall keep all records, except those specified in OAR 414-300-0060(1)(d)(F) and 414-300-0205(7)(a), for at least two years, and staff and children's records for two years after termination of employment or care. These records shall be available at all times to OCC:
 - (a) Complete and current information on each child as required in OAR 414-300-0040(4) and (6);
 - (b) Records of daily attendance showing:
 - (A) The date of employment, time of arrival and departure, and room assignment for each staff; and
 - (B) The date, name of each child in attendance, and time of arrival and departure. The record must show the children in attendance at any given time;
 - (C) The current day's attendance record shall be maintained in the child's classroom in paper format.
 - (c) Personnel record for each staff, which shall include:
 - (A) Name, address and telephone number of staff;
 - (B) Position in center;
 - (C) Written verification (such as transcripts, payroll records, time sheets, documented resumes, notes regarding telephone conversations, etc.) that the person possesses the qualifications for the position;
 - (D) Verification that the staff is currently enrolled in the Central Background Registry;
 - (E) Statement of the staff's duties;
 - (F) Record of current health-related training, such as CPR, Life Support, Life Saving, and First Aid, and current food handler certifications, as appropriate;
 - (G) Driving record, driver's license number and expiration date if the person is to transport children; and
 - (H) Documentation of dates and participation in orientation, training, and staff development activities, as required in OAR 414-300-0120.
 - (d) A written record of:

- (A) A death of or injury to a child, as specified in OAR 414-300-0030(5)(a);
 - (B) Dates and times of the practices of emergency procedures;
 - (C) Child abuse reports made to the Department of Human Services Child Welfare (DHS) or a law enforcement agency;
 - (D) Authorizations to administer medication to a child, as specified in OAR 414-300-0230(1)(a);
 - (E) Medications dispensed, as specified in OAR 414-300-0230(1)(d);
 - (F) Meals and snacks provided by the center for the previous three weeks;
 - (G) The program of activities for each group of children, as specified in OAR 414-300-0295; and
 - (H) The daily schedule for each group of children, as specified in OAR 414-300-0290.
- (2) The operator shall allow custodial parent(s), upon request, to review records and reports, except for child abuse reports, maintained on their own children.

PERSONNEL

414-300-0070 General Requirements

- (1) The operator shall establish a system of job descriptions, staff selection, and staff evaluation. All caregivers shall:
- (a) Have competence, sound judgment, and self-control in working with children;
 - (b) Be mentally, physically, and emotionally capable of performing duties related to child care; and
 - (c) Have the required training and/or experience for the position for which they are hired.
- (2) There shall be a person or persons on the staff who meet(s) the qualifications of director (OAR 414-300-0080) and head teacher (OAR 414-300-0090). A person assigned the duties of the position must meet the qualifications of the position.
- (3) Notwithstanding OAR 414-300-0120(3), there shall be at least one person in the center at all times who has current certification in first aid and CPR.
- (4) Any staff with evidence of a child care-restrictable disease, as defined in OAR 333-019-0010, symptom of physical illness, as defined in OAR 414-300-0220(1), or mental incapacity that poses a threat to the health or safety of children shall be relieved of his/her duties.

- (5) If additional information is needed to assess a person's ability to care for children or to have access to children, OCC may require references, an evaluation by a physician, counselor, or other qualified person, or other information.
- (6) No one shall have access to child care children or be in the center during child care hours who has demonstrated behavior that may have a detrimental effect on a child. This includes any individual in the center who has or may have unsupervised access, however brief, to child care children (i.e., the owner, the operator, all child care staff, maintenance staff who work on-site during hours of operation, volunteers who may be left alone with children, etc.). This does not apply to persons authorized to drop off and pick up a child care child.
 - (a) The operator, all child care staff and others as described in section (6) above 18 years of age or older shall be enrolled in OCC's Central Background Registry prior to the issuance of an initial or renewal certification;
 - (b) The facility must receive confirmation from OCC that staff who are 18 years of age or older, are enrolled or conditionally enrolled in the CBR before they may be on-site of the child care premises during child care hours.
 - (c) When a center is notified by OCC that a staff member or other individual has been removed from the Central Background Registry, the center shall not permit the staff member or other individual to have access to child care children;
 - (d) If any person listed in section (6) and section (6)(a) of this rule has been charged with, arrested for, or a warrant is out for any of the crimes which OCC has determined indicate behavior which may have a detrimental effect on a child, with final disposition not yet reached, certification will be denied or suspended until the charge, arrest, or warrant has been resolved if the person continues to operate, be employed in, or have access to children in the center;
 - (e) If a criminal record check shows that a warrant has been issued for any person checked, OCC will inform the originating law enforcement agency of the person's name, address, and telephone number.
- (7) Staff conditionally enrolled in the CBR may function in their staff position but shall not have unsupervised access to children until the center has confirmed with OCC the individual is enrolled.
- (8) All caregivers and other individuals that are required to be enrolled in the CBR and are on-site must maintain current enrollment in the CBR at all times while the center license is active.
- (9) Individuals whose CBR enrollment has been revoked, denied or suspended, may not be on the premises during child care hours; or have contact with child care children.

- (10) Any visitor to the center or other adult who is not enrolled in the CBR shall not have unsupervised access to children.
- (11) The center shall have a written plan to ensure that individuals who are not enrolled or conditionally enrolled in the CBR and are on the child care premises shall not have unsupervised access to children.
- (12) The center shall maintain a log of arrival and departure times of all individuals 18 and older who are not enrolled or conditionally enrolled in the CBR and enter the center while child care children are present, excluding persons authorized to drop off and pick up a child care child.
- (13) If additional information is needed to assess a person's ability to care for children or to have access to children, OCC may require references, an evaluation by a physician, counselor, or other qualified person, or other information.
- (14) Alcohol shall not be consumed or stored on the child care center premises during the hours the child care business is conducted or when child care children are present. No one shall be under the influence of alcohol on the child care center premises during the hours the child care business is conducted or when child care children are present.
- (15) No one shall possess, use or store illegal controlled substances on the child care center premises. No one shall be under the influence of illegal controlled substances on the child care center premises.
- (16) No one shall grow or possess marijuana plants or distribute marijuana on the child care center premises. No one shall possess, use or store marijuana on the premises of the child care center unless medically necessary to treat a child care child. No adult shall use or be under the influence of marijuana on the child care center premises.
- (17) Marijuana, derivatives and associated paraphernalia shall not be kept on the child care center premises unless medically necessary to treat a child care child. All associated medical marijuana must be kept in original container if purchased at a dispensary, and together with derivatives and related paraphernalia must be kept under child safety lock.
- (18) Volunteers must meet the following requirements:
 - (a) If volunteers are counted in determining the staff/child ratios, they must meet the qualifications of the position they are filling and be enrolled in the Central Background Registry;
 - (b) If volunteers may have unsupervised access to children, they must be enrolled in the Central Background Registry;
 - (c) If volunteers do not have unsupervised access to children at any time, including during emergencies, the center must have a written policy to this effect, the policy must be

known to all center staff and volunteers, and the volunteers do not have to be enrolled in the Central Background Registry.

- (19) No person shall smoke or carry any lighted smoking instrument, including an e-cigarette or vaporizer in the certified center or within ten feet of any entrance, exit, or window that opens or any ventilation intake that serves an enclosed area, during child care hours or when child care children are present. No person shall use smokeless tobacco in the certified center during child care hours or when child care children are present. No person shall smoke, carry any lighted smoking instrument, including an e-cigarette or vaporizer or use smokeless tobacco in motor vehicles while child care children are passengers.

414-300-0080 Director Qualifications and Duties

(1) The director shall:

(a) Be at least 21 years of age; and

(b) Have:

(A) At least one year of training and/or experience in management and supervision of adults; and

(B) Have knowledge of child development for the primary ages served in the center, as evidenced by a combination of professional references, education, experience or training; or

(C) Documentation of attaining at least step nine in the Oregon Registry, or

(c) Have:

(A) One year of training and/or experience in management and supervision of adults OR have knowledge of child development for the primary ages served by the center as evidenced by a combination of professional references, education, experience or training; and

(B) A plan, approved by OCC, that shows how the missing component in (A) above will be addressed and how the program will be operated until the director has obtained the training, experience or knowledge.

(2) The director of the center shall be accountable for:

(a) Administrative functions, including, but not limited to: financial management; maintaining records; budgeting; policy development; ensuring the appropriateness of program activities according to age and developmental levels of children; staff orientation; management and training; maintenance of buildings and grounds; meal planning and preparation; and transportation, if provided; and

- (b) Operating the center in compliance with certification requirements (OAR 414-300-0000 through 414-300-0415).
- (3) If head teacher qualifications (OAR 414-300-0090) are met by the director, that person may serve as head teacher for the age range of children for which she/he is qualified if she/he works full-time in the center:
 - (a) If the center is certified for less than 40 children, the director may serve as head teacher and have regular teaching duties, if qualified;
 - (b) If the center is certified for 40 or more children, the director may serve as head teacher, but shall have no regular teaching duties.
- (4) A director responsible for a center certified for fewer than 100 children shall be in the center at least one-third of the hours that the center is in operation. The hours shall be calculated on a weekly basis, except for planned vacations and emergency absences. The time on-site must include time spent directly observing staff and children.
- (5) A director responsible for a center certified for more than 100 children can be responsible for only one site. The director shall be in the center at least half of the hours that the center is in operation. The hours shall be calculated on a weekly basis, except for planned vacations and emergency absences. The time on-site must include time spent directly observing staff and children.
- (6) The director, or a substitute director, shall be on the premises during all hours of operation.
- (7) The director must have completed OCC approved health and safety training.
- (8) If the center is certified to care for infants, the director must have completed OCC approved safe sleep training.
- (9) The substitute director shall:
 - (a) Meet at least the qualifications of a teacher;
 - (b) Be familiar with the certification requirements;
 - (c) Be authorized, able, and available to correct a deficiency that might be an immediate threat to children's health or safety; and
 - (d) Have on file documentation of an orientation and training in these administrative rules and the functions and duties of a director.
- (10) Whenever a director is absent from the center, the name of the substitute director shall be posted in the center, as required in OAR 414-300-0030(1)(b).

414-300-0090 Head Teacher Qualifications and Duties

- (1) For each infant and toddler, preschool age, and school age program in the center, there shall be a qualified person designated as head teacher who is at least 18 years of age.
- (2) The head teacher shall be accountable for:
 - (a) The development and implementation of the center's program of activities for that age group or groups; and
 - (b) Ensuring the appropriateness of program activities according to the age, interests, and developmental level of the children.
- (3) A head teacher shall meet the qualification requirements of one of the options listed in Table 1 of this rule.
- (4) A person may serve as head teacher for more than one age group as long as the qualifications for head teacher for each age group are met.
- (5) Head teachers shall be in the center at least one-fourth of the hours, calculated on a weekly basis, that the center is in operation. Table 1.
- (6) Head teachers must have completed OCC approved health and safety training.
- (7) If the center is certified to care for infants, the head teacher must have completed OCC approved safe sleep training.

414-300-0100 Teacher

- (1) For each group of children, a person shall be designated as the teacher. This person shall:
 - (a) Be at least 18 years of age;
 - (b) Be responsible for and supervise a designated group of children; and
 - (c) Supervise the activities of an aide assigned to his/her group.
- (2) A teacher shall meet the qualification requirements of one of the options listed in Table 2 of this section. Table 2.
- (3) Teachers must have completed OCC approved health and safety training.
- (4) If caring for infants, teachers must have completed OCC approved safe sleep training.

Qualifications for Teacher

TABLE 2

Option	Infant and Toddler Age Program	Preschool-Age Program	School-Age Program
(a) Completion of 20 credits (semester system) or 30 credits (quarter system) of training at a college or university in:	<ul style="list-style-type: none"> • Early childhood education • Child development 	<ul style="list-style-type: none"> • Early childhood education • Child development • Elementary education • Special education 	<ul style="list-style-type: none"> • Child development • Elementary education • Physical education • Recreation • Special education • Early childhood education
OR (b) A one year state or nationally recognized credential:	<ul style="list-style-type: none"> • Related to infant and toddler care 	<ul style="list-style-type: none"> • Related to preschool-age care 	<ul style="list-style-type: none"> • Related to school-age care
OR (c) At least one year of qualifying teaching experience, with at least one year as a teacher, in a Certified Child Care Center or comparable group care program, in the care of:	<ul style="list-style-type: none"> • Infants and/or toddlers 	<ul style="list-style-type: none"> • Preschool-age children 	<ul style="list-style-type: none"> • School-age children
OR (d) Completion of 10 credits (semester system) or 15 credits (quarter system) of training at a college or university in: AND At least six months of qualifying teaching experience in a Certified Child Care Center or comparable group care program, in the care of:	<ul style="list-style-type: none"> • Early childhood education • Child development • Infants and/or toddlers 	<ul style="list-style-type: none"> • Early childhood education • Child development • Elementary education • Special education • Preschool-age children 	<ul style="list-style-type: none"> • Child development • Elementary education • Physical education • Recreation • Special education • Early childhood education • School-age children
OR (f) Documentation of attaining at least step 8 (eight) in the Oregon Registry			

414-300-0110 Teacher Aides

(1) Aide I shall:

- (a) Be at least 15 years of age;
- (b) Be directly supervised, i.e., within sight and sound of a staff person who meets at least the qualifications of a teacher;
- (c) Have current certification in first aid and pediatric CPR within 90 days of employment.
 - (A) CPR training must have practical hands-on instruction;
 - (B) CPR courses that involve an on-line component with hands-on instruction may be accepted; and
 - (C) Strictly on-line CPR training is not acceptable.
- (d) Have completed a minimum of 2 hours of training on recognizing and reporting child abuse and neglect that is specific to Oregon law within 30 days of employment;
- (e) Have completed OCC approved health and safety training within 30 days of employment.
- (f) If caring for infants, completed OCC approved safe sleep training within 30 days of employment.

(2) An Aide II must:

- (a) Have completed a training with a minimum of 2 hours on recognizing and reporting child abuse and neglect that is specific to Oregon law;
- (b) Have completed OCC approved health and safety training; and
- (c) If caring for infants, completed OCC approved safe sleep training.

(3) Aide II in infant/toddler/preschool-age programs shall:

- (a) Be at least 18 years of age;
- (b) Have worked at least six months at the center where they are now employed; and
- (c) Have current certification in first aid and CPR. Training must have practical hands-on instruction; therefore, online training is not acceptable.

- (4) Aide II in school-age programs shall:
 - (a) Be at least 18 years of age;
 - (b) Have worked at least four months in the school-age program where they are now employed; and
 - (c) Have current certification in first aid and CPR. Training must have practical hands-on instruction; therefore, online training is not acceptable.
- (5) Staff at Aide II level may, with the approval of the director, be out of sight and sound of a teacher for brief, necessary events, such as taking a child to the bathroom or bringing a child in for minor medical attention.
- (6) An Aide II may not be left alone with a group of children, except as described in OAR 414-300-0130(2)(a) and 414-300-0350(5)(b).
- (7) Staff at Aide II level shall be trained in the policies and procedures appropriate to tasks assigned prior to even brief periods of unsupervised access to children.

414-300-0115 School-Age Multi-Site Programs - Additional Staff

- (1) In a multi-site program, the operator shall develop a written plan which shows:
 - (a) How the administrative functions in section OAR 414-300-0080(2)(a) will be met; and
 - (b) How Head Teacher functions in OAR 414-300-0090(2)(a) and (b) will be met.
- (2) All staff of school-age multi-site programs shall meet qualifications for the position they hold, as specified in OAR 414-300-0080, -0090, -0100 and -0110, unless otherwise specified in this section.
- (3) If the multi-site program does not have a director, the site coordinator and the site director/supervisor shall jointly perform the functions of director.
- (4) A site coordinator shall:
 - (a) Be at least 21 years of age;
 - (b) Have at least one year of training and/or experience in management and supervision of adults;
 - (c) Be authorized, able and available to correct deficiencies; and
 - (d) If acting as a substitute teacher, be teacher qualified.

- (5) A site coordinator shall be at each site on a monthly basis during the hours of operation. The time at each site must include time spent directly observing staff and children.
- (6) A site director/supervisor shall:
 - (a) Be at least 18 years of age;
 - (b) Be at least teacher-qualified;
 - (c) Be authorized, able and available to correct deficiencies; and
 - (d) If the facility is certified for 40 or more children, not have teaching duties unless the number of children on site is less than 40.
- (7) A site director/supervisor shall be on site at least one-half of the hours, calculated on a weekly basis, that the school-age program is in operation.
- (8) If a school-age multi-site program does not have a head teacher at each site, a designated head teacher for the multi-site program shall observe at each site on a monthly basis during the hours of operation.

414-300-0120 Staff Training

- (1) All staff shall receive an orientation within the first two weeks of employment and before they can have unsupervised access to children. Orientation shall ensure that staff are familiar with the contents of the orientation, as described below, and shall include, but is not limited to:
 - (a) Individual responsibilities in the event:
 - (A) The building must be evacuated (e.g., fire);
 - (B) An emergency requiring staff and children to remain inside under unusual circumstances (e.g., power outage, environmental hazard); or
 - (C) A child or staff is injured or becomes ill;
 - (b) These requirements (OAR 414-300-0000 through 414-300-0415);
 - (c) The center policies, as required in OAR 414-300-0030; and
 - (d) Procedures for reporting suspected child abuse or neglect.
- (2) The operator shall have documentation for each staff person of the date and type of orientation received and the person providing the orientation.

- (3) Within the first 90 days of employment, all staff shall complete first aid and Infant and Child CPR training or have current certification in first aid and Infant and Child CPR on file. First aid and Infant and Child CPR training must be kept current during employment at the center. First aid training shall include the following components: bleeding; burns; poisoning; choking; injuries; shock; seizures; sprains and breaks; dental emergencies; and head injuries. CPR training must have practical hands-on instruction. CPR courses that involve an on-line component with hands-on instruction may be accepted. Strictly on-line CPR training is not acceptable.
- (4) Key people in food preparation must have food handler certification, pursuant to ORS 624.570, within 30 days of employment or have current certification on file. Food handler's training must be kept current during employment at the center. Key people include cooks, kitchen staff who handle food, and classroom staff who serve meals from a communal source.
- (5) The director, head teacher, and all teachers shall participate yearly in at least 15 clock hours of training or education related to child care, of which at least eight clock hours shall be in child development or early childhood education. The annual 15 clock hours of training or education must include OCC approved health and safety training curriculum. If an individual has worked in the facility less than a year, the training requirements will be prorated as follows: At least 1.25 clock hours for each month worked in the current license period.
 - (a) The following core knowledge categories are accepted for the child development and early childhood education requirement: Diversity (D), Family and Community Systems (FCS), Human Growth and Development (HGD), Health Safety and Nutrition (HSN), Learning Environments and Curriculum (LEC), Observation and Assessment (OA), Special Needs (SN), and Understanding and Guiding Behavior (UGB).
 - (b) A head teacher whose qualifications for the position are based solely on work experience shall emphasize training in child development and early childhood education for the first two years of employment;
 - (c) Training may include correspondence courses, conferences, workshops, or audiovisual programs.
 - (d) An approved planned reading program of professional materials may count for up to six hours of the 15 clock hours of training and must include a written assessment of reading materials completed by each participating staff person.
 - (e) OCC will accept duplicate training one additional time if it is a Set 2 (intermediate) or Set 3 (advanced) training or above as described by the Oregon Center for Career Development in Childhood Care and Education; and it is not taken within the same license period.
 - (f) The center shall record each person's training showing the subject matter, the date completed, and the number of clock hours of training in each certification year.

- (6) During the first year of employment, a staff person may count up to two hours of orientation and their most recent training in first aid and CPR, food handler's training, if applicable, and child abuse and neglect training as part of the 15 clock hours of training required in OAR 414-300-0120(5), but may not use these toward the eight hours required in child development or early childhood education.
- (7) During subsequent years of employment, a staff person may count 5 hours of first aid and CPR training or food handler's training as part of the 15 clock hours of training. Duplicate training on recognizing and reporting child abuse and neglect can be accepted again after three years, and every three years thereafter towards the 15 clock hours of staff training required for licensing.
- (8) Staff meetings shall not count as training.
- (9) All staff, with the exception of Aide I's, who count in staff to child ratios must complete OCC approved training on recognizing and reporting child abuse and neglect, and health and safety training, prior to having unsupervised access to children and functioning in their position. Aide I's must complete the training within the first 30 days of employment.
- (10) All infant caregivers, with the exception of Aide I's, must complete OCC approved training on safe sleep, prior to having unsupervised access to children and functioning in their position. Aide I's must complete the training within the first 30 days of employment.
- (11) If certified to care for infants, current infant caregivers must complete OCC approved safe sleep training by January 1, 2019.

414-300-0130 Staff/Child Ratios and Group Size

- (1) The number of caregivers and group size shall be determined by the number and ages of the children in attendance.
- (2) The maximum number of children in a group and the ratio of caregivers to children specified in Table 3A of this rule shall apply, except that:
 - (a) When all toddler, preschool and school-age children are at rest, the situation permits, and the room is arranged so all children are supervised, there may be one teacher or Aide II supervising the resting room. As children awaken and become active, additional staff shall be added to return ratios to those in Table 3A. Sufficient staff to meet the required ratio shall be in the facility and able to be summoned by the caregiver without leaving the resting room; and
 - (b) Maximum group size shall not apply to field trips, outdoor play, planned large group activities, napping and eating. Staff/child ratios shall apply to these activities.

(c) Centers with certification in effect on July 15, 2001, shall comply with age groupings, staff/child ratios and group size in either Table 3A or Table 3B for as long as the facility is continuously used for child care, under the following conditions:

- (A) The center must choose to operate under Table 3A or Table 3B; centers shall not operate under a combination of both;
- (B) If centers wish to change from operating under one set of ratios to operating under the other set of ratios, the change shall occur at the time of certification renewal; and
- (C) Centers may change options only twice.

TABLE 3A

Age of Children	Minimum Number of Caregivers to Children	Maximum Number of Children in a Group
Six Weeks of Age through 23 Months	1:4	8
24 Months of Age through 35 Months	1:5	10
36 Months of Age to Attending Kindergarten	1:10	20
Attending Kindergarten and Older	1:15	30

TABLE 3B

Age of Children	Minimum Number of Caregivers to Children	Maximum Number of Children in a Group
Six Weeks of Age and Under 30 Months	1:4	8
30 Months of Age to Attending Kindergarten	1:10	20
Attending Kindergarten and Older	1:15	30

- (3) Children shall at all times have the full attention of the appropriate number of staff. Children shall be within sight and sound of a caregiver at all times, except as specified below.
- (a) School-age children shall be within sight and/or sound of staff at all times, and staff shall be near enough to children to respond when needed. Children out of direct visual contact shall be monitored regularly and frequently and must be in approved activity areas. A written plan regarding the use and monitoring of these activity areas must be approved by OCC.
 - (b) School age programs with toilet facilities or activities off-site shall have a written plan, approved by OCC, to assure accountability for all children.

- (4) At least one caregiver who meets the qualifications of a teacher (OAR 414-300-0100) shall supervise each group of children.
- (5) In a mixed group of older toddler, preschool and school-age children, the number of caregivers shall be determined by the age of the youngest child in the group.
- (6) If there are four or fewer children of any age in care for 45 minutes or less directly after opening or directly before closing, OAR 414-300-0300(10) does not apply and infants and younger toddlers may be included with older children. The staff shall be teacher-qualified in one of the represented age groups and the staff/child ratio must be 1:4.
 - (a) Each age group must have age appropriate activities, equipment and toys available for use; and
 - (b) If infants or toddlers are part of the multiple age group, a diaper changing area must be located in the room being utilized for care.
- (7) Any time there are children in care,
 - (a) There shall be a staff person and one other adult on site. The other adult shall be enrolled in the Central Background Registry and shall be physically available to be called on by staff, if needed; or
 - (b) There shall be a written plan, approved by OCC, for a second caregiver to be available within 5 minutes for emergencies. The name and telephone number of the emergency back-up shall be known to all staff who work alone.

PHYSICAL SETTING

414-300-0140 Indoor Space

- (1) There shall be a minimum of 35 square feet of indoor activity area per child. Space considered in determining the facility capacity shall be available for use by children at all times, shall be used exclusively for child care during the hours of operation and shall be determined on a room-by-room basis. The following shall not be counted as part of the 35 square feet per child requirement: heating units; storage areas; teachers' desks; large permanent equipment; any space not useable by children. Cribs will be counted as useable space if the space underneath the cribs is accessible to children.
- (2) A school-age program shall have a minimum of 50 square feet of indoor activity area per child or may have a minimum of 35 square feet of indoor activity area per child if:
 - (a) The children in care have access to a larger gross motor area, either indoor or outdoor, on a daily basis; or

- (b) The center has a plan, approved by OCC, which addresses how the gross motor needs of children in care will be met.
- (3) In a room used by more than one group of children not yet attending kindergarten, the area occupied by each group shall be defined by use of portable or permanent room dividers or program equipment that stand above the eye level of the children who use the area. Rooms used only for large group activities (e.g., eating, napping, large muscle activities) are exempt from this requirement.
- (4) Storage space shall be available for each child's clothing and personal possessions.
- (5) Storage space shall be available for play equipment, teaching equipment and supplies, records and files, cots, mats, and cleaning equipment and supplies.

414-300-0150 Outdoor Space

- (1) There shall be an outdoor activity area which the children can reach safely. If an outdoor activity area is not next to the center, or not under the control of the center during hours of operation, it cannot be used without the specific approval of OCC.
- (2) There shall be at least 75 square feet of outdoor space for each child using the area at one time. In centers where groups of children are scheduled at different times for outdoor play, there shall be 75 square feet times one-third of the center's capacity, if permitted by local zoning regulations
- (3) The outside activity area shall:
 - (a) Be suitably surfaced. All pieces of playground equipment shall be surrounded by a resilient surface of an acceptable depth or by rubber mats manufactured for such use, according to standards of the US Consumer Product Safety Commission;
 - (b) Be well drained;
 - (c) Be kept free of litter, solid waste and refuse, ditches, or other conditions presenting a potential hazard; and
 - (d) Be equipped to provide age-appropriate activities for gross motor development.
- (4) The outdoor activity area of a center serving children not yet attending kindergarten shall be enclosed by a barrier (fence, wall, or building) at least four feet high. Centers with certification in effect on July 15, 2001, must comply with a barrier at least three feet high until such time as the existing barrier is replaced. Spacing between vertical slats of a fence shall be no greater than 4 inches. Fences must meet applicable local codes.

414-300-0160 Fire Protection

- (1) The building, occupant load and means of egress, including the number of exits, exiting distances, doors and exit illumination and signs, shall meet the requirements of the Oregon Structural Specialty Code.
- (2) Rooms used for child care shall not be located above or below the ground floor, except as allowed by the Oregon Structural Specialty Code.
- (3) Fire Extinguishers
 - (a) There shall be at least one 2A-10BC-rated fire extinguisher in the center;
 - (b) Fire extinguisher(s) shall be placed as recommended by the fire marshal.
- (4) Smoke Detectors:
 - (a) Smoke detectors shall be installed in all areas where children nap;
 - (b) When the center's capacity is 50 or more, an approved manual fire alarm system shall be provided, as required by the Oregon Structural Specialty Code;
 - (c) Smoke detectors shall be tested each month.
- (5) Obstructions, including furniture, storage of supplies, or any other items shall not be placed in corridors, stairwells or exit ways.
- (6) Candles or other open flame decorative devices are prohibited, except for the brief use of celebratory candles.
- (7) There shall be written evidence that any wood stove in the building has been inspected and approved for use by the local building official.

414-300-0170 Hazards and Emergencies

- (1) Protection from Hazards:
 - (a) Glass surfaces subject to impact by children shall be of safety glass and marked at a child's eye level or have a protective barrier in place.
 - (b) Electrical outlets accessible to children not yet attending kindergarten shall have protective caps or safety devices when not in use.
 - (c) All stairways with three steps or more used by children shall have handrails installed a minimum of thirty inches to a maximum of thirty-four inches above the stair tread.

- (d) Protective barriers shall be used in any hazardous location accessible to a child.
 - (e) A movable barrier, such as a mesh-type gate, shall be placed at the top and/or bottom of all stairways accessible to infants and toddlers. Gates and enclosures should have the Juvenile Products Manufacturers Assn. (JPMA) certification seal to ensure safety.
 - (f) Lights shall be protected from hazards or breakage by installation of covers or shields.
 - (g) All rooms used by staff and children shall have adequate lighting.
 - (h) Floors shall be free of splinters, large or unsealed cracks, sliding rugs, and other hazards.
 - (i) Items of potential danger to children (e.g., cleaning supplies and equipment, poisonous and toxic materials, paints, plastic bags, aerosols, detergents) shall be:
 - (A) Kept in the original container or labeled;
 - (B) Secured by a child-proof lock or latch;
 - (C) Stored in an area not used by children; and
 - (D) Stored separately from food service equipment and supplies.
 - (j) Lead-based paint or other toxic finishing materials shall not be used on walls, furnishings, toys, or any other equipment, materials or surface which may be used by children or are within their reach.
 - (k) The possession and/or storage of firearms and ammunition are prohibited in the center.
 - (l) The center must take precautions to protect children from vehicular traffic. The center shall:
 - (A) Require drop off and pick up only at the curb or at an off-street location protected from traffic; and
 - (B) Assure that any adult who supervises drop-off and loading can see and assure that children are clear of the perimeter of all vehicles before any vehicle moves.
 - (m) Other hazards observed in the certification process must be corrected.
- (2) Preparation for Emergencies:
- (a) A portable emergency light source, in working condition, shall be available with each group of children.

- (b) Telephone service shall be accessible and available in the center at all times when children are in care.
 - (c) The center must have a system in place to ensure that parents can have contact with facility staff at all times when children are in care.
 - (d) Telephone numbers for fire, emergency medical care, and poison control shall be posted on or near all telephones. Portable telephones must have emergency numbers on the phone.
 - (e) Written instructions for evacuating the building, including a map illustrating exiting, shall be posted in each room children use.
- (3) Emergency Plan:
- (a) The center shall have a written plan for handling emergencies, including, but not limited to, acute illness of a child or staff, floods, natural disasters (e.g. fire, earthquake, etc.), man-caused events, such as violence at a child care facility and evacuation of the facility. The plan must include:
 - (A) How the center will ensure that parents or the parents' emergency contacts can be reached in person;
 - (B) Designation of an alternate safe location in the event of evacuation;
 - (C) How the center will inform parents where children will be located in the event of evacuation and how children will be reunited with their families;
 - (D) An accessible file of emergency contact numbers for children and staff;
 - (E) Designation of a staff member(s) to take the emergency contact numbers file to the evacuation site in the event of an evacuation;
 - (F) Procedures to address the needs of individual children, including infants and toddlers, children with special needs, and children with chronic medical conditions;
 - (G) An acceptable method to ensure that all children in attendance are accounted for;
 - (H) Procedures in the event that children must shelter-in-place or if the child care center must be locked-down so that no one can enter or leave; and
 - (I) Procedures for maintaining continuity of child care operations.
 - (b) All staff shall be familiar with the emergency telephone numbers and emergency procedures.

(c) Fire drills shall be practiced monthly. In addition, one other aspect of the emergency plan shall be practiced every other month.

(A) The director shall keep a written record of the type, date, time, and duration of the practices.

(B) If a center has on-site swimming or is responsible for off-site swimming, the practices must include pool and swimming safety.

(d) Fire and other emergency exiting shall not be through a swimming pool area.=

414-300-0180 Sanitation

(1) Water Supply:

(a) The center's water supply shall be continuous in quantity and from a water supply system approved by the Health Division.

(b) There shall be safe drinking water available to children that is supplied in a sanitary manner. Drinking water for preparing food, infant formula, drinking or cooking shall not be obtained from bathroom sinks or diaper changing sinks.

(2) Heat and Ventilation:

(a) The center shall be ventilated, by natural or mechanical means, and shall be free of excessive heat, condensation, and obnoxious odors.

(b) Room temperature shall be at least 68° F. (20 C.) and not so warm as to be dangerous or unhealthy in the center when children are present.

(c) After painting or laying carpet, the building must be aired out completely for at least 24 hours with good ventilation before children are allowed to return.

(3) Insect and Rodent Control:

(a) The center shall be in such condition as to prevent the infestation of rodents and insects.

(b) Doors and windows used for ventilation shall be equipped with fine-meshed screens.

(c) Automatic insecticide dispensers, vaporizers, or fumigants shall not be used.

(4) Maintenance:

(a) The building, toys, equipment, and furniture shall be maintained in a clean and sanitary condition:

- (A) Kitchen and toilet rooms shall be cleaned when soiled and at least daily;
 - (B) The isolation area shall be thoroughly cleaned after each use and all bedding laundered before it is used again;
 - (C) Door knobs and cabinet pulls in toilet rooms and diaper changing areas shall be sanitized daily;
 - (D) All clean linen shall be stored in a sanitary manner;
 - (E) Soiled bed linen and clothing shall not be stored in food preparation or food storage areas, and shall be inaccessible to children;
 - (F) Floors, walls, ceilings, and fixtures of all rooms shall be kept clean and in good repair;
 - (G) All food storage areas shall be kept clean and free of food particles, dust, dirt, and other materials;
 - (H) Cribs, mats, and cots shall be sanitized with a sanitizing solution at least once a week and upon change of occupant. If visibly soiled, items must be cleaned prior to sanitizing.
 - (I) Bedding shall be cleaned when soiled, upon change of occupant and at least once a week;
 - (J) Water tables and toys used in water tables shall be emptied and sanitized daily;
 - (K) When a chemical, such as chlorine, is used for sanitizing, a test kit that measures the parts per million concentration of the solution shall be used to ensure the proper concentration; and
 - (L) Cloths, both single use and multiple use, used for wiping food spills on utensils and food-contact surfaces shall be kept clean and used for no other purpose. Cloths that are reused shall be stored in a sanitizing solution between uses.
- (b) The center shall be kept hazard-free, in good repair, and free of litter or rubbish and unused or inoperable equipment and utensils.
- (5) Infant and Toddler Care:
- (a) The following shall be sanitized immediately after each use. If visibly soiled, items must be cleaned prior to sanitizing:
 - (A) A bathtub or other receptacle used for bathing a child;
 - (B) A diaper-changing table;

- (C) High chairs, tables and chairs;
 - (D) Toys that infants and toddlers put in the mouth; and
 - (E) Toilet training seat inserts.
- (b) Pacifiers must be labeled, stored individually and sanitized after contamination. The health department must approve methods of sanitation.
 - (c) A sanitizing solution shall be kept in each diaper changing area ready for immediate use. This solution need not be stored in a locked cabinet but must be out of children's reach.
- (6) Hand washing:
- (a) Staff and children shall wash their hands with soap and warm running water after using the toilet or wiping the nose, and before and after eating.
 - (b) Staff shall wash their hands with soap and warm running water before and after changing a diaper, before and after feeding a child or handling food and after assisting a child with toileting or wiping the nose.
 - (c) Infants' and children's hands shall be washed with soap and warm running water after diaper changing.
 - (d) Commercial products labeled "hand sanitizers" shall not replace hand washing. If hand sanitizers are present in the center, they shall be kept under child-proof lock and shall not be used by children.
 - (e) When hand washing is not possible, e.g. on field trips and on the playground, moist towelettes shall be used.
- (7) Waste Disposal:
- (a) All sewage and liquid wastes shall be collected, treated, and disposed of in compliance with the requirements of the Department of Environmental Quality.
 - (b) All garbage, solid waste, and refuse shall be disposed of at least once a week.
 - (c) All garbage shall be kept in watertight, non-absorbent, and easily washable containers with close-fitting lids.
 - (d) Diaper disposal containers shall be approved by the environmental health specialist.
 - (e) All garbage storage areas and garbage containers shall be kept clean.

- (f) All rubbish and garbage storage shall be inaccessible to children.
- (g) Bio-contaminants including but not limited to bodily fluids and blood shall be disposed of in a manner that prevents exposure to children.

414-300-0190 Toilet Facilities

(1) Toilets:

- (a) Toilet rooms shall have at least one flush toilet for each 15 children in the center 36 months old or older.
- (b) Urinals may be substituted for not more than one-half the required number of toilets, as long as there is at least one toilet in each toilet room and at least two toilets in the center. Facilities built after July 15, 2001, specifically as child care centers shall not substitute urinals for the required number of toilets.
- (c) Toilet facilities shall provide privacy for school age children.

(2) Hand washing Sinks:

- (a) There shall be at least one hand washing sink with mixing faucets for every two toilets. Centers with certification in effect on July 15, 2001, shall comply with the requirement for mixing faucets when toilet facilities are remodeled.
- (b) A sink used for hand washing, bathing, or diaper-changing shall not be used in any way for preparation of food or drinks, or for dish washing.
- (c) Hot and cold running water, as well as soap and paper towels dispensed in a sanitary manner, shall be provided at each hand washing sink. Other hand drying options must be approved by the environmental health specialist.
- (d) Self-closing metered faucets shall be designed to provide water flow for at least 15 seconds without the need to reactivate the faucet. Centers with certification in effect on July 15, 2001, shall comply with the water flow requirement for self-closing metered faucets when toilet facilities are remodeled.
- (e) Drinking fountains shall not be installed at sinks. If installed at sinks, the fountains shall not be used as a source of drinking water.

(3) If toilets or hand washing sinks are adult size, easily-cleanable steps or blocks shall be provided so that preschool age children can use the toilets and sinks without adult assistance.

(4) Bathrooms shall have smooth, washable, easily-cleanable walls and floors.

- (5) Infants and Toddlers — In a center serving children under 36 months old, there shall be:
- (a) At least one flush toilet in or adjacent to each older toddler area;
 - (b) One toilet with training seat, or child-size toilet, for every ten older toddlers. Potty chairs are prohibited;
 - (c) At least one diaper-changing table in or adjacent to each activity and sleeping room. Each table shall have a surface that is non-absorbent and easily cleaned. The diaper-changing policy shall be posted above each table;
 - (d) A hand-washing sink in each diaper changing area, except that centers with certification in effect on July 15, 2001, shall comply with this requirement when the diaper changing area is remodeled; and
 - (e) A bathtub, bathinette, plastic basin, or similar size shallow sink available for bathing children.

414-300-0200 Kitchens

- (1) Kitchens shall have facilities for dish washing, storage, and preparation of food. The kitchen shall be separate from any child caring areas.
- (2) If there is no kitchen in the center and if meals or snacks are not catered, the center shall observe the requirements in OAR 414-300-0280(8).
- (3) The walls, floors, and floor coverings of all rooms in which food or drink is prepared or stored, or utensils are washed or stored, shall be smooth, washable, and easily cleanable.
- (4) All equipment and utensils used for food service, including plastic ware and food-contact surfaces, shall be:
 - (a) Easily cleanable;
 - (b) Durable;
 - (c) Nontoxic;
 - (d) Nonabsorbent; and
 - (e) Maintained in a clean and sanitary condition.
- (5) All equipment used for food preparation shall be installed and maintained in a manner providing ease of cleaning beneath, between, and behind each unit.

- (6) A center shall have a:
- (a) Mechanical dishwasher that meets the requirements in the Health Division's administrative rules, OAR 333-150-0000; or
 - (b) Compartmentalized sink that meets the requirements in the Health Division's administrative rules, OAR 333-154-0000.
 - (c) Centers with a maximum capacity of 19 children may use a light commercial dishwasher approved by the National Sanitation Foundation.
- (7) There shall be separate sinks in the kitchen designated by the environmental health specialist for hand washing, for food preparation activities, and for dishwashing activities.
- (a) The sink designated for hand washing shall be equipped with soap and paper towels dispensed in a sanitary manner and posted with a hand washing sign.
 - (b) In centers in which there is not a sink provided for food preparation, a sink used for dishwashing may be used as long as dishwashing activities do not interfere with sanitary food preparation, and the sink is sanitized before being used for food preparation.
 - (c) Sinks in the kitchen shall be used exclusively for food service activities.
 - (d) Centers newly constructed or remodeled after July 15, 2001, shall meet the requirements for hand washing sinks established by State Building Code, as defined in ORS chapter 455.
- (8) Children shall not be allowed in the kitchen except for a supervised learning activity.

414-300-0205 Testing for Lead in Drinking Water

- (1) For purposes of this rule, "drinking water faucet or fixture"
- (a) means any plumbing fixture on the premises used to obtain water for drinking, cooking, preparing infant formula, or preparing food; and
 - (b) does not include any plumbing fixture used to obtain water for handwashing, bathing, or diaper changing.
- (2) Water obtained from fixtures identified in subsection (1)(b) of this rule cannot be used for drinking, cooking, preparing infant formula, or preparing food.
- (3) Initial Testing
- (a) Any operator with an active certificate as of September 30, 2018 must test each drinking water faucet or fixture by November 30, 2018.

- (b) The following operators must test each drinking water faucet or fixture for lead in the water prior to being eligible to receive a license from OCC:
 - (A) Any operator with a pending certificate application as of September 30, 2018; and
 - (B) Any operator applying for certificate on or after September 30, 2018, including, but not limited to, initial applications, renewal applications, and reopen applications.
- (c) An operator identified in subsection (3)(a) or (b) does not need to conduct the initial testing if:
 - (A) All drinking water faucets or fixtures have been tested within 6 years prior to the effective date of this rule; and
 - (B) The testing was conducted in accordance with the requirements of subsection (5) of this rule.
- (d) An operator identified in subsection (3)(a) must submit all test results to OCC no later than November 30, 2018. The test results must be accompanied by a floor plan or map of the facility that identifies the location of each drinking water faucet or fixture tested.
- (e) An operator identified in subsection (3)(b) must submit test results to OCC within 10 calendar days of the operator receiving the results from the laboratory. The test results must be accompanied by a floor plan or map of the facility that identifies the location of each drinking water faucet or fixture tested.

(4) Ongoing Testing

- (a) After an operator conducts the initial testing under subsection (3) of this rule, the operator must test all drinking water faucets or fixtures at least once every six years from the date of the last test.
- (b) All test results obtained in accordance with subsection (4)(a) of this rule must be submitted to OCC within 10 calendar days of the operator receiving the results from the laboratory. The test results must be accompanied by a floor plan or map of the facility that identifies the location of each drinking water faucet or fixture tested.

(5) Sampling and Testing

- (a) All sample collection and testing must be in accordance with the Environmental Protection Agency (EPA)'s 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference.
- (b) All testing must be performed by a laboratory accredited by the Oregon laboratory Accreditation Program according to standards set under OAR chapter 333, division 64 in effect as of September 30, 2018.

- (c) If a center does not use any of the on-site plumbing fixtures to obtain water for drinking, cooking, preparing infant formula, or preparing food, the operator must:
 - (A) Submit a written statement to OCC identifying the alternative source of water and confirming that the provider does not use any on-site plumbing fixtures for drinking, cooking, preparing infant formula, or preparing food; and
 - (B) Notify OCC in writing if the alternative source of water changes.

(6) Results

- (a) If test results show that water from any drinking water faucet or fixture has 15 parts per billion (ppb) or more of lead, the operator must:
 - (A) Prevent access to that drinking water faucet or fixture immediately after receiving the test results; and
 - (B) Continue to prevent access to that drinking water faucet or fixture until mitigation is completed in accordance with subsection (6)(b) of this rule.
- (b) Following receipt of test results showing that water from any drinking water faucet or fixture has 15 parts per billion (ppb) or more of lead, the operator must:
 - (A) Submit a corrective action plan to OCC for approval within 60 days of receiving the test results. The corrective action plan must identify an appropriate mitigation strategy in accordance with Module 6 of the EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference; and
 - (B) Implement the mitigation method within 30 days of approval by OCC.

(7) Recordkeeping and Posting

- (a) The operator must keep a copy of the most recent lead test results on-site at all times.
 - (b) The operator must post the most recent lead test results summary provided by OCC in an area of the facility where the summary can be clearly viewed by parents. The operator must post the lead test results summary immediately after receiving the summary from OCC.
- (8) Certified child care centers must follow the routine practices identified in Module 6 of the EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities, Revised Manual from October 2018, adopted by reference, at all times.

414-300-0210 Furniture

- (1) Furniture shall:
 - (a) Be durable;
 - (b) Have cleanable or non-absorbent surfaces;
 - (c) Be safely constructed, with no sharp, rough, loose, or pointed edges; and
 - (d) Be in good repair.
- (2) Tables and seating shall be scaled to the height and size of a child.
- (3) There shall be a safe, washable cot or rest mat for each toddler and preschool age child in the center at nap time and for each school-age child who wants to rest.
- (4) Each mat used for napping shall be:
 - (a) Covered with a waterproof cover; and
 - (b) At least one inch thick.
- (5) Mats or cots shall be placed at least two feet apart if children are placed head to toe; or three feet apart otherwise. They shall be arranged in a manner that allows for a direct, unobstructed passage to each child.
- (6) Each child who is resting shall have individual bedding consisting of at least a sheet or blanket.
- (7) Mats, cots and bed linen shall be properly stored, as recommended by the environmental health specialist.

414-300-0215 Infant and Toddler Furniture and Equipment

- (1) Each infant shall have a crib, portable crib, or play pen with a clean, non-absorbent mattress that meets the following requirements:
 - (a) Each crib shall be of sturdy construction with vertical slats no more than 2 3/8" apart;
 - (b) Locks and latches on the dropside of a crib shall be safe and secure from accidental release or release by the infant inside the crib;
 - (c) Cribs shall not be used with the dropside down;
 - (d) Each mattress shall fit snugly;

- (e) Each mattress shall be covered by a sheet;
 - (f) Crib bumpers, if used, shall be easily cleanable, durable, and not dangerous to children;
 - (g) There shall be no restraining devices of any type used unless prescribed by a physician;
and
 - (h) Wall or stacking cribs shall not be used.
- (2) Sleeping arrangements other than cribs, portable cribs or playpens must be approved by OCC.
 - (3) There shall be at least two feet of space between cribs, portable cribs or play pens when in use. They shall be arranged in a manner that allows for a direct, unobstructed passage to each child.
 - (4) If high chairs are used, they shall have:
 - (a) A broad base to prevent tipping;
 - (b) A latch to keep a child from raising the tray; and
 - (c) Straps to prevent a child from sliding out.
 - (5) If clip-on table chairs are used, they shall have straps to prevent a child from sliding out.
 - (6) There shall be at least one adult-sized chair for each group of infants and toddlers.
 - (7) Cribs, portable cribs, playpens, and high chairs must meet US Consumer Product Safety Commission or equivalent standards.
 - (8) The use of infant walkers is prohibited.
 - (9) The use of baby equipment shall not substitute for providing a variety of stimulating experiences.

HEALTH

414-300-0220 Illness or Injury

- (1) Illness:
 - (a) A center shall not admit or retain in care, except with the written approval of the local health officer, a child who:

- (A) Is diagnosed as having or being a carrier of a child care-restrictable disease, as defined in Health Division administrative rules, OAR 333-019-0010; or
- (B) Has one of the following symptoms, or combination of symptoms, of illness:
 - (i) Fever over 100 degrees F taken under the arm;
 - (ii) Diarrhea (more than one abnormally loose, runny, watery or bloody stool);
 - (iii) Vomiting;
 - (iv) Nausea;
 - (v) Severe cough;
 - (vi) Unusual yellow color to skin or eyes;
 - (vii) Skin or eye lesions or rashes that are severe, weeping, or pus-filled;
 - (viii) Stiff neck and headache with one or more of the symptoms listed above;
 - (ix) Difficult breathing or abnormal wheezing; or
 - (x) Complaints of severe pain.
- (b) A child who shows signs of illness, as defined in this rule, shall be isolated and the parent(s) notified and asked to remove the child from the center as soon as possible;
- (c) If a child has mild cold symptoms that do not impair his/her functioning, the child may remain in the center and the parent(s) notified when they pick up their child;
- (d) A specific place for isolating a child who becomes ill shall be provided. The isolation area:
 - (A) Shall be located where the child can be seen and heard by staff; and
 - (B) Shall be equipped with a cot, mat, or bed for each sick child.
- (e) An outbreak of a child care restrictable disease, as defined in OAR 333-019-0010, or food poisoning shall be reported immediately to the local health department and posted for the parents of all children who attend the facility.
- (f) If a child with allergies is enrolled who needs a specific plan for caring for that child, such a plan shall be developed in writing between center staff, parents, and if necessary, outside specialists. All staff who come in contact with that child shall be fully aware of the plan.

(2) Injuries:

- (a) All caregivers shall take appropriate precautions to prevent shaken baby syndrome and abusive head trauma.
- (b) The operator shall have written procedures for handling injuries that shall be made known to all staff, including:
 - (A) Procedure for taking a child to emergency medical care;
 - (B) Routine for treatment of minor injuries; and
 - (C) First aid measures for serious accidents.
- (c) First aid supplies and a chart or handbook of first aid instructions shall be maintained in one identified place away from food and food-contact surfaces and be available for staff use but kept out of reach of children:
 - (A) The first aid supplies shall include Band-Aids, adhesive tape, sterile gauze pads, soap or sealed antiseptic towelettes or solution to be used as a wound cleaning agent, scissors, disposable plastic gloves for handling blood spills, chlorine bleach for sanitizing after a blood spill, and a sanitary temperature-taking device;
 - (B) Separate first aid supplies and a copy of each child's medical release form shall be taken on all field trips away from the immediate neighborhood.
- (d) Injuries or accidents shall be reported to the child's parent(s) on the day of occurrence:
 - (A) A written report of the injury or accident shall be maintained on file;
 - (B) The report shall include the date, child's full name, nature of the injury, witnesses, action taken, and the signatures of reporting staff and parent(s).
- (e) The injury to or death of a child shall be reported to OCC in accordance with OAR 414-300-0030(5)(a) and (b).

(3) Emergency Medical Care:

- (a) The operator shall identify a licensed physician, hospital, or clinic to be used for emergency medical care;
- (b) In the event of an illness or injury which requires immediate medical care, the director or the substitute director is responsible for securing such care and notifying the parent(s).

414-300-0230 Medications

- (1) No prescription medication or non-prescription medication, including, but not limited to, pain relievers, sunscreen, cough syrup, diapering and first aid ointments or nose drops, may be given to a child except under the following conditions:
 - (a) A signed, dated, written authorization by the parent(s) is on file;
 - (b) Prescription medication is in the original container and labeled with the child's name, name of the drug, dosage, directions for administering, date, and physician's name;
 - (c) Non-prescription medication is in the original container, labeled with the child's name, dosage, and directions for administering; and
 - (d) A written record of all medications administered listing, as a minimum, the name of the child, type of medication, the signature of the person administering the medication, date, time, and dosage given, shall be kept.
- (2) All medications shall be:
 - (a) Secured in a tightly-covered container with a child-proof lock or latch; and
 - (b) Stored in an area not used by children.
- (3) Medications requiring refrigeration shall be kept in the refrigerator in a separate tightly-covered container, with a child-proof lock or latch, clearly marked "medication".
- (4) Sunscreen is considered a non-prescription medication and may be used for child care children under the following conditions:
 - (a) Providers must obtain written parental authorization prior to using sunscreen.
 - (b) One container of sunscreen may be used for child care children unless a parent supplies an individual container for their child. The sunscreen shall be applied in a manner that prevents contaminating the container.
 - (A) Parents must be informed of the type of product and the sun protective factor (SPF).
 - (B) Parents must be given the opportunity to inspect the product and active ingredients.
 - (c) If sunscreen is supplied for an individual child care child, the sunscreen must be labeled with the child's first and last name and must be used for only that child.
 - (d) Providers must reapply sunscreen every two hours while the child care children are exposed to the sun.

- (e) Providers shall use a sunscreen with an SPF of 15 or higher and must be labeled as "Broad Spectrum".
 - (f) Providers shall not use aerosol sunscreens on child care children.
 - (g) Sunscreen shall not be used on child care children younger than six months.
 - (h) Child care children over six years of age may apply sunscreen to themselves under the direct supervision of the provider or staff member.
- (5) Parent(s) shall be informed daily of medication administered to their child.

414-300-0240 Animals in the Center

- (1) Animals shall be in good health, show no evidence of carrying any disease, and be a friendly companion for the children.
 - (a) When immunizations are required, proof of current compliance signed by a veterinarian shall be on file at the center.
 - (b) Dogs and cats shall be maintained on a flea, tick and worm control program. Products toxic to humans are prohibited.
 - (c) Animals shall be cared for as recommended by a veterinarian.
- (2) Reptiles (e.g., lizards, turtles, snakes, iguanas), frogs, monkeys, hook-beaked birds, baby chicks, ferrets, and potentially aggressive animals are prohibited. Educational programs which include prohibited animals and are run by zoos, museums and other professional animal handlers are permitted.
- (3) Parent(s) shall be informed in writing of any animal in the center.
- (4) Animals, except fish, shall not be in classrooms for infants or toddlers.
- (5) The center shall have and follow written procedures for the care and maintenance of the animals in the center.
- (6) Animals shall be kept in an approved cage for the type of animal. Cages shall have removable bottoms and shall be kept clean and sanitary.
- (7) Animal litter boxes shall not be located in areas accessible to children.
- (8) There shall be assigned staff who are responsible for the handling, care and feeding of the animal(s).

- (a) The cleaning of cages shall not be done in areas used for food preparation, storage or serving.
 - (b) Staff must immediately and thoroughly wash their hands after handling animals or cleaning cages.
 - (c) The cleaning of cages shall be scheduled when children are not present.
 - (d) Animal food supplies shall be kept out of the reach of children and stored separately from food supplies and equipment. Animal food shall be stored in a manner that does not attract rodents or insects.
 - (e) Chemicals related to the care of animals shall be kept under lock.
- (9) Caregivers shall always be present when children are exposed to animals.
- (10) If children are allowed to handle animals, they shall immediately and thoroughly wash their hands after handling.

414-300-0250 Food Selection, Storage, and Preparation

- (1) All food and drink provided by the center shall be selected, stored, prepared, and served in a sanitary manner.
- (2) Selection:
- (a) All food products served by the center shall be obtained from commercial suppliers, except that:
 - (A) Fresh fruits and vegetables and center-frozen fruits or vegetables may be served;
 - (B) Home-canned or processed food may be served to a child only when supplied by the child's parent(s); and
 - (C) The serving of unpasteurized juice is prohibited.
 - (b) Only Grade A pasteurized and fortified milk shall be served to children.
 - (A) Powdered milk shall be used only in cooking.
 - (B) The serving of unpasteurized milk is prohibited.
- (3) Storage:
- (a) A center shall have at least one refrigerator, in good operating condition, that is adequate to store all potentially hazardous foods. "Potentially hazardous food" means

any food or beverage that contains milk or milk products, eggs, meat, fish, shellfish, poultry, cooked rice or beans, and all other previously cooked foods.

(A) A spirit stem (alcohol filled — usually red) thermometer in working condition shall be affixed to the door, or the front edge of the top shelf, of each refrigerator.

(B) Refrigerators equipped with a temperature gauge visible from the exterior are acceptable.

(b) All potentially hazardous food shall, except when being prepared, be kept at 41 degrees Fahrenheit (F) or below, or 140 degrees F or above.

(A) Foods requiring refrigeration after preparation shall be rapidly cooled to a temperature of 41 degrees F or below.

(B) Refrigerated storage space at 41 degrees F or less shall be used to store lunches which contain potentially hazardous food that children bring from home.

(C) A metal stem-type probe thermometer shall be used to ensure food requiring hot storage is maintained at 140 degrees F or above.

(D) Foods that have been cooked, and then refrigerated, shall be reheated rapidly to at least 165 degrees F before being served or placed in a hot food storage unit.

(4) Preparation:

(a) Food shall be prepared with a minimum of manual contact.

(b) Raw fruits and vegetables shall be washed in a clean, sanitized sink before being cooked or served.

(c) Food shall be prepared on food-contact surfaces and with utensils that are clean and have been sanitized.

(d) Food-contact surfaces and utensils shall be cleaned and sanitized after each use and/or whenever there is a change in processing from raw to ready-to-eat foods.

(e) Only approved food additives and preservatives shall be used by the center.

(5) Service:

(a) Each child shall be provided with his/her own individual use utensils for eating and drinking. These may be:

(A) Single service paper and plastic which shall be used once only; or

(B) Multiple use utensils which shall be washed in the prescribed manner between each use (OAR 414-300-0260).

(b) To protect food from contamination:

(A) A suitable dispensing utensil, that is not used for any other purpose, shall be used to transfer a food item to each child's plate or bowl; and

(B) A bowl, platter, pitcher, or dispensing utensil used for serving food or drink shall not be refilled or reused without first being washed and sanitized.

(c) Milk and fluid milk products shall be dispensed from a commercially filled plastic container of not more than one-gallon capacity, individual half-pint containers, or from a refrigerated bulk container equipped with an approved dispensing device.

(A) Milk containers shall be opened immediately before pouring.

(B) Any unused portions left in the original container shall be returned immediately to refrigeration.

(C) Unused portions of milk left in a pitcher shall be discarded.

(a) All food, once removed from the kitchen for service, shall be discarded.

(b) Leftover prepared food which has not been served shall be labeled and dated, rapidly cooled, and used within 36 hours, or frozen immediately for later use.

414-300-0260 Cleaning, Sanitizing, and Storage of Food Service Equipment and Utensils

(1) Tableware and kitchenware (e.g., pots, pans and equipment) shall be washed, rinsed, and sanitized after each use:

(a) When mechanical cleaning and sanitizing methods are used, the requirements in the Health Division's administrative rules, OAR 333-150-0000, Food Sanitation Rules, shall be met;

(b) When manual washing, rinsing, and sanitizing of dishes and equipment is used, the requirements in the Health Division's administrative rules, OAR 333-150-0000, Food Sanitation Rules, shall be met.

(2) Food-contact surfaces of equipment shall be washed, rinsed, and sanitized after each use.

(3) All multi-use utensils and counters, shelves, tables, refrigeration equipment, sinks, drain boards, dish tables, cutting boards, appliances, and other equipment or utensils used for food preparation shall be kept clean and in good repair.

(4) After being sanitized, all tableware, equipment, and utensils shall be air dried.

- (5) After being cleaned and sanitized, tableware and utensils shall be:
 - (a) Stored in a clean, dry place protected from insects, dust, and other contamination; and
 - (b) Handled in a way that protects them from contamination.

414-300-0270 Nutrition

- (1) An operator shall provide or ensure the availability of adequate and nutritious meals and snacks appropriate for the ages and needs of the children served. USDA guidelines will be used to determine if meals and snacks are adequate and nutritious. Foods of minimal nutritional value (e.g., Jell-O, popcorn, desserts, potato chips) shall only be served occasionally and not replace nutritious foods.
- (2) Each lunch and dinner served shall equal at least 1/3 of a child's daily nutritional needs. Every meal shall meet USDA guidelines and shall include at least one serving from each of the following groups: fluid milk; breads and grains; meat, fish, poultry or meat alternatives (e.g., dried beans, peanut butter, yogurt or cheese). Each meal shall include two servings of fruits and vegetables. No liquids other than milk and 100% fruit juice shall be counted as part of the daily nutrition.
- (3) Each breakfast served shall meet USDA guidelines and shall include at least one serving each of milk, fruit or vegetable, and bread or grain.
- (4) Snacks (mid-morning or mid-afternoon) shall meet USDA guidelines and shall consist of food or beverage from at least two of the following food groups: fluid milk; breads and grains; meat, fish, poultry or meat alternatives (e.g., dried beans, peanut butter, yogurt or cheese); fruits and vegetables. No liquids other than milk and 100% fruit juice shall be counted as part of the daily nutrition. A snack shall not consist of only two beverages.
- (5) No liquids other than milk, formula, water, and 100 percent fruit juices shall be served to the children in care.
- (6) Water shall be freely available to children.
- (7) Nutrient concentrates and supplements (protein powders, liquid proteins, vitamins, minerals, and other nonfood substances) shall not be served to a child without a written statement of parental consent and written instructions from a medical practitioner. Special diets, not including vegetarian diets, shall not be served to a child without written instructions from a registered dietician or medical practitioner and written parental consent.

414-300-0280 Meals and Snacks

- (1) Meals and snacks provided to children shall meet the following requirements:
 - (a) Food services hours may be flexible but there shall be no more than 3-1/2 hours between meals and snacks in any center providing care for the same children 3-1/2 or more consecutive hours;
 - (b) In a center open morning through afternoon, lunch and morning and afternoon snacks shall be served to the children in care. If breakfast is served in the center to all children, a midmorning snack is not required, as long as there is no more than 3-1/2 hours between meals;
 - (c) School age children arriving after school shall be served a snack; and
 - (d) When the planned attendance is prior to 7 a.m. or after 6:30 p.m., a child shall be offered a complete meal if it is not provided or arranged for by the parent(s).
- (2) Meals for children shall be:
 - (a) Prepared on-site;
 - (b) Catered; or
 - (c) Provided by the parent(s).
- (3) During the service and eating of meals and snacks, the appropriate number of staff to meet staff/child ratios shall be engaged with the children in food-related activities.
- (4) Proper hand washing, as specified in OAR 414-300-0180(6) shall be practiced prior to and after eating meals or snacks.
- (5) When parent(s) provide food for the meal:
 - (a) Food shall be brought on a daily basis and be ready to eat;
 - (b) All food and beverage containers shall be labeled with the child's name;
 - (c) The center shall provide at least one serving of milk to each child at meals and shall provide morning and afternoon snacks;
 - (d) Each child's food shall be monitored daily to ensure that the food meets nutritional requirements as defined in OAR 414-300-0270;
 - (e) The center shall have sufficient food available to supplement any lunch that does not meet nutrition requirements as defined in OAR 414-300-0270;

- (f) If parents bring food for all the children as snacks or for celebrations, the food shall be commercially prepared and served by the center in an approved manner; and
 - (g) There shall be a refrigerator on site to store foods needing refrigeration.
- (6) Catered foods shall be:
- (a) Prepared in a kitchen approved by the State Health Division or a county health department; and
 - (b) Delivered in a safe, sanitary manner with food maintained at the required temperature (OAR 414-300-0250).
 - (c) If meals are catered, the process of receiving, holding and serving food shall be approved by the environmental health specialist.
- (7) To serve family style meals, where food is brought to the table in larger quantities and served to the plates from the table, a center must have a written plan, approved by the environmental health specialist and OCC, which includes at least the following elements:
- (a) Provision for handwashing immediately prior to eating;
 - (b) Separate serving portions for each table;
 - (c) Serving utensils distinct from eating utensils;
 - (d) Table accommodations for group sizes no larger than those stated in OAR 414-300-0130, Table 3A or Table 3B, for that age group;
 - (e) Provision for serving mildly ill children so as to prevent the spread of the illness; and
 - (f) The discarding of any food brought to the table and not eaten.
- (8) If there is no kitchen in the center and if meals or snacks are not catered:
- (a) Only single service utensils shall be used;
 - (b) Either commercially-prepared, individually-packaged, single-serving foods shall be served or the serving of bulk food shall be approved by the environmental health specialist;
 - (c) Utensils that require washing shall not be used or stored on site;
 - (d) Food shall be stored in a space used only for food, beverages and single-service utensils; and

- (e) If foods needing refrigeration are served, the center shall have a refrigerator.
- (9) A center serving children under 12 months of age shall comply with the following requirements for those children:
 - (a) Each child shall be fed on his/her own feeding schedule;
 - (b) When formula is provided by the center, it shall be either the commercially prepared, iron-enriched, ready-to-feed type or shall be prepared from powder or concentrate and diluted according to manufacturers' instructions. When formula is prepared on site, it must be mixed in a kitchen approved by the environmental health specialist, and the program must have a written plan for mixing formula and sanitizing bottles and nipples. The plan must be approved in writing by the environmental health specialist;
 - (c) Formula, breast milk, and food provided by the parent(s) shall be clearly marked with the child's name and refrigerated if required;
 - (d) Whole milk, skim milk, 1%, and 2% milk shall not be served unless requested in writing by the child's parent(s) and with a medical provider's written permission.
 - (e) Any bottles used for feeding liquid must be sterilized at the center by boiling or must come from home labeled by the parent with the child's name. Nipples must be stored in a closed container after sterilizing;
 - (f) Solid foods fed to infants shall be selected from the food groups specified in OAR 414-300-0270(2):
 - (A) Solid foods shall not be fed to infants less than four months of age without parental consent;
 - (B) Solid food shall not be served directly from the container;
 - (C) Leftovers in the serving container shall be discarded; and
 - (D) Solid foods, with the exception of finger foods, shall be fed with a spoon.
 - (g) Honey or foods containing honey shall not be served to children under 12 months of age; and
 - (h) Children who cannot feed themselves shall be held or, if able to sit alone, fed in an upright position.
 - (A) Infants up to six months of age shall be held or sitting up in a caregiver's lap for bottle feeding.
 - (B) Bottles shall never be propped. The child or a staff person shall hold the bottle.

(C) Infants no longer being held for feeding shall be fed in a manner that provides safety and comfort.

(10) Children of any age shall not be laid down with a bottle.

PROGRAM OF CARE OF CHILDREN

414-300-0290 Program Plan

- (1) The center shall develop and post a written daily schedule for each group of children, according to their ages, interests and abilities. The schedule shall:
 - (a) Cover all hours of operation;
 - (b) Include regularity of routine activities such as eating, napping and toileting;
 - (c) Include periods of outdoor play each day when weather permits; and
 - (d) Include one or more regularly scheduled rest periods. Children who do not sleep after 20–45 minutes of quiet time must be provided with an alternative quiet activity. The activity may be in the same room where children are sleeping if it is not distracting to sleeping children.
- (2) The center shall follow the written daily schedule, allowing flexibility to respond to the needs of individual children and/or groups of children.

414-300-0295 Program of Activities for All Children

- (1) All caregivers must give the children's needs first priority, ensuring that they get adequate care and attention.
- (2) The center shall provide a written program of activities for each group of children according to their developmental ages, interests, and abilities. The program of activities must allow for change and flexibility and show evidence of the preplanning.
- (3) The program of activities shall be planned to provide:
 - (a) Positive learning experiences appropriate to the individual developmental needs of children in care;
 - (b) Individual and group activities;
 - (c) A balance of active and quiet activities;
 - (d) Opportunities for free choice by children; and

- (e) Daily indoor and outdoor activities in which children use both large and small muscles.
- (4) The center shall follow the written program of activities.
- (5) The center shall inform parents when children are participating in contracted services (e.g., tumbling, music) that the contracted services have not been certified by OCC.

414-300-0300 Infant and Toddler Program of Activities

- (1) Each infant and toddler shall be:
 - (a) Allowed to form and follow his or her own pattern of sleeping and waking periods; and
 - (b) Given opportunities during each day to move freely by creeping and crawling in a safe, clean, open, warm, and uncluttered area.
- (2) Throughout the day, each child shall receive physical contact and individual attention (e.g., being held, rocked, talked to, sung to, and taken on walks inside and outside the center).
- (3) Routines relating to activities such as bedtime, feeding, diapering, and toileting shall be used as opportunities for language development, building the child's self esteem, and other learning experiences.
- (4) Children shall be encouraged to play with a variety of safe toys and objects.
- (5) Children shall be given appropriate opportunities to use the five senses through sensory play.
- (6) The following safe sleep practices must be followed:
 - (a) Each infant shall sleep in a crib, portable crib, bassinet or playpen with a clean, non-absorbent mattress. All cribs, portable cribs, bassinets and playpens must comply with current Consumer Product Safety Commission (CPSC) standards;
 - (b) Bassinets may only be used until the infant is able to roll over on their own;
 - (c) Each mattress shall:
 - (A) Fit snugly; and
 - (B) Be covered by a tightly fitting sheet;
 - (d) A clean sheet shall be provided for each child;
 - (e) Infants must be placed on their backs on a flat surface for sleeping;

- (f) While on the child care premises, if an infant falls asleep in a place other than their crib, portable crib, bassinet or playpen, the caregiver must immediately move the infant to an appropriate sleep surface;
 - (g) No child shall be routinely left in a crib, portable crib, bassinet or playpen except for sleep or rest;
 - (h) There shall be no items in the crib, portable crib, bassinet or playpen with the infant, except a pacifier (e.g. bottles, toys, pillows, stuffed animals, blankets, bumpers);
 - (i) Swaddling or other clothing or covering that restricts the child's movement is prohibited;
 - (j) Clothing or items that could pose a strangulation hazard (e.g. teething necklaces, pacifier attachments, clothing drawstrings) are prohibited; and
 - (k) Car seats are to be used for transportation only. Children who are asleep in a car seat must be removed upon arrival to the center and placed in an appropriate sleep surface.
- (7) Immediate attention shall be given to the emotional and physical needs of children.
- (8) Staff shall encourage the development of self-help skills (dressing, toileting, washing, eating) as children are ready.
- (9) In addition to those activities specified in OAR 414-300-0295(2), toddlers shall be given opportunities to participate in:
- (a) A variety of activities encouraging creative expression through the arts; and
 - (b) Running, climbing, and other vigorous physical activities.
- (10) Infants and younger toddlers shall have an activity area not used by older children at the same time.
- (11) The center shall provide the following information to each parent of an infant and toddler on a daily basis:
- (a) Their child's schedule of feeding;
 - (b) Their child's toilet and diapering activities; and
 - (c) Their child's sleep schedule.

414-300-0310 Preschool-Age Program of Activities

In addition to those activities specified in OAR 414-300-0295(2), preschool age children shall have opportunities, on a daily basis, to choose from a variety of activities and experiences, which shall include:

- (1) Creative expression through the arts;
- (2) Dramatic play;
- (3) Gross motor development;
- (4) Fine motor development;
- (5) Music and movement;
- (6) Opportunities to listen and speak;
- (7) Concept development;
- (8) Appropriate sensory play; and
- (9) A supervised nap or rest period.

414-300-0320 School-Age Program of Activities

- (1) School age programs shall provide an environment where adults' actions demonstrate respect for school age children's changing physical, emotional and intellectual needs.
- (2) School age children shall have the opportunity to take part, on a daily basis, in activities which support their need to practice and build skills in problem-solving, making responsible choices, cooperation, creativity, and appropriate social interactions.
- (3) In addition to those activities specified in OAR 414-300-0295(2), school age children shall have opportunities to choose from a variety of activities, including:
 - (a) Creative expression through the arts;
 - (b) Individual projects, which may include homework;
 - (c) Exposure to individual and team physical activities;
 - (d) Opportunities to experience or learn about the tasks of adulthood (e.g., the world of work, taking responsibility, budgeting); and

(e) Opportunities to rest if tired. The center shall provide a space that encourages rest for those children who wish to rest.

(4) The center shall have age-appropriate activities and equipment for school age children.

414-300-0330 Guidance and Discipline

(1) A center shall have a written policy on guidance and discipline of children. The policy shall be posted in the center.

(2) All staff, volunteers and parents shall be familiar with the guidance and discipline policy.

(3) The guidance and discipline policy shall:

(a) Provide for positive guidance, redirection, and the setting of clear-cut limits; and

(b) Be designed to help the child develop self-control, self-esteem, and respect for others.

(4) Only staff, excluding volunteers, shall provide guidance or discipline to a child.

(5) Guidance and discipline shall be fair, consistently applied, timely, and appropriate to the infraction and the age of the child. Positive statements or redirection of behaviors shall be used.

(6) Prohibited punishment includes, but is not limited to:

(a) Hitting, slapping, shaking, striking with hand or instrument, pinching, tying or binding or inflicting any other form of corporal punishment;

(b) Mental or emotional punishment including, but not limited to, name calling, ridicule, yelling, or threats;

(c) Non-prescription chemical restraints used for discipline or to control behavior;

(d) Confining a child in an enclosed area (e.g., a locked or closed room, closet, box);

(e) Forcing or withholding meals, snacks, rest, or necessary toilet use; or

(f) Belittling a child for or forcing a child to clean up after toileting accidents.

(7) The center shall not accept parental permission to use any form of punishment listed in subsection (6) of this rule.

414-300-0340 Equipment and Materials

- (1) The center shall have play equipment and materials that are:
 - (a) Appropriate to the developmental needs and interests of the children;
 - (b) Sturdy and free of sharp points or corners, splinters, protruding nails or bolts, loose rusty parts, hazardous small parts, or paint that contains lead or other toxic materials;
 - (c) In good condition; and
 - (d) Easily accessible to the children.
- (2) The quantity and variety of play materials (i.e., toys, books and games) shall be sufficient to:
 - (a) Avoid excessive competition;
 - (b) Provide a variety of choices to each child;
 - (c) Provide a balance of:
 - (A) Active/quiet activities; and
 - (B) Individual/group activities;
 - (d) Meet the developmental needs of each group of children; and
 - (e) Provide the variety of activities required in OAR 414-300-0295, 414-300-0300, 414-300-0310, and 414-300-0320, as appropriate.
- (3) The center shall have a variety of age-appropriate toddler, preschool and school age toys, materials and equipment which give children choices from the following:
 - (a) Blocks;
 - (b) Manipulatives;
 - (c) Books;
 - (d) Sensory experiences;
 - (e) Gross motor activities;
 - (f) Music;
 - (g) Art;

- (h) Dramatic play;
- (i) Science and/or exploration; and
- (j) Discovery of nature.

(4) Infants shall have a variety of appropriate infant toys stimulating to the senses.

414-300-0350 Transportation

When transportation is provided by or arranged for by the center, the following requirements shall be met:

- (1) Drivers shall:
 - (a) Be at least 18 years of age;
 - (b) Hold a current driver's license. If required by the Motor Vehicles Division (DMV), a commercial driver's license shall be obtained; and
 - (c) Maintain a safe driving record.
 - (d) The provider must take precautions to protect children from vehicular traffic.
- (2) The operator shall obtain a copy of the driving record from DMV for each staff whose job description includes driving duties. The DMV check shall be updated annually.
- (3) The vehicle shall be:
 - (a) In compliance with all applicable state and local motor vehicle laws; and
 - (b) Maintained in a safe operating condition.
- (4) If transportation is provided between the center and the child's school or other destination, the center shall have in writing an acknowledgment from the parent(s) that they are aware of the time of day their child is to be picked up and/or delivered by the center. If the pick-up schedule results in children being unsupervised at school or other location, the center shall notify parents of this fact.
- (5) When transporting children on a regular basis, there shall be sufficient staff to meet the required staff/child ratios (OAR 414-300-0130) for each age group of children being transported.
 - (a) The driver may count in the staff/child ratios.

- (b) Staff shall be teacher-qualified or Aide II qualified. Aide I qualified staff may count in the staff/child ratios if one other staff is teacher-qualified.
 - (c) If none of the staff is teacher-qualified, an adult in the vehicle shall be trained in first aid and the vehicle shall be equipped with a cell phone or other communication device.
- (6) When transporting children on field trips, the center shall follow its procedures for field trips as described in OAR 414-300-0030(9)(e). The procedures shall include, but not be limited to, requirements regarding drivers and adult supervision.
- (7) When transporting children for any and all purposes:
- (a) Children shall be transported only in sections of vehicles designed for and equipped to carry passengers;
 - (b) A seat that fully supports the passenger shall be provided for each child;
 - (c) All children, shall be transported in accordance with ORS 811.210. The child safety system and safety belts shall comply with ORS 815.055 and the standards adopted by the Oregon Department of Transportation;
 - (d) Infants, toddlers, and preschool age children shall leave the vehicle on the same side of the street as the building they will enter;
 - (e) Drivers delivering children to their homes shall not depart until the child has been received by an authorized person; and
 - (f) No child shall be left unattended inside or outside a vehicle.
- (8) The center shall maintain a written plan for transportation.
- (9) The following vehicles may be used to transport child care children:
- (a) A vehicle manufactured to carry fewer than ten passengers;
 - (b) A school bus or a multi-function school activity bus;
 - (c) A vehicle manufactured to carry ten or more passengers that was manufactured in 2010 or after; or
 - (d) A vehicle manufactured to carry ten or more passengers that was manufactured before 2010, with the following conditions:
 - (A) Travel speed may not exceed 50 mph; and

- (B) The vehicle must have an annual safety inspection by a garage, dealership or auto repair shop. Proof of inspection must be on the form provided by the Early Learning Division or on a form provided by the inspector which contains the same information.

SPECIAL PROGRAMS

414-300-0360 Night Care

- (1) A center providing night care to children shall meet all the requirements for child care centers contained in OAR 414-300-0000 through 414-300-0415, except for 414-300-0150, 414-300-0290 through 414-300-0320, and 414-300-0340(2)(e). In addition, the center shall comply with the following requirements:
 - (a) Staffing:
 - (A) During the hours of night care, the required staff/child ratio shall be maintained in the center.
 - (B) There shall be at least two staff persons present and awake at all times.
 - (C) All sleeping and awake children shall be within sight and sound of staff at all times. Audio and/or video monitoring devices shall not substitute for sight and sound supervision.
 - (b) Safety:
 - (A) No one shall be allowed to enter except authorized persons including, but not limited to, the child's family, persons authorized by the parent(s), staff, OCC certification representatives, fire safety officials, and environmental health specialists.
 - (B) The center shall provide staff training for evacuating sleeping children in an emergency.
 - (C) There shall be emergency lighting in each room used by children.
 - (c) Activities:
 - (A) The center shall provide a program of activities for children according to their ages, interests, and abilities.
 - (B) There shall be quiet time activities, such as story-time, games, arts and crafts, and reading, for each child arriving before bedtime.

(C) There shall be toys and equipment available to meet the needs of children in night care.

(D) There shall be an activity area away from sleeping children where the awake children may engage in activities.

(d) Sleeping Arrangements:

(A) Space shall be arranged so that children may go to sleep at various times, based on their age and need for rest.

(B) All sleeping rooms used by children shall have two usable exits. A sliding door or window that can be used to evacuate children may be considered a usable exit.

(C) Each child who spends the majority of his/her sleeping hours per night in night care shall have a bed and mattress, or another sleeping arrangement that provides adequate support to a child's body with a waterproof cover and of a size appropriate to the age of the child.

(i) Cribs shall comply with OAR 414-300-0215(1).

(ii) The upper level of bunk beds shall not be used for children under 10 years of age

(iii) The upper level of bunk beds may be used for children 10 years or older if a bed rail and safety ladder are provided.

(D) Each child who does not spend the majority of his/her sleeping hours in night care shall have a crib, cot, or mat with bedding that complies with OAR 414-300-0210 and 414-300-0215.

(E) Children who attend the center for the evening hours, but do not spend the whole night, shall have an opportunity to sleep, if needed.

(F) No children shall share a bed.

(G) Each sleeping arrangement occupied by a child shall have sheets, pillows, pillowcases, and blankets.

(H) Bed linens shall be changed upon change of occupant and at least once a week.

(e) Personal Hygiene:

(A) Each child shall have an individual washcloth, towel, toothbrush, comb or brush, and sleepwear.

(B) Children staying the night shall have the opportunity to bathe and brush their teeth.

- (i) There shall be at least one bathtub or shower for each 15 children. Bathtubs and showers shall be equipped to prevent slipping.
 - (ii) When bathing, showering, or brushing teeth, children shall be supervised by staff.
 - (iii) Privacy between the sexes shall be maintained for school age children.
 - (iv) Tubs or showers shall be cleaned after each use. If visibly soiled, tubs and showers must be cleaned prior to sanitizing.
 - (v) Glass shower doors or glass tub enclosures shall be constructed of safety glass.
- (f) Meals and Snacks:
- (A) Each child present at the time the evening meal is scheduled shall be served a meal.
 - (B) A nutritious nighttime snack (OAR 414-300-0270(4)) shall be available to all children in care.
 - (C) Each child present at the time breakfast is scheduled shall be served breakfast, unless the parent(s) specifies otherwise.

414-300-0380 Swimming Activities

The following requirements apply to swimming/water activities provided on the premises of a child care center, or off premises by another organization, public or private, when part of the center's program.

(1) Definitions.

- (a) "Beginning swimmer" means a child who has mastered the skills required to:
 - (A) Hold his breath with his head submerged;
 - (B) Perform a front and back float;
 - (C) Perform the flutter kick on his front and back;
 - (D) Be able to level off from a vertical entry into a float position; and
 - (E) Do a combined stroke (front or back) for at least 20 feet without stopping.
- (b) "Non-swimmer" means a child who does not meet the definition of beginning swimmer.

- (c) "Lifeguard" means a person holding current certification and meeting the requirements of OAR 333-060-0015(13).
- (d) "Swimming pool" means a swimming or wading pool licensed by the Oregon Health Division or one of its delegated agents under the requirements of OAR 333-060-0005 through 333-060-0225.
- (e) "Wading" means water activities in which the water's depth is no higher than the child's knee.

(2) General Health and Safety:

- (a) Children with diarrhea or who have had diarrhea within the last two weeks shall not use the pool.
- (b) Children who are not toilet trained shall wear swim diapers.
- (c) Children shall use the toilet and shower before entering the pool.
- (d) Proper supervision shall be maintained, as specified in OAR 414-300-0380(3)(e), (f) and (g) and 414-300-0380(4)(d).
- (e) The pool operator shall maintain water quality as required in OAR 333-060-0200 or pool use shall cease until the water quality is restored.
- (f) Children using the pool shall participate in basic water safety instruction based on their ages and developmental levels.
- (g) Recreational swimming is not allowed for non-swimmers ages 6 weeks to 36 months in swimming pools with water depth 24 inches and over.
- (h) Portable-style wading pools are not permitted.

(3) On-Premises Pool Facilities:

- (a) On-premises pool facilities shall be licensed by the Oregon Health Division or its delegated agent and shall comply with the requirements in OAR 333-060-0005 through 333-060-0225.
- (b) On-premises pool facilities shall have toilets and showers for use by the swimmers.
- (c) All new pools or pools at centers certified after July 15, 2001, shall have dressing areas for each sex, with storage for the childrens' clothes.

- (d) All activities occurring in a pool shall be under the direction and direct supervision of lifeguards.
- (e) Center staff/child ratios shall be maintained at all times children are in the pool area, as specified in Table 4 of this rule.
 - (A) All adults counted in the staff/child ratios in Table 4 shall be able to swim if the water is more than 48 inches deep and, regardless of the water depth, shall be dressed for swimming.
 - (B) For children 6 weeks to 36 months, one of the required staff must be in the water. Other staff may be on deck.
- (f) Lifeguard/child ratios shall be maintained at all times children are in the pool area:
 - (A) For children not yet attending kindergarten, there shall be one lifeguard for every 20 children;
 - (B) For children attending kindergarten and older, there shall be one lifeguard for every 40 children; and
 - (C) For mixed age groups of children, the age of the youngest child shall determine the lifeguard/child ratio.
- (g) During all periods of pool operation, the appropriate number of life guards shall be on duty in the pool area. During periods of recreational swimming, at least one of the required number of life guards shall be stationed on the pool deck.
- (h) Water activities that involve a sprayer or spray feature using potable water that is not re-circulated or collected may be conducted by the center.

TABLE 4
Staffing Requirements for Swimming

Wading Pools- Water Depth under 24 Inches

Age of Child	Non-Swimmer		Beginning Swimmer	
	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio
	<u>Lessons</u>	<u>Recreation</u>	<u>Lessons</u>	<u>Recreation</u>
Six Wks – 36 Mo	1:1	1:1	1:4	1:1
36 Mo – Not Yet Attending Kindergarten	1:6	1:6	1:8	1:8
Attending Kindergarten +	1:10	1:10	1:10	1:15

Swimming Pools- Water Depth from 24 – 48 Inches

Age of Child	Non-Swimmer		Beginning Swimmer	
	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio
	<u>Lessons</u>	<u>Recreation</u>	<u>Lessons</u>	<u>Recreation</u>
Six Wks – 36 Mo	1:1	Not Allowed	1:4	1:1
36 Mo – Not Yet Attending Kindergarten	1:5	1:2	1:7	1:7
Attending Kindergarten +	1:10	1:10	1:10	1:15

Swimming Pools- Water Depth over 48 Inches

Age of Child	Non-Swimmer		Beginning Swimmer	
	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio	Staff/Child Ratio
	<u>Lessons</u>	<u>Recreation</u>	<u>Lessons</u>	<u>Recreation</u>
Six Wks – 36 Mo	1:1	Not Allowed	1:4	1:1
36 Mo – Not Yet Attending Kindergarten	1:4	Not Allowed	1:6	1:6
Attending Kindergarten +	1:5	1:5	1:10	1:15

- (i) A written plan for pool emergencies shall be available to all staff. The plan shall cover procedures for medical emergencies, chemical emergencies and severe weather.
 - (A) Staff shall be familiar with emergency procedures, the use of safety equipment and emergency contacts.
 - (B) The center shall provide in-service training and/or drills of the emergency procedures for the pool at least every six months. The director shall keep a written record of the type, date, time and duration of the training/drills.
 - (C) Emergency telephone numbers shall be posted near the telephone in the pool area and near a centrally-located and accessible telephone in the center.
 - (j) Safety equipment shall be provided and comply with OAR 333-060-0005 through 333-060-0225. In addition:
 - (A) All pools shall have an emergency telephone located in the pool area. The telephone shall be able to dial directly for emergency assistance, unless otherwise approved by the Oregon Health Division.
 - (B) A bodily-fluid spill clean-up kit shall be provided in the pool area. The kit shall consist, at a minimum, of protective gloves, disinfectant, clean-up materials (e.g., bucket, sponge, paper towels), and a biohazard waste bag, be stored in a complete condition, and be replaced or restocked immediately after use.
 - (C) A rescue tube, of the type required by the lifeguard certifying agency, shall be provided for each lifeguard on duty.
- (4) Off-Premises Pool Facilities:
- (a) Off-premises pool facilities used by the center shall be licensed by the Oregon Health Division as public swimming pools.
 - (b) The off-premises pool management shall be made aware of the child care center rules regarding swimming activities.
 - (c) Center staff and children shall comply with the rules and regulations of the public swimming pool.
 - (d) Center staff shall comply with the staff/child ratios in Table 4 of this rule. Lifeguard/child ratios shall be determined by the public swimming pool.
 - (e) Children shall be within sight and sound of center staff at all times.
 - (f) First aid supplies and a copy of each child's medical release form shall be taken to off-premises pool facilities.

(5) Natural Bathing Areas:

- (a) The center shall not conduct swimming activities in areas with flowing water.
- (b) Wading is the only water activity permitted in shallow surf, lakes, rivers and streams.

414-300-0390 Drop-in Care

- (1) A Drop-In Center shall meet all the requirements for child care centers contained in OAR 414-300-0000 through 414-300-0415, except for 414-300-0150.
- (2) The center shall comply with the following requirements which apply to Drop-In Care provided exclusively for drop-in children as a single primary service or as a separate component of a child care center.
 - (a) The child care area used for Drop-In Care shall not be used by the children from any other component of the center.
 - (b) Staff assigned to provide Drop-In Care shall not be responsible for children from any other component of the center at the same time.
 - (c) The planned attendance for a child in Drop-In Care shall not exceed two and one half full days per week, or twenty-five hours per week.

SANCTIONS

414-300-0400 Suspension, Denial and Revocation

- (1) The Office of Child Care may immediately, and without prior notice, suspend the child care certification when, in the opinion of OCC, such action is necessary to protect the children from physical or mental abuse or a substantial threat to health, safety or well-being. Such action may be taken before an investigation is completed.
- (2) A center whose certification has been suspended must immediately notify, verbally or in writing, all parents of the suspension.
- (3) A center whose certification has been suspended must immediately provide OCC with all names, work and home telephone numbers and addresses of the parent(s) or legal guardian(s) for each child.
- (4) A center whose certification has been suspended must post the suspension on the main entry door where it can be viewed by parents and others for the duration of the suspension.
- (5) If necessary to protect children, OCC may give public notice of denial, suspension or revocation action taken. The type of notice will depend on individual circumstances.

- (6) If the center does not request a hearing and the conditions which resulted in suspension have not been corrected, the certification shall be revoked.
- (7) Certification may be denied or revoked if the center fails to meet requirements, provide OCC with information requested, allow an inspection, correct deficiencies, or is operated or maintained in a manner which is harmful to the health, safety or wellbeing of children in care.
- (8) A center whose certification has been denied or revoked must immediately notify all parents of the closure and shall post a notice of the closure where it can be viewed by parents and others. The notice shall remain posted for a minimum of 2 weeks.
- (9) The center has the right to appeal any decision to suspend, deny or revoke the certification, subject to the provisions of chapter 183, Oregon Revised Statutes.
- (10) Any action taken by OCC to deny, suspend, or revoke certification may be reported to the Department of Human Services, USDA Child Care Food Programs, child care resource and referral system.
- (11) A center whose certification has been denied for cause (e.g. health and safety concerns, criminal activity or child protective services involvement) or revoked shall not be eligible to reapply for five years after the effective date of the closure.
- (12) If any person, who is enrolled in the CBR, has been charged with, arrested for, or a warrant is out for any of the crimes which OCC has determined indicate behavior which may have a detrimental effect on a child, with final disposition not yet reached, certification may be denied or suspended or revoked until the charge, arrest, or warrant has been resolved if the person continues to operate, be employed in or reside in the center, or have access to children in the center.
- (13) Certification may be denied, suspended or revoked if an individual listed in OAR 414-350-0080(5) has a child protective services history or an open child protective services or law enforcement case that would disqualify the individual from the CBR.

414-300-0415 Civil Penalty

- (1) Violations of these rules or terms and conditions of certification under these rules may be subject to a civil penalty up to \$2500 per violation.
- (2) Whenever the Office of Child Care (OCC) investigates an alleged complaint at a certified facility, or a facility that may be operating in violation of the requirements of ORS 329A.250 through 329A.450, OCC shall:
 - (a) Provide technical assistance as appropriate;

- (b) Send written notice of the complaint visit to the facility with a finding of valid, unable to substantiate, or invalid; and
- (c) OCC shall assess whether additional legal actions are appropriate, including but not limited to civil penalties, denials, revocations or suspensions, depending upon:
 - (A) Numbers of previous violations of the same rule; or
 - (B) Circumstances surrounding the rule violation.
- (3) For a serious violation, as defined in OAR 414-300-0005(44), a center may be subject to a civil penalty not to exceed \$2500 for each violation.
- (4) For a non-serious violation, a center may be subject to a civil penalty of \$800 for each violation.
- (5) Each day that a child care facility is operating in violation of any of the rules and conditions of certification is a separate violation of the rules.
- (6) An individual or entity that provides child care subject to licensing in a home or facility that is not certified with the Office of Child Care, may be subject to a civil penalty not to exceed \$1,500 per day of operation of the uncertified facility.
- (7) Notwithstanding the Office of Child Care's (OCC) decision to impose a civil penalty for one or more rule violations, OCC may also take action to deny, suspend or revoke a certification for the same rule violation or violations.
- (8) The facility has the right to appeal any decision to impose a civil penalty, subject to the provisions of chapter 183, Oregon Revised Statutes.
- (9) Failure to pay a civil penalty in which the Office of Child Care has issued a final order by default or a final order after a contested case hearing shall be grounds for denial or revocation of the facility's certification.