

CITY OF MCMINNVILLE

OR 99W

(Linfield to McDonald)

# ACTIVE TRANSPORTATION CONCEPT PLAN



APRIL 2021

# ACKNOWLEDGMENTS

## Project Management Team

Jenna Berman, ODOT Region 2, Active Transportation Liaison  
Daniel Fricke, ODOT Region 2, Senior Transportation Planner  
Larry Sherwood, The City of McMinnville, Engineering Services Manager  
Heather Richards, The City of McMinnville, Planning Director  
Mike Bisset, The City of McMinnville, Community Development Director

## ODOT Review Team

Dorothy Upton, ODOT Region 2, Region Traffic Operations Engineer  
Arielle Ferber, ODOT Region 2, Traffic Analysis Engineer  
Kristie Gladhill, ODOT Transportation Planning Analysis Unit, Senior Transportation Analyst

## Consultant Project Team

**KITTELSON & ASSOCIATES, INC.**  
Marc Butorac, PE, PTOE, PMP, Project Principal  
Nick Gross, Project Manager  
Amy Griffiths, EIT, Lead Analyst  
Eric Germundson, Lead Designer  
Steve Rhyne  
Jon Sommerville  
Katie Taylor

## Project Advisory Committee

Barb Jones, Accessibility Advocate  
Bahram Refaei, Linfield University  
Cyrus Scarboro-Ford, McMinnville High School Student  
Chuck Hillestad, Former Planning Commissioner, Board of Yamhill County Historic Society  
Dave Rucklos, Director of McMinnville Downtown Association  
Jack Crabtree, McMinnville School District  
Jamie Fleckenstein, McMinnville Planning Department and Avid Cyclist  
Cole Mullis, ODOT District Manager  
Peter Higbee, Bicyclist Community  
Steve Macartney, Public Safety  
Zack Geary, McMinnville City Council  
Lori Schanche, Planning Commission, Active Transportation Planner

# CONTENTS

Introduction.....5  
Keeping the End User in Mind .....7  
What Needs Improving .....11  
Who Participated in the Planning Process?.....15  
Proposed Solutions .....19  
Preferred Solution Concepts.....25  
Enhanced Pedestrian Crossings .....85  
Making the Preferred Concept a Reality .....87  
Supporting Documentation .....89



# 1 / Introduction



## active transportation

is a term that describes self-propelled, human-powered transportation modes, such as walking, biking, skateboarding, and using a wheelchair.



## An Active, Thriving Future for McMinnville

The primary purpose of the McMinnville OR 99W (Linfield to McDonald) Active Transportation Concept Plan is to identify improvements within the corridor that will result in a safer, more comfortable, more attractive place to walk, bike, roll, and facilitate transit use.

Today, the high speeds and traffic volumes on OR 99W make walking and biking uncomfortable for most people. The Adams Street-Baker Street segment of OR 99W (“the couplet”) does not have bike lanes. Portions of these roads were identified in the Oregon Department of Transportation (ODOT) statewide systemic safety analysis as a high-risk corridor for people walking and biking. New walking and biking infrastructure are needed to support low-stress, safe connections for people walking and biking on and around OR 99W.

The project study area is the segment of OR 99W between NE McDonald Lane (north) to Linfield Avenue (south). Parallel neighborhood streets (under the jurisdiction of the City of McMinnville) were also considered for potential alternative bicycle routes.

This Concept Plan identifies the vision and presents a solution to address the needs of people walking, biking, and rolling along the OR 99W corridor.

Adoption of this Concept Plan into the McMinnville Transportation System Plan allows both the City and ODOT to pursue funding for the various concepts presented here. Once funding is received for implementation, the concepts will be further refined through a detailed design process before being constructed.



The Study Area



# 2 / Keeping the End User in Mind

## Who is McMinnville?

With over 34,000 people, McMinnville is Yamhill County's largest city, and the gateway to wine country.

Downtown McMinnville's historic character, antique stores, breweries, restaurants, and galleries make it attractive to both visitors and locals traveling on foot or by bike. McMinnville High School at the north and Linfield University at the south end of the corridor generate a substantial number of walking and biking trips, particularly for student populations.

Other walking and biking activity in the area is driven by transit stops, schools, libraries, gyms, grocery stores, health clinics, municipal buildings, community centers, places of worship, bike shops, and parks.

The area surrounding the OR 99W corridor is home to many people from transportation-disadvantaged groups: people 65 and older, 17 and younger, non-white or Hispanic (who speak little or no English), low-income, with a disability, living in crowded households, or living in households without vehicle access. On average, the people living around OR 99W at the northern end of the corridor fit into slightly more transportation disadvantaged categories and the people living near Linfield University fit into slightly fewer.

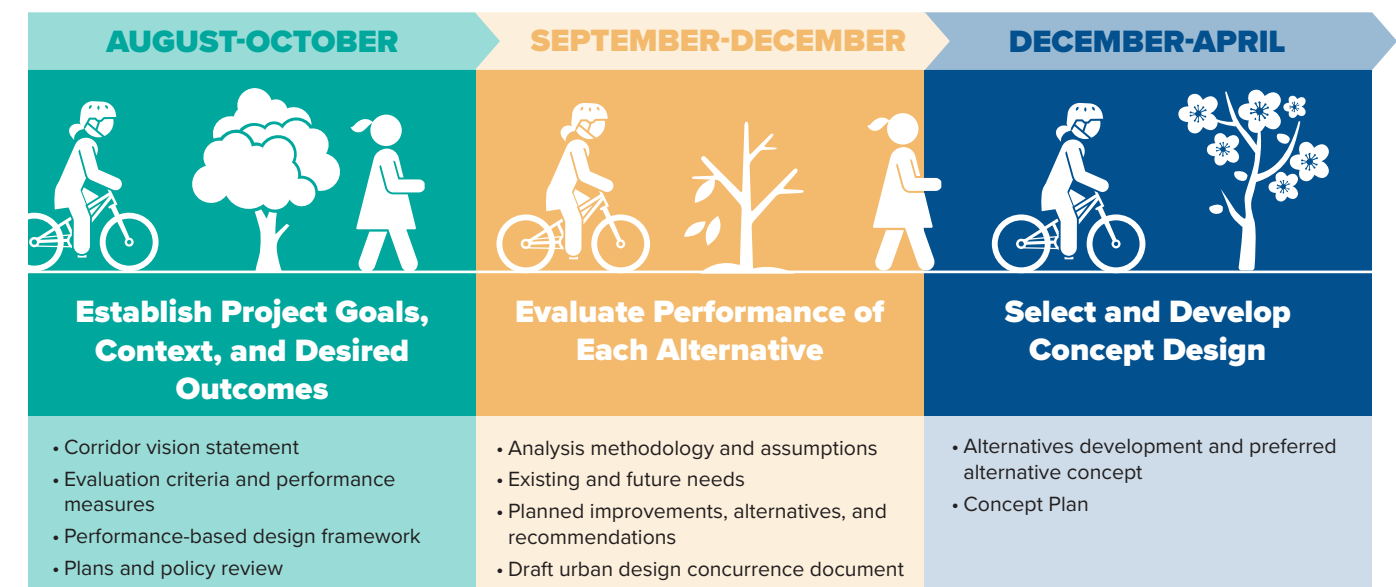
## Designing to Meet Community Needs

Traditionally, transportation planners and engineers applied a set of one-size-fits-all design standards to roadway projects. These standards did not necessarily fit the unique circumstances of every community or project. The result could be undesirable, sometimes uncomfortable conditions for people using the transportation system.

Performance-based or context-sensitive design is a shift away from applying strict design standards toward designing based on a community's specific setting and circumstances. Performance-based design supports planning efforts to create projects that are context-sensitive and reflect the original intended outcomes where people want to live, work, and play.

The ODOT Blueprint for Urban Design establishes a framework for determining the urban context along state roadways. Identifying desired project outcomes and understanding the urban context, and who will be using the roadway, helps decision-makers determine appropriate performance measures to evaluate the trade-offs of various design decisions.

## Project Schedule & Performance-Based Approach





The Blueprint for Urban Design provides facility recommendations and modal priorities based on the urban context of the roadway. These recommendations are shown in the table below.

### Existing Conditions & Recommendations by Mode

OR 99W Segment	Recommended Context	High Priority Modes	Vehicular Speed Comparison	Bicyclist Facility Comparison	Pedestrian Facility Comparison
NE McDonald Lane to NW 15th Street	Urban Mix	Pedestrian, Bicyclist, and Transit	<b>Existing:</b> 30-35 mph <b>Recommended:</b> 25-30 mph	<b>Existing:</b> standard on-street bike lanes/none <b>Recommended:</b> wide, comfortable, buffered facilities	<b>Existing:</b> standard sidewalks, no buffer <b>Recommended:</b> wide, comfortable, buffered facilities
NW 15th Street to SE 1st Street	Traditional Downtown/Central Business District	Pedestrian, Bicyclist, and Transit	<b>Existing:</b> 30 mph <b>Recommended:</b> 25 mph	<b>Existing:</b> none <b>Recommended:</b> wide, comfortable facilities	<b>Existing:</b> standard sidewalks, no buffer <b>Recommended:</b> wide, comfortable, buffered facilities
SE 1st Street to SW Linfield Avenue	Urban Mix	Pedestrian, Bicyclist, and Transit	<b>Existing:</b> 35 mph <b>Recommended:</b> 25-30 mph	<b>Existing:</b> standard, on-street bike lanes/none <b>Recommended:</b> wide, comfortable, buffered facilities	<b>Existing:</b> standard sidewalks, no buffer <b>Recommended:</b> wide, comfortable, buffered facilities

“  
a transportation mode is a way of transporting people or goods. ODOT’s Blueprint for Urban Design recognizes five modes: Motorist, Freight, Transit, Bicyclist, and Pedestrian.



Source: Wikimedia Commons, by Visitor7 - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=27376911>

### WHAT ABOUT PARKING?

#### Analysis Shows Minimal Impacts

By removing parking from the west side of Adams Street, this project can affordably provide walking, biking, and rolling facilities while maintaining space needed for motor vehicle and freight through movements.

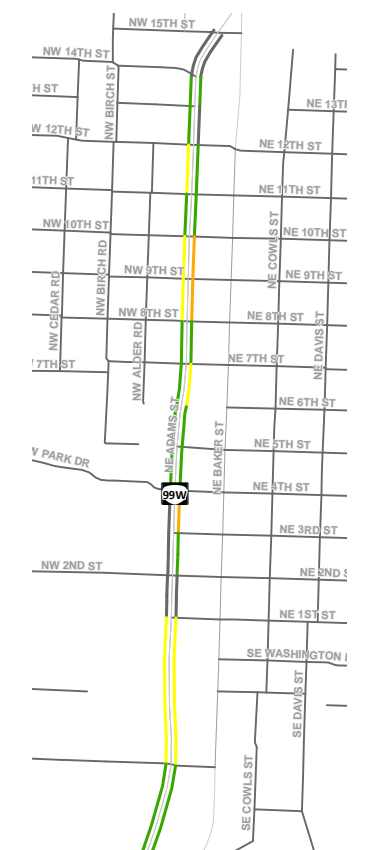
**Current and historic analysis shows that street parking along Adams Street is underused.** Peak parking utilization for the total 208 spaces along Adams Street was 10%. The highest parking demand was observed along Adams Street south of 2nd Avenue and is likely generated by residences. Parking along the corridor could be accommodated below 85% occupancy—the nationally accepted target for parking utilization—during peak hours along one side of the roadway.

The study evaluated solutions that stay within the roadway’s existing curb-to-curb width to reduce costs and minimize impacts to private rights of way.

Thursday Peak Hour



Friday Peak Hour



Parking Utilization: ● 0% ● 1-35% ● 36-85% ● 86-100% ● No parking



## How Did We Choose the Best Concept?

The City's Transportation System Plan (TSP) established goals and policies that were used to evaluate the suitability of each alternative concept for active transportation facilities along the OR 99W corridor through McMinnville. These criteria align with the Corridor Vision for OR 99W.

The table below lists the evaluation criteria and how each was used to evaluate the alternative concepts for the corridor. Public opinion was an important factor in arriving at the preferred concept.

### Evaluation Criteria & Performance Measures

Evaluation Criterion	Description
<b>Complete Streets</b>	The preferred concept provides comfortable facilities for people walking and biking, regardless of age and ability. The "complete streets" criterion addresses the "Complete Streets" goal and supplemental policy identified in the TSP.
<b>Multimodal Transportation System</b>	The preferred concept provides an integrated network of facilities and services for a variety of motorized and non-motorized travel modes based on the appropriate relative priority given the corridor context. The "multimodal transportation system" criterion addresses the "Multimodal Transportation System" goal and supplemental policy identified in the TSP.
<b>Connectivity</b>	The preferred concept provides comprehensive connectivity and circulation to existing active transportation facilities in McMinnville. The preferred concept encourages walking and biking to essential destinations within the city. The "connectivity" criterion addresses the "Connectivity and Circulation," "Transportation System and Energy Efficiency," and "Transportation Sustainability" goals and supplemental policies identified in the TSP.
<b>Safety</b>	The preferred concept establishes safety countermeasures to reduce the number of fatal and severe injury crashes. The "safety" criterion addresses the "Transportation Safety" and "Transportation Sustainability" goals and supplemental policies identified in the TSP.
<b>Equity</b>	The preferred concept meets the requirements set forth in the Americans with Disabilities Act (ADA) and provides transportation options to transportation disadvantaged populations. The "equity" criterion addresses the "Accessibility for Persons with Disabilities" and "Health and Welfare" goals and supplemental policies identified in the TSP.
<b>Livability</b>	The preferred concept minimizes impacts to adjacent property owners and encourages the use of public transit, bikeways, sidewalks, and walkways. The preferred concept provides equity and receives public support. The "livability" criterion addresses the "Livability" and "Aesthetics and Streetscaping" goals and supplemental policies identified in the TSP.
<b>Design Feasibility</b>	The preferred concept has no major design feasibility concerns. The "design feasibility" criterion does not directly address any goals or supplemental policies identified in the TSP.



# 3 / What Needs Improving



## What Stands in the Way of Walking, Biking, and Rolling in McMinnville Today?

The project team reviewed the project study area's characteristics, safety conditions, and existing walking and biking facilities to identify gaps and deficiencies.

A gap is a missing link in the network—for example, a missing sidewalk, crosswalk, pedestrian ramp, or bicycle facility.

A deficiency is a pedestrian or bicycle facility—a sidewalk or bike lane, for example—that is insufficient to meet the needs of its users. An example of a deficient facility is a roadway near a school that is stressful for the students who travel on foot or by bike.



"If there were ways to **slow down vehicle traffic** and to provide clean bike lanes (often there is a lot of debris on the road), I would consider using OR 99W as my main route. However, I don't think Oregon drivers will gladly share such a main road with non-vehicular traffic based on my dealings as a cyclist with drivers."

—Public comment









# 4 / Who Participated in the Planning Process?

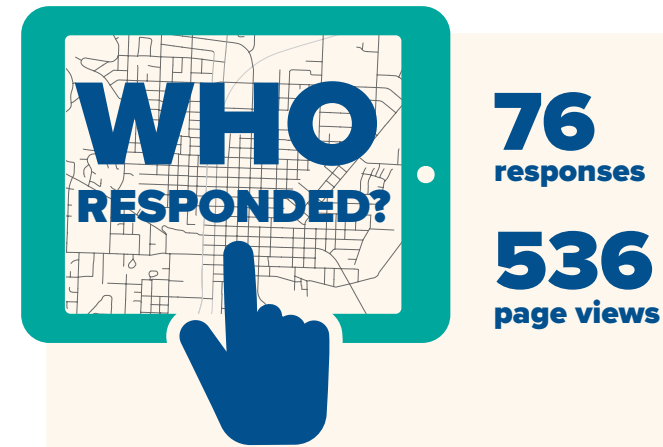
## Community Leadership

A diverse group of 12 community members and stakeholders—all interested in improving walking, biking, and rolling facilities along OR 99W—served on the Project Advisory Committee (PAC). Their responsibilities included attending committee meetings, reviewing and commenting on draft technical memoranda prepared by the project team, providing information about existing and future needs for active transportation facilities in the study area, attending and advertising the public virtual meeting, and providing input on the concepts described in this plan.

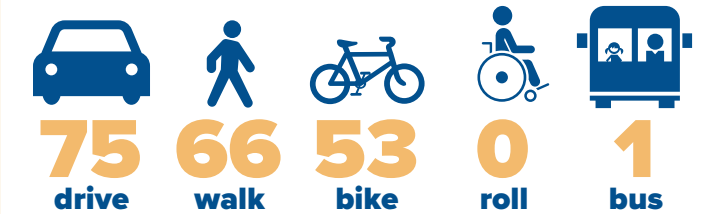
## Virtual Open House

The project team, ODOT, and the City of McMinnville hosted a virtual open house for the project in early 2021. The goal of the virtual open house was to educate the public on the project and solicit feedback on the selection of a preferred concept for advancement into the draft Concept Plan.

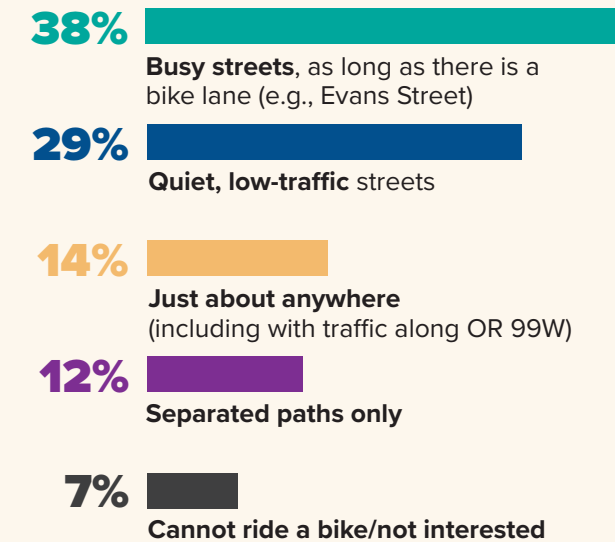
The virtual open house included a survey, which was open from February 25 through March 11, 2021. A livestreamed virtual meeting was held on Thursday, March 4 and a recording of this meeting was posted to the virtual open house website.



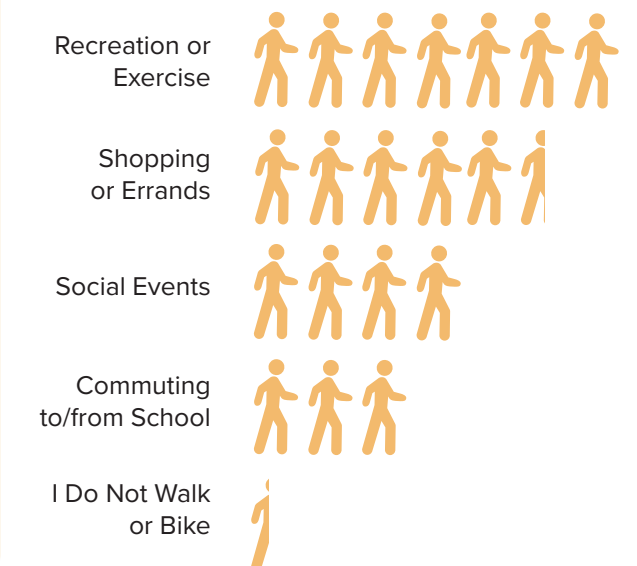
## How do they get around?



## Comfortable biking on...



## Why do they walk or bike in McMinnville? = 10 responses





# We heard you!

We received **76 comments** from community members through interactive maps, emailed comments, a community survey and virtual open house. Here's what people had to say:



THE ROAD HERE IS FAST AND GETS NARROW, WOULD THERE BE A BIKE LANE?

intersection is **not pedestrian friendly!** Cars are looking out for themselves only. I actively avoid crossing Evans or 99 at this corner.

PLEASE!! ADD A DEDICATED LEFT HAND TURN LANE GOING EAST ONTO HWY 99 AT THIS INTERSECTION!!! **IT IS SO DANGEROUS FOR KIDS/PEDESTRIANS TRYING TO CROSS THAT HIGHWAY THERE! WITH SCHOOLS RESUMING, IT'S INCREASINGLY IMPORTANT. THANK YOU!!**

**Davis is fairly narrow along this strip with road parking and faster speeds, perhaps Ford Street can be a less trafficked option.**

**THE LIGHTS ALONG 99W AND ON EVANS AND 5TH NEED TO BE BICYCLE-SENSITIVE! I HAVE WASTED SOME OF MY YOUNG YEARS AWAITING A LIGHT CHANGE IN MAC ON MY BIKE.**

**My concern is that most of the bike traffic will end up on the street sidewalks. I have biked on these streets and they are less stressful, but still not a street biking area for young children, youth or families.**

I will be surprised if residents on Davis and Evans want what is proposed in their neighborhood. **Does the solution have to be one concept or another?** Can we have bike lanes on OR 99W and a neighborhood greenway?

Traffic gets pretty backed up on the 99 during rush hours now. **I think we need a stop light on 8th street.** Additionally, either a bidirectional protected bike lane, or a greenway would be ideal.

**Booth Bend would be great for a bike path** (add wide safe shoulder).

I AM A PEDESTRIAN. I AVOID ADAMS/BAKER UNLESS MY DESTINATION IS ON THEM.

**No stop signs creates huge hazards!**

My basic route through McMinnville runs along Davis. Having an option parallel to Evans offers a **less trafficked route** with fewer stop signs, too. It makes traveling along on a bike much easier, which is my preferred and regular mode of transportation.

**Linfield trail improvement** to keep folks off the narrow section of Baker?

...I SUPPORT [A SIGNAL ICON] AT 8TH AND ADAMS AND BAKER. **TRAFFIC GETS BACKED UP TO THAT POINT ALREADY,** SO IT WOULD BE NICE TO HAVE BOTH CARS AND PEDESTRIANS AWARE OF WHOSE TURN IT IS.

**Evans Street is a high traffic area and primary route to the high school (with particularly young drivers) and I think this street should be avoided entirely.**

**LIGHTS NEED TO HAVE THE ABILITY TO CHANGE WHEN A CYCLIST IS IN THE BIKE LANE AWAITING A GREEN LIGHT.**







# 5 / Proposed Solutions

Today, around 20,000 to 30,000 vehicles pass through McMinnville on Adams and Baker Streets every day. There are no dedicated bicycle lanes and no enhanced pedestrian crossings within the couplet segment of OR 99W. As a consequence, ODOT identified the couplet as high risk for pedestrians and bicyclists in its statewide systemic safety analysis.

The OR 99W corridor needs context-sensitive solutions to support a lower-stress, safer connection within McMinnville's multimodal transportation system.

## Potential Design Options

The project team developed three concepts for the McMinnville OR 99W Active Transportation Concept Plan based on an analysis of existing conditions and input from the Project Management Team (PMT), Project Advisory Committee (PAC), and public.

These concepts included:

- **Concept 1:** Two-Way Separated Bike Lane on Adams Street
- **Concept 2:** Buffered Bike Lanes on Adams Street and Baker Street
- **Concept 3:** Neighborhood Greenway on Davis Street or Evans Street

Concept layouts for these options are provided in the Appendix in TM #5: Alternatives Development and Preferred Alternative Concept.

### BICYCLE DESIGN OPTIONS:

#### 1 / Two-Way Separated Bike Lane

A two-way separated bike lane, also known as a two-way cycle track or protected bike lane, is located within the street right-of-way. It is separated from motor vehicle traffic by vertical features such as curbs, landscape planters, flexible post delineators (shown in the image on the right), or parked cars. Two-way separated bike lanes serve bicycle travel in two directions on one side of the street.



#### 2 / Buffered Bike Lane

Buffered bicycle lanes are on-street lanes that include an additional striped buffer of typically 2-3 feet between the bicycle lane and the vehicle travel lane and/or between the bicycle lane and the vehicle parking lane.



#### 3 / Neighborhood Greenway

Neighborhood greenways are low traffic volume, low-speed streets where people biking and people driving share road space, but where people biking are prioritized and people driving are not encouraged to use the road as a through street.





## OR 99W PRELIMINARY CONCEPTS

This section presents the preliminary concepts to address the active transportation needs within the study area.

### Concept 1: Two-Way Separated Bike Lane on Adams Street

Concept 1 proposes a two-way separated bike lane along the west side of Adams Street between 2nd and 15th Streets, transitioning to buffered bike lanes to the north and south and tying into existing bike lanes on OR 99W. The separated bike lanes are proposed to be at street level, separated from vehicular traffic with flexible post delineators. This concept requires removing the parking lane on the west side of Adams Street and narrowing vehicle lane widths. It creates the need to transition bicycles from one-way buffered lanes to the two-way portion. Physical buffers may make it difficult for street sweepers to maintain and could impact freight travel through the corridor. The order of magnitude, preliminary cost estimate for this concept is \$857,000.

Concept 1



### Concept 2: Buffered Bike Lanes on Adams Street and Baker Street

Concept 2 proposes buffered bike lanes along Adams and Baker Street. The concept requires removing parking on the west side of Adams Street and narrowing vehicle lane widths on Baker Street. Parking will be maintained on Baker Street. This concept provides vertical separation from vehicular traffic along some segments and intersections, but not throughout the whole corridor, which makes it easier for street sweepers to maintain. It would also have less impact to freight movements than the two-way separated bike lane. The order of magnitude, preliminary cost estimate for this concept is \$418,000.

Concept 2



### Concept 3: Neighborhood Greenway on Davis Street or Evans Street

Concept 3 proposes a neighborhood greenway parallel to OR 99W using signage and pavement markings to direct people through the neighborhood. These routes have lower traffic volumes and speeds compared to OR 99W, offering a more comfortable alternative to biking or walking along the highway. Additional infrastructure improvements can be used to reduce vehicle speeds and bring more attention to people walking and biking along the neighborhood greenway route, like the traffic diverters shown in the image at right. Traffic diverters prevent cut-through traffic for people driving, making the route more comfortable for people walking and biking. The neighborhood greenway concept considered two routes:

- **Concept 3A:** Davis Street Neighborhood Greenway
- **Concept 3B:** Evans Street Neighborhood Greenway.

The order of magnitude, preliminary cost estimate for these concepts is about \$141,000.

Concept 3



## Evaluation Criteria

The evaluation criteria listed on page 10 were used to assess the trade-offs of each concept and determine which concept best aligns with the corridor context and community needs. These criteria were developed based on McMinnville's TSP's Guiding Goals and Policies.

The scoring scale for each criterion ranges from -1 to +2. An evaluation of the concept designs according to this scale is provided below. Using this method, the project team was able to create a data-driven approach to evaluating which concept(s) best align with McMinnville's goals for the transportation system.

Evaluation Criteria	Concept 1: Two-Way Separated Bike Lane	Concept 2: Buffered Bike Lanes	Concept 3A: Davis Street Greenway	Concept 3B: Evans Street Greenway
Complete Streets	+1.5	+1	+2	+2
Multimodal Transportation System	+1	+1	+1	+1
Connectivity	+2	+2	+1.7	+2
Safety	+1.8	+1.8	+2	+1.9
Equity	+1	+ 0.8	+1	+1
Livability	+1.5	+1.5	+1.5	+1.5
Design Feasibility	-1	0	+1	0
<b>TOTAL SCORE</b>	<b>7.8</b>	<b>8.1</b>	<b>10.2</b>	<b>9.4</b>





## Pros and Cons of Each Concept

### CONCEPT 1: TWO-WAY SEPARATED BIKE LANE ON ADAMS STREET

The two-way separated bike lane would create a physically-separated facility for people biking by installing raised curbs and flex posts. The proposed two-way separated bike lane alignment also provides direct access to businesses along the couplet. A physically-separated facility, however, could impact freight maneuvers within the corridor and be challenging for maintenance crews to clean and maintain.

The facility would be bidirectional, requiring some bicycles to travel adjacent to and facing oncoming traffic. Transitioning people biking from the two-way separated bike lane to the proposed buffered bike lanes to the north and south is a significant challenge. Additional challenges include dealing with access management due to the many driveways along the corridor and designing for contra-flow bicycle traffic entering and exiting the separated bike lane safely and efficiently.

### CONCEPT 2: BUFFERED BIKE LANES ON ADAMS STREET AND BAKER STREET

This relatively inexpensive option provides an intuitive, directional, and continuous route along OR 99W. Buffered bike lanes do not require vertical separation from traffic. Adding vertical separation, where feasible based on driveways, parking, and curb-to-curb widths, increases comfort and utility of the facility. This concept does not provide vertical separation throughout the couplet in the near term, which makes it easier to maintain but less comfortable for people biking.

The buffered bike lane concept does not require bicyclists to transition across the couplet at the northerly (15th Street) and southerly (2nd Street) terminus points compared to the two-way separated bike lane concept. This makes the option more attractive for people biking through the corridor and reduces challenges and costs associated with transitioning people biking across the couplet.

### CONCEPT 3A: NEIGHBORHOOD GREENWAY ON DAVIS STREET

Another inexpensive option, this parallel route offers a low-stress experience for people walking and biking due to lower traffic volumes and speeds. It is comfortable for users of all ages and abilities, provides wayfinding signage and traffic calming features, and uses a signalized crossing of 3rd Street.

This option offers less-direct access to businesses along OR 99W and may not be as attractive for confident people biking who prioritize speed over comfort.

### CONCEPT 3B: NEIGHBORHOOD GREENWAY ON EVANS STREET

Another inexpensive and comfortable option for users of all ages and abilities, this parallel route is similar to Concept 3A but presents some challenges based on the higher volumes and speeds along the northern segment of Evans Street and the lack of a signalized crossing at 3rd Street. Traffic calming efforts would need to be more substantial to create a lower-stress environment for people walking and biking.

## Costs

Planning-level cost estimates for each concept are provided in Table 2. The estimates include costs for mobilization, signage, striping, and a 30% contingency to cover costs for administrative or engineering services related to the potential projects. The cost of the enhanced crossing concepts is provided separately. The concepts maintain existing curb-to-curb cross sections; therefore, no right-of-way costs are anticipated.

### Planning-level Cost Estimates

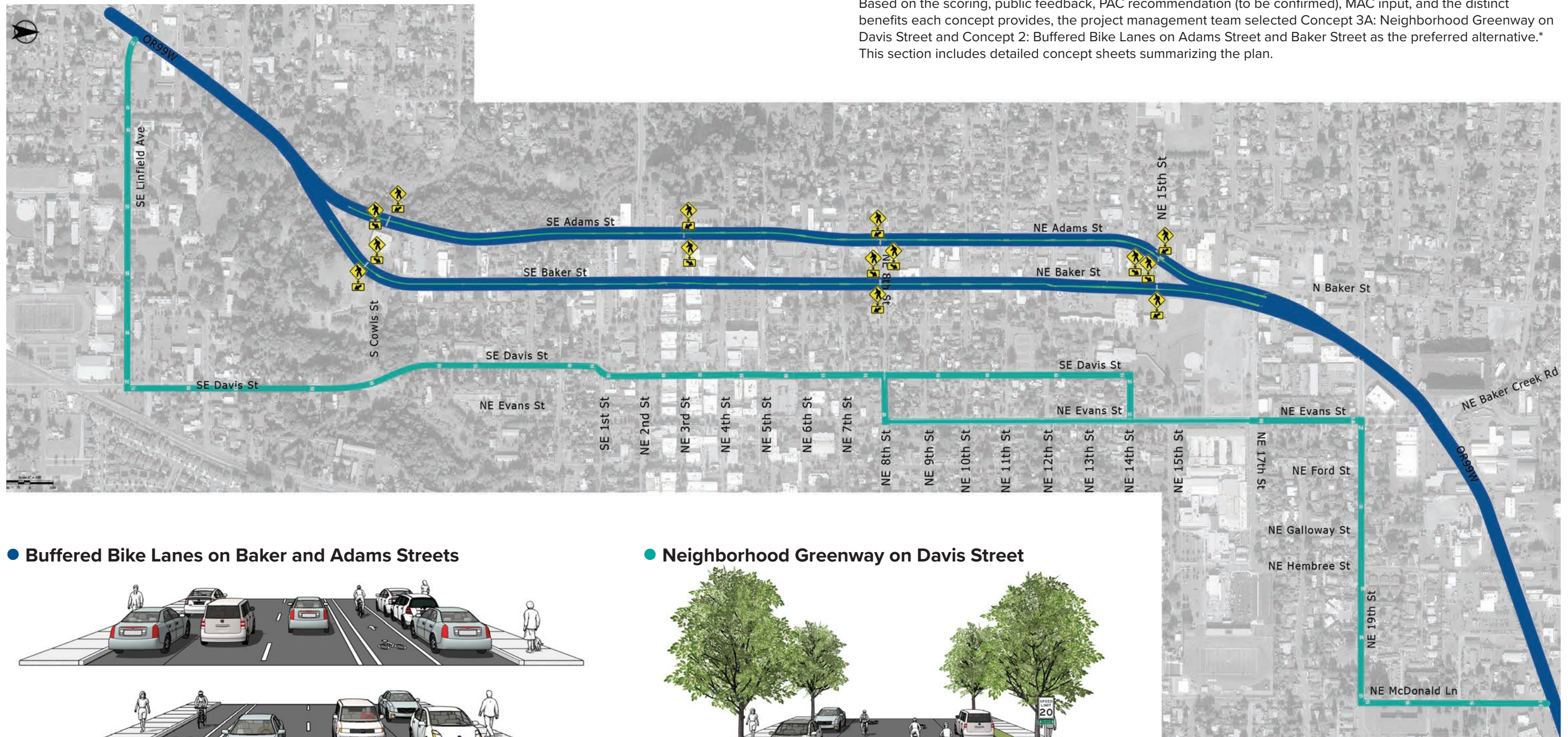
Concept	Planning-Level Cost Estimate	Notes
Concept 1: Two-Way Separated Bike Lane on Adams Street	\$857,000	<ul style="list-style-type: none"> <li>Assumes project is completed with a paving project and estimate excludes costs associated with said paving project.</li> <li>Includes potential signal modifications to transition from the buffered bike lanes to the two-way separated bike lane at 2nd Street.</li> </ul>
Concept 2: Buffered Bike Lanes on Adams Street and Baker Street	\$418,000	<ul style="list-style-type: none"> <li>Assumes project is completed with a paving project; estimate excludes costs associated with said paving project.</li> <li>Includes flex post delineators along Adams Street between OR 99W and 1st Street and at intersections with high turning volumes.</li> </ul>
Concept 3A: Neighborhood Greenway on Davis Street	\$141,000	<ul style="list-style-type: none"> <li>Includes the cost of the following traffic calming elements: traffic diverters at the intersection of Davis Street/8th Street, one speed hump, and two speed tables.</li> <li>Includes the cost of wayfinding signage.</li> </ul>
Concept 3B: Neighborhood Greenway on Evans Street	\$141,000	<ul style="list-style-type: none"> <li>Includes the cost of the following traffic calming elements: traffic diverters at one intersection, one speed hump, and two speed tables.</li> <li>Includes the cost of wayfinding signage.</li> <li>Estimate based on those used for the neighborhood greenway on Davis Street. Due to the higher speeds and volumes present along Evans Street, it is likely that the cost of Concept 3B is underestimated.</li> </ul>

As summarized in the table above, the two-way separated bike lane is the most expensive concept, followed by the buffered bike lanes and the neighborhood greenway concepts. Maintenance costs are anticipated to be substantially higher for Concept 1 than for the other concepts because of the flex-post delineators and special maintenance equipment needed to sweep the two-way separated bike lane.



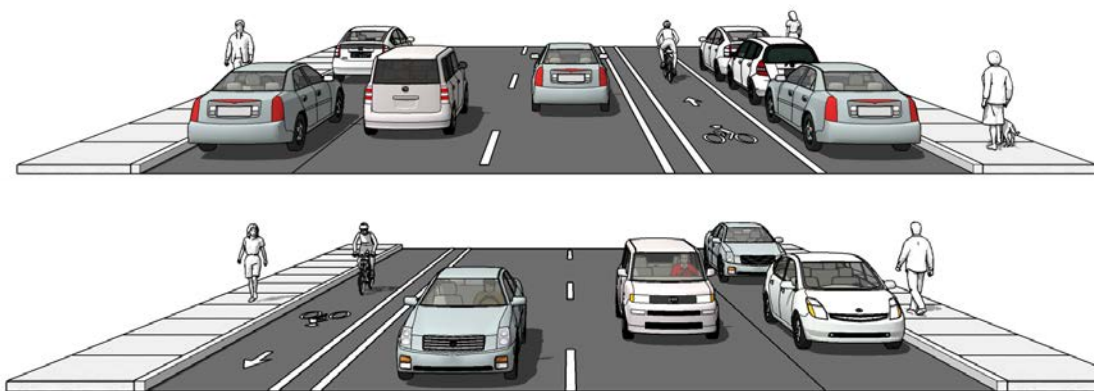
# 6 / Preferred Solution Concepts

Based on the scoring, public feedback, PAC recommendation (to be confirmed), MAC input, and the distinct benefits each concept provides, the project management team selected Concept 3A: Neighborhood Greenway on Davis Street and Concept 2: Buffered Bike Lanes on Adams Street and Baker Street as the preferred alternative.\* This section includes detailed concept sheets summarizing the plan.



## ● Buffered Bike Lanes on Baker and Adams Streets

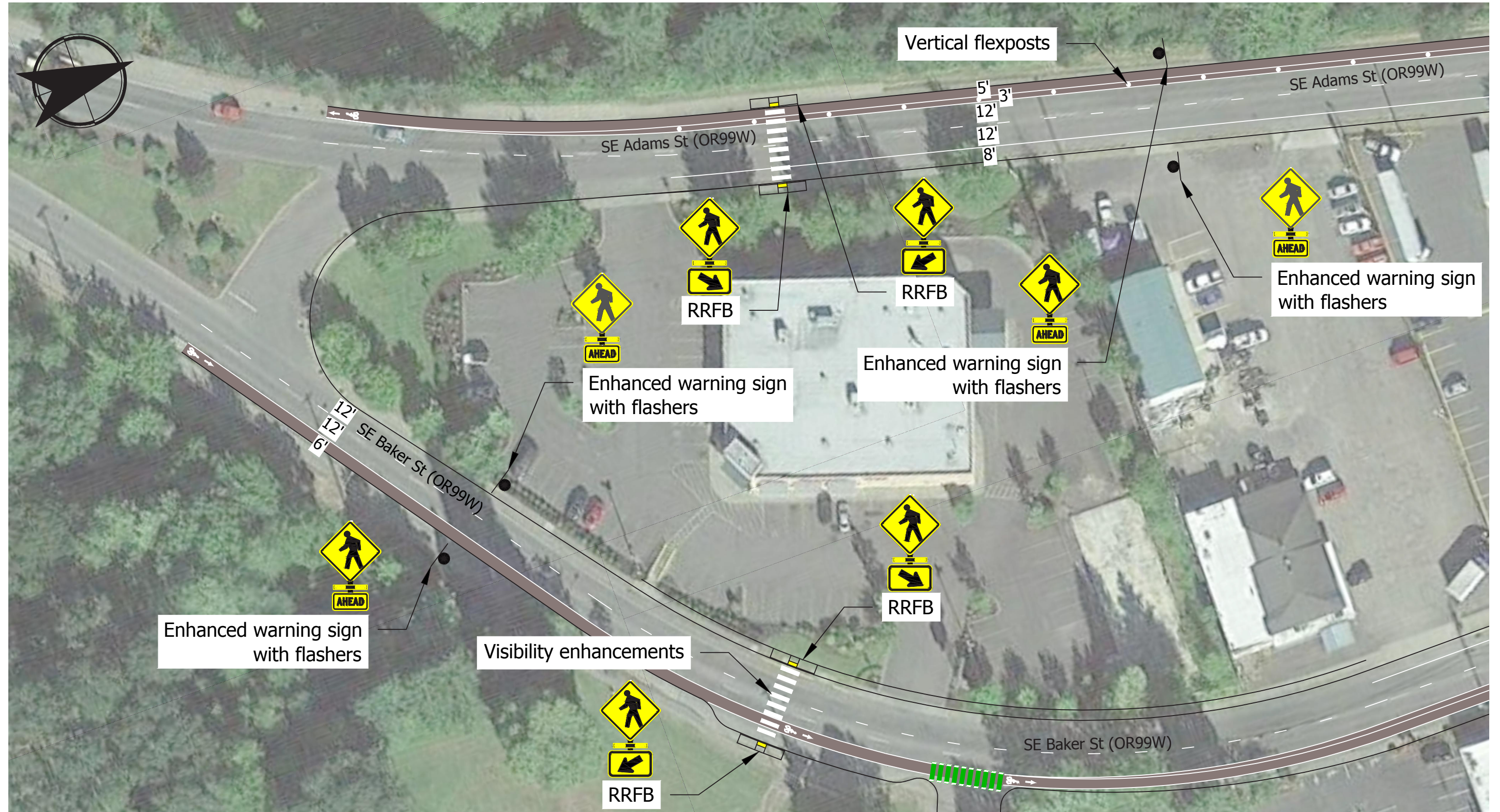
## ● Neighborhood Greenway on Davis Street



\*Planning concept potentially reduces vehicle-carrying capacity of the highway; further evaluation of the project design will be required at the time of implementation to ensure compliance with ORS 366.215.

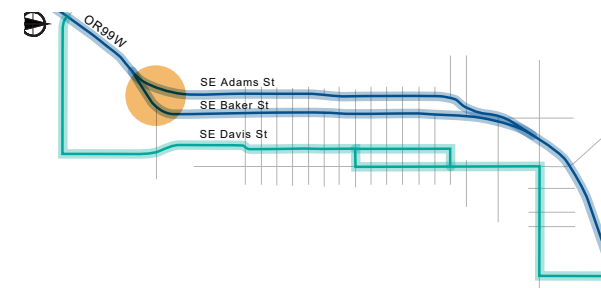


Buffered Bike Lanes on Baker and Adams Streets



**Rectangular Rapid-Flashing Beacon (RRFB) crossings** are recommended to provide people walking and biking protected crossing opportunities.

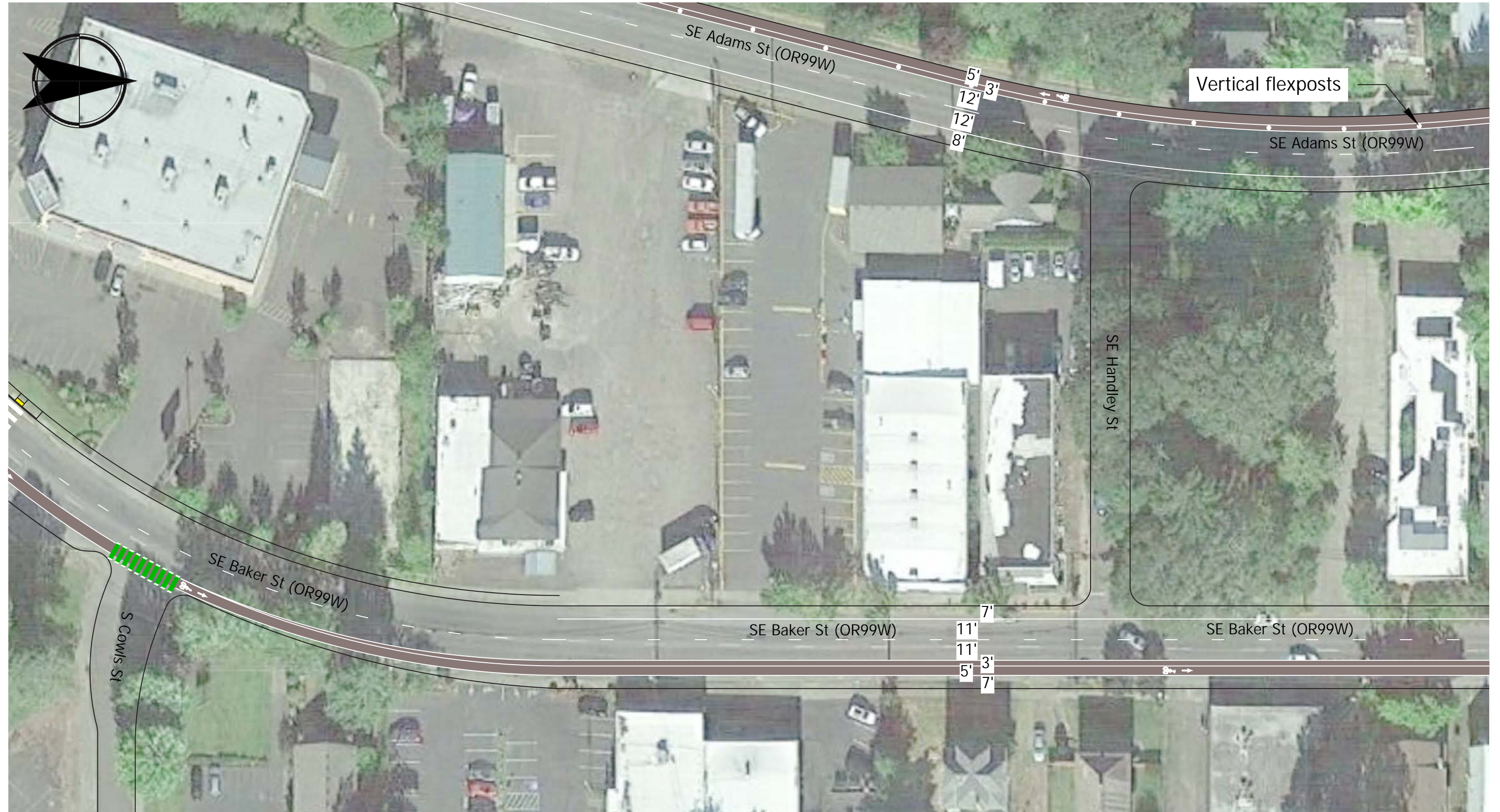
Vertical flexposts provide people biking with vertical separation from traffic. They are recommended in the near term along Adams Street between OR 99W and 1st Street because there are fewer driveway challenges along this segment. The type and extents of vertical separation may be updated in the future.



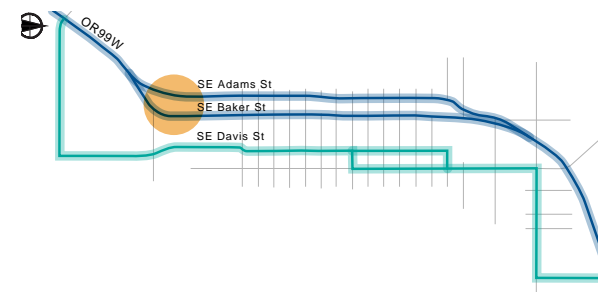
**FIGURE 1**



**Buffered Bike Lanes on Baker and Adams Streets**



Parking will be removed along the west side of Adams Street and maintained along the east side. No parking changes are recommended along Baker Street.



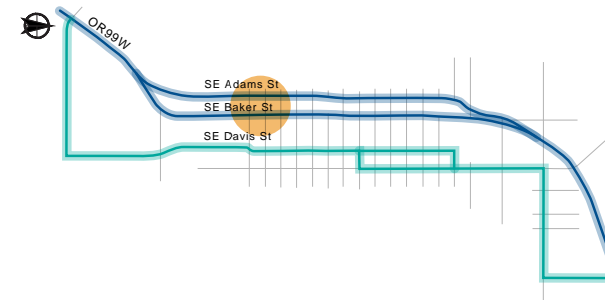
**FIGURE 2**



**Buffered Bike Lanes on Baker and Adams Streets**



**Green paint at intersections** increases awareness of the presence of people biking in conflict areas, improving safety where bike lanes cross intersections.



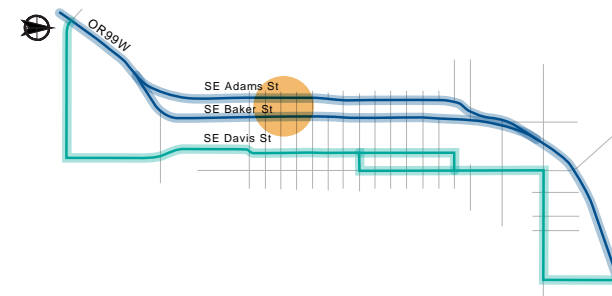
**FIGURE 3**



**Buffered Bike Lanes on Baker and Adams Streets**



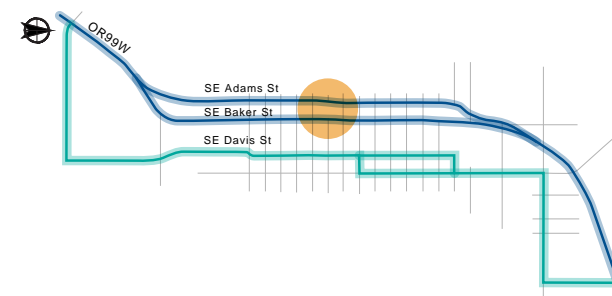
**Vertical flexposts** are recommended approaching signalized intersections to reduce the potential for right-turn “hooks” between people biking and driving.



**FIGURE 4**



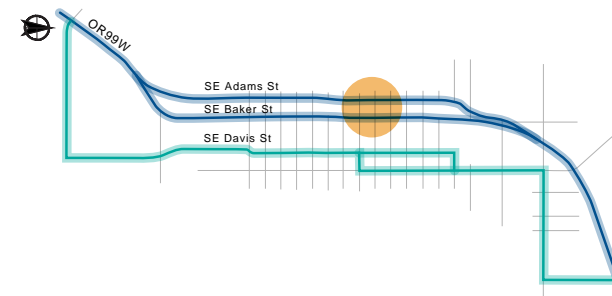
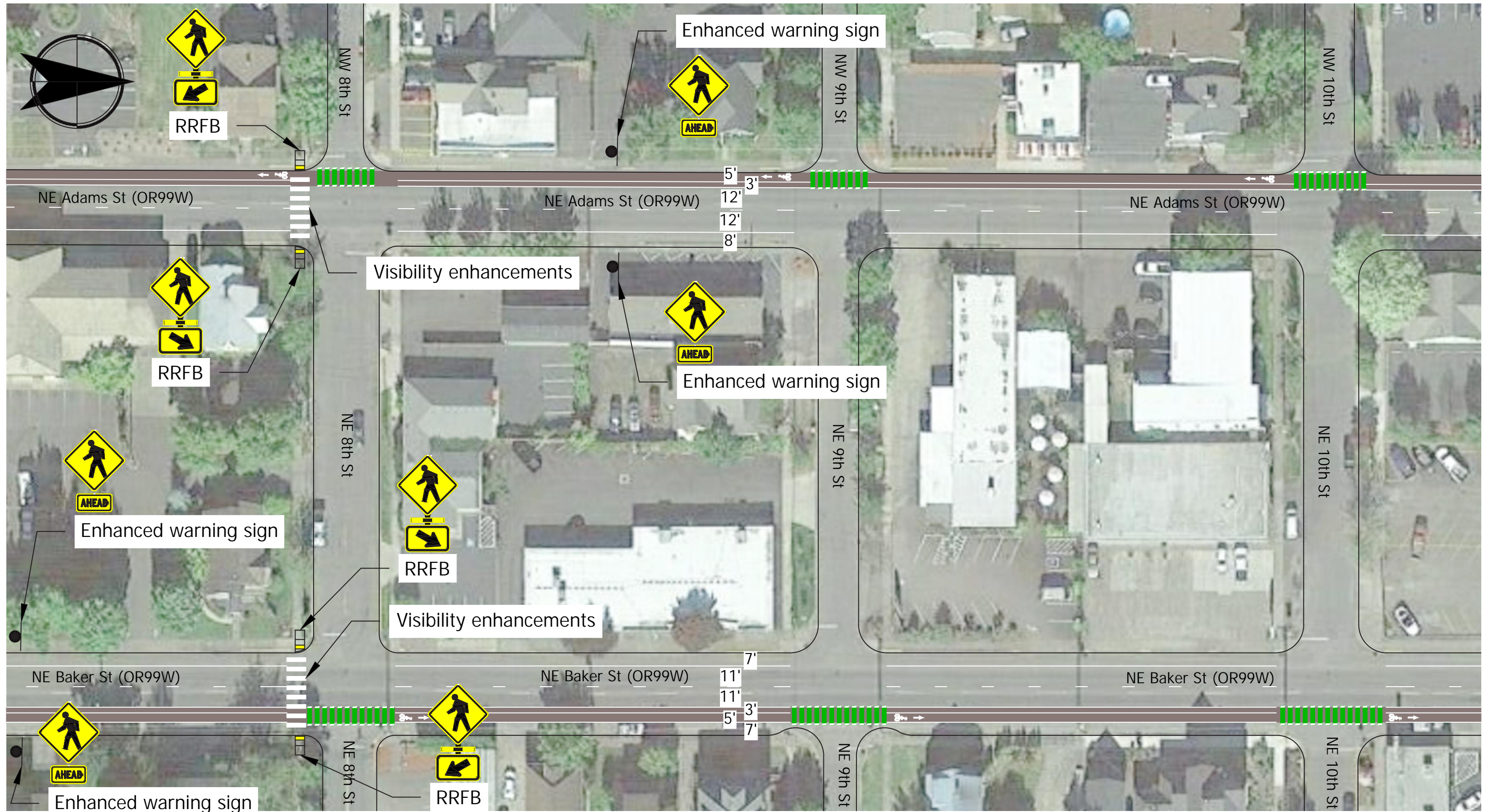
**Buffered Bike Lanes on Baker and Adams Streets**



**FIGURE 5**



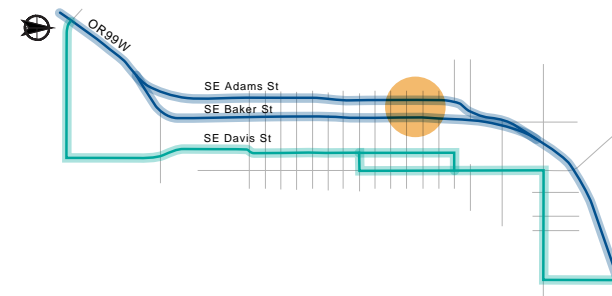
**Buffered Bike Lanes on Baker and Adams Streets**



**FIGURE 6**



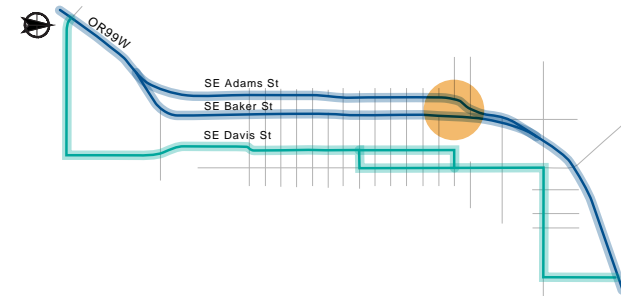
**Buffered Bike Lanes on Baker and Adams Streets**



**FIGURE 7**



**Buffered Bike Lanes on Baker and Adams Streets**



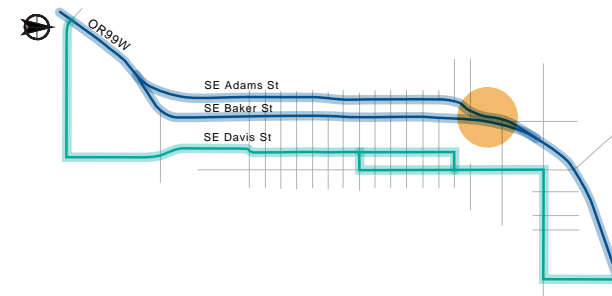
**FIGURE 8**



Buffered Bike Lanes on Baker and Adams Streets



The N Baker Street/OR 99W intersection is recommended to be realigned to reduce exposure for people walking and biking through the intersection and add delineation to vehicle movements. This concept uses paint and vertical flexposts to realign the intersection approach as a near-term option with raised concrete recommended as a long-term option. The final design of this intersection will be determined in the design process.



**FIGURE**  
**9**

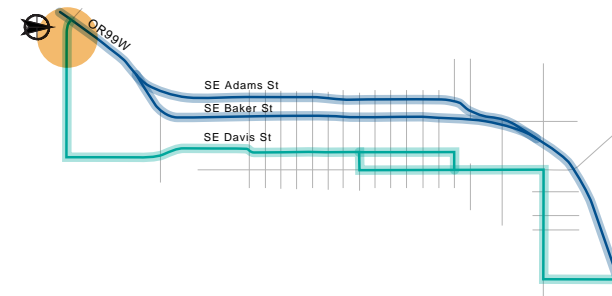


Neighborhood Greenway on Davis Street



Wayfinding “Neighborhood Greenway” signs, as pictured above, are added to the speed limit signs to increase driver awareness of people walking and biking and direct people walking and biking to the greenway route. The speed limit will be maintained through the corridor at 20 mph, consistent with residential streets in the area.

Speed humps are included to provide traffic calming, making the environment more comfortable to bike and share the roadway.



**FIGURE**  
**10**



Neighborhood Greenway on Davis Street



The speed table shown above will raise the entire crosswalk at a high-volume crossing location, slowing vehicles and allowing people walking to cross the street at a consistent elevation.

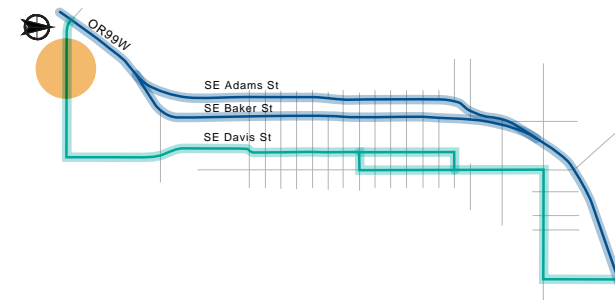


FIGURE 11



Neighborhood Greenway on Davis Street

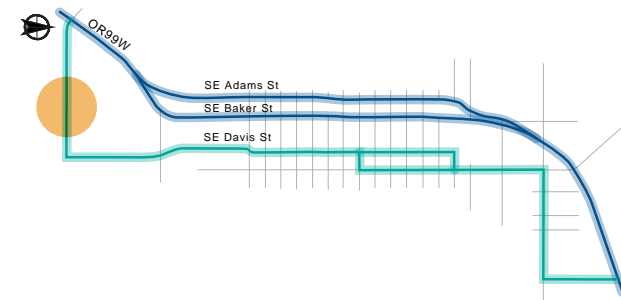


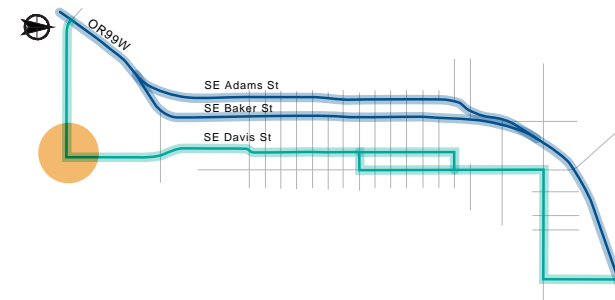
FIGURE 12



# Neighborhood Greenway on Davis Street



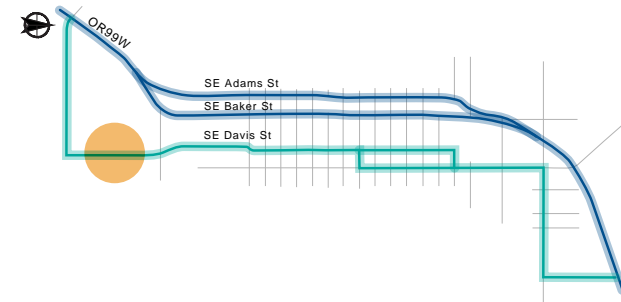
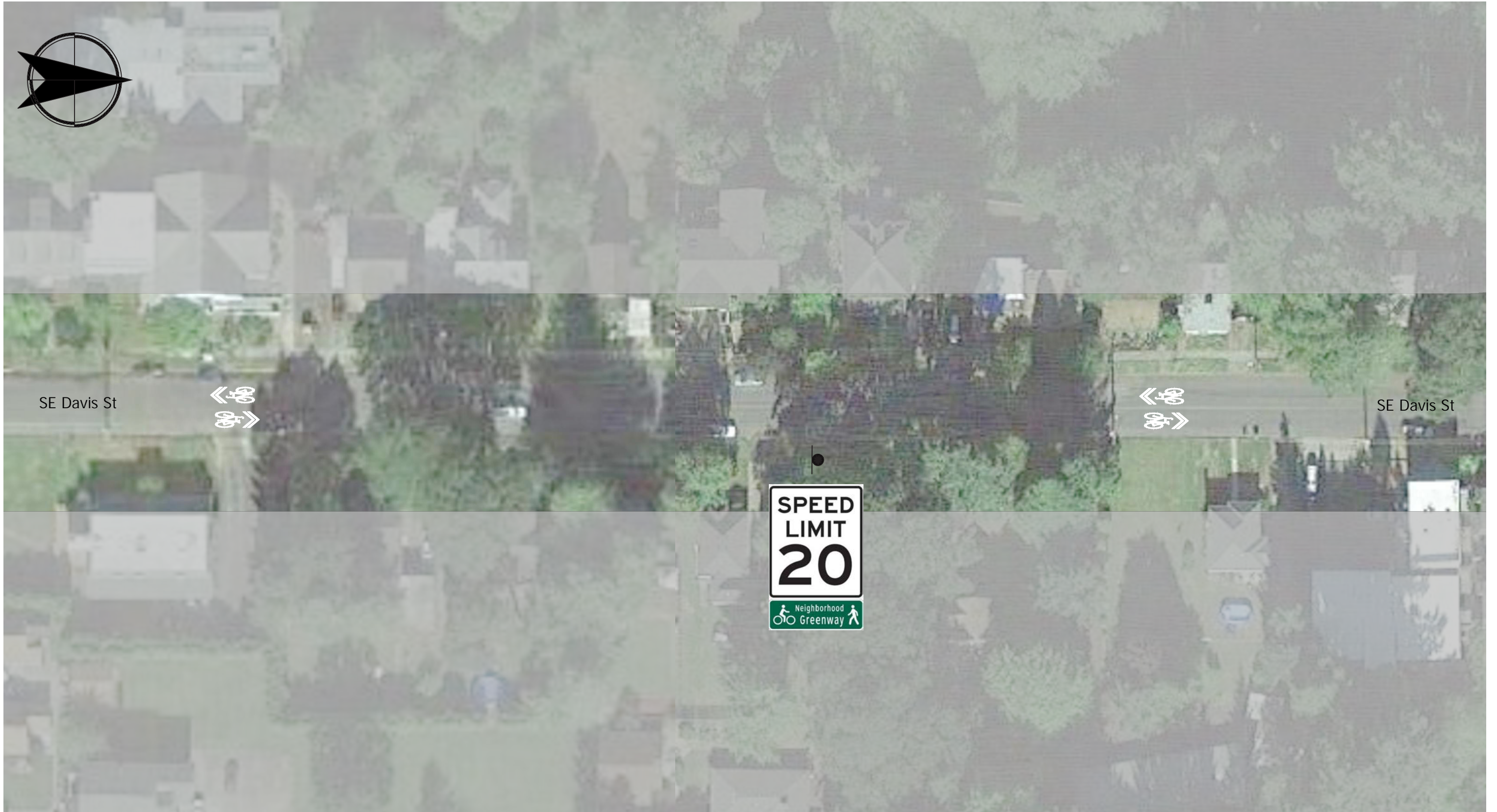
Shared lane markings or “sharrows,” like the one pictured above, use arrows to direct people biking to stay on the neighborhood greenway route.



**FIGURE**  
**13**



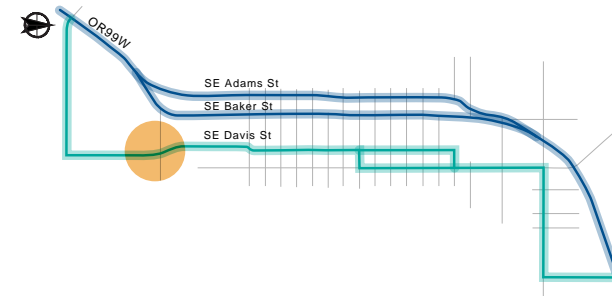
Neighborhood Greenway on Davis Street



**FIGURE**  
**14**



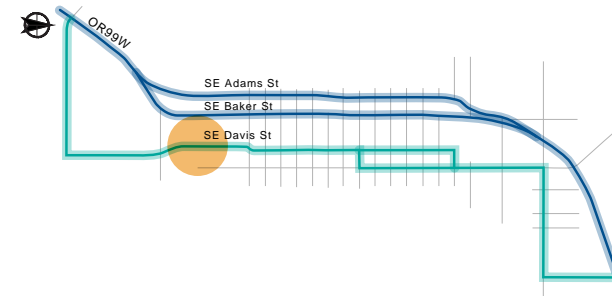
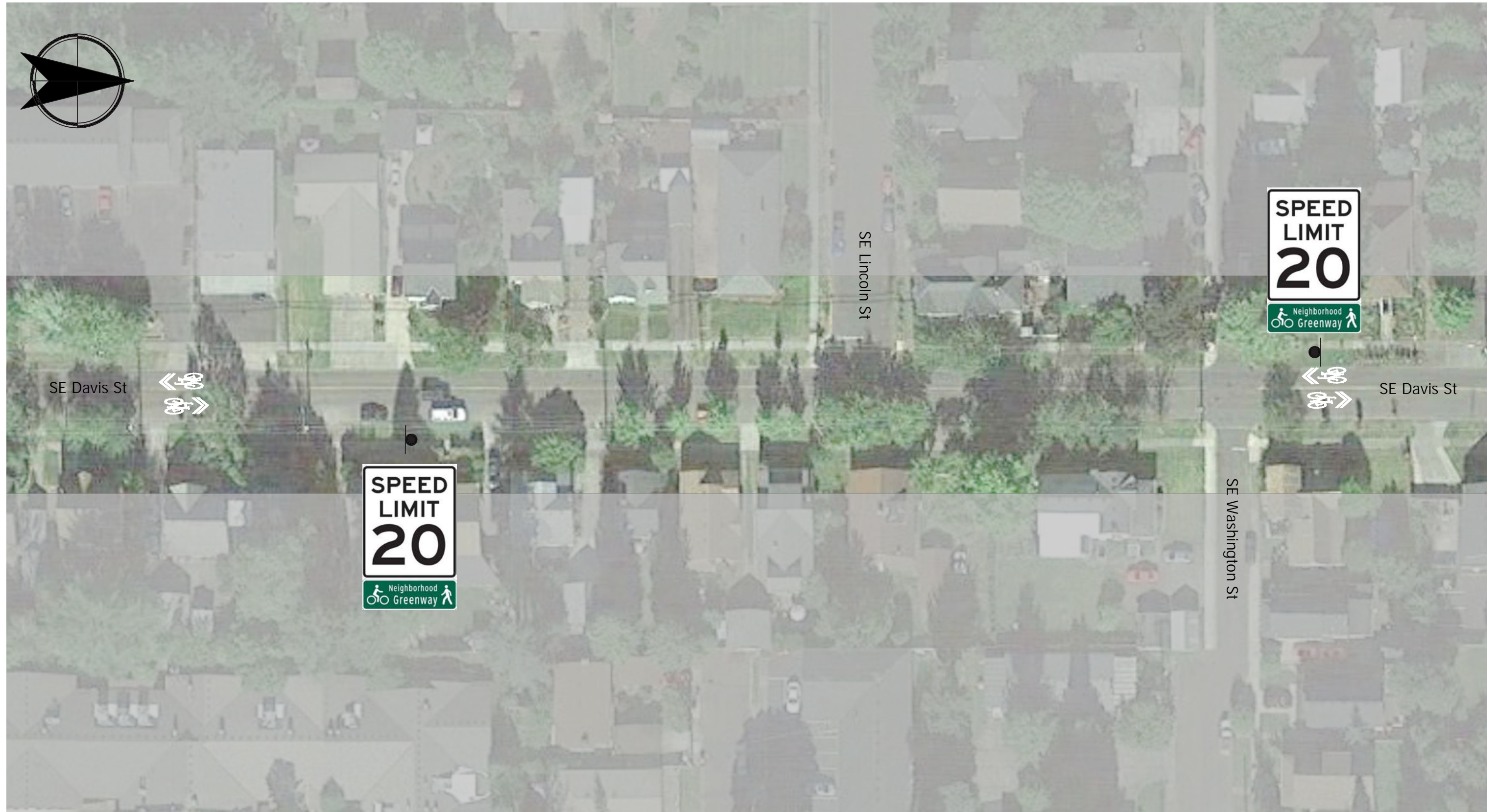
Neighborhood Greenway on Davis Street



**FIGURE**  
**15**



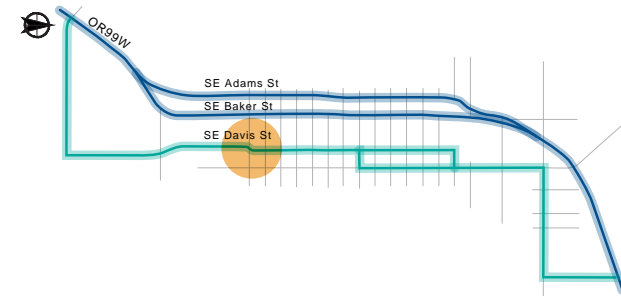
Neighborhood Greenway on Davis Street



**FIGURE**  
**16**



# Neighborhood Greenway on Davis Street



**FIGURE**  
**17**



Neighborhood Greenway on Davis Street

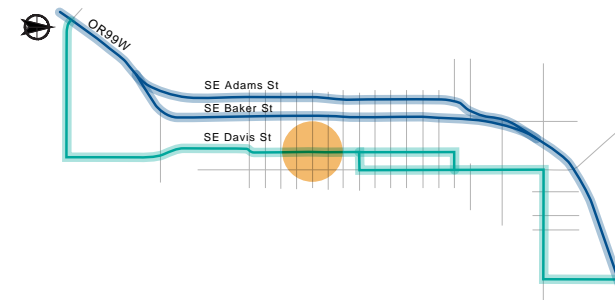


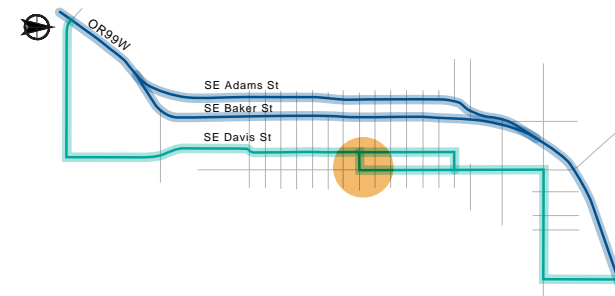
FIGURE  
18



Neighborhood Greenway on Davis Street



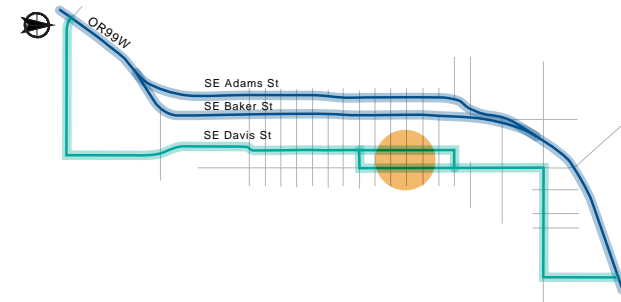
**Traffic diverters** prevent people driving from cutting through, making the route more comfortable for people walking and biking. A wayfinding sign is used to direct more confident cyclists to the existing bike lanes on Evans Street, which has higher speeds and traffic volumes than Davis Street.



**FIGURE 19**



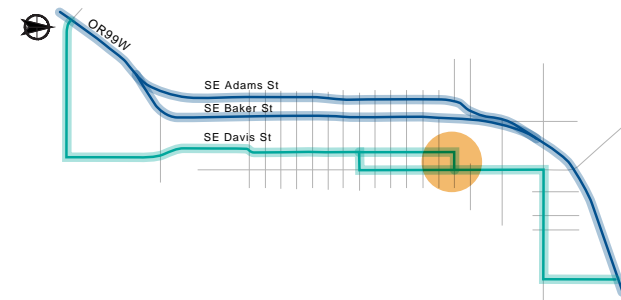
Neighborhood Greenway on Davis Street



**FIGURE**  
**20**



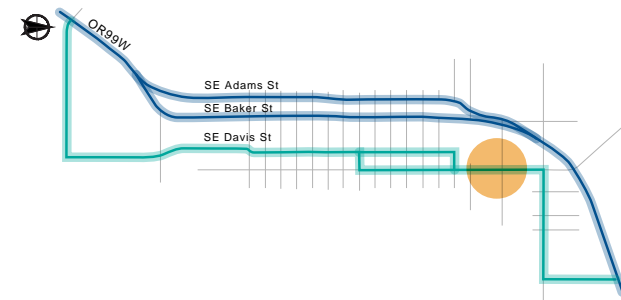
Neighborhood Greenway on Davis Street



**FIGURE**  
**21**



Neighborhood Greenway on Davis Street



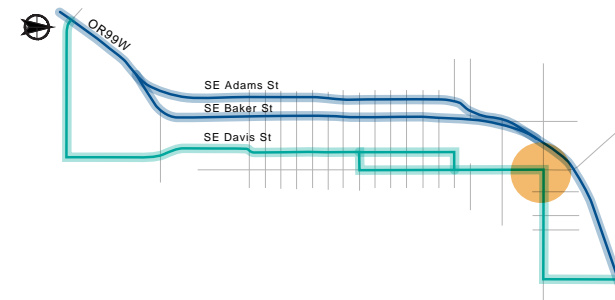
**FIGURE**  
**22**



Neighborhood Greenway on Davis Street



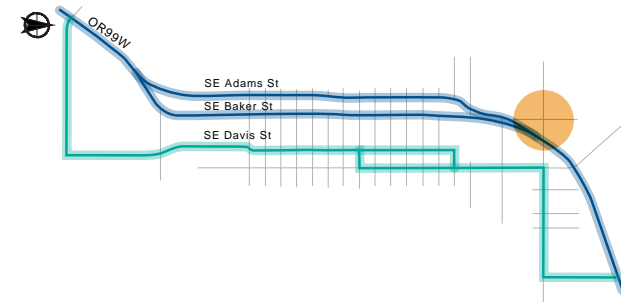
A **shared-use path** is recommended along the east side of NE Evans Street to connect people walking and biking to OR 99W. This concept will require further refinement as part of the formal design process.



**FIGURE**  
**23**



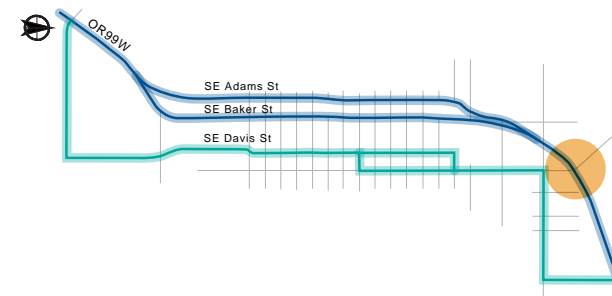
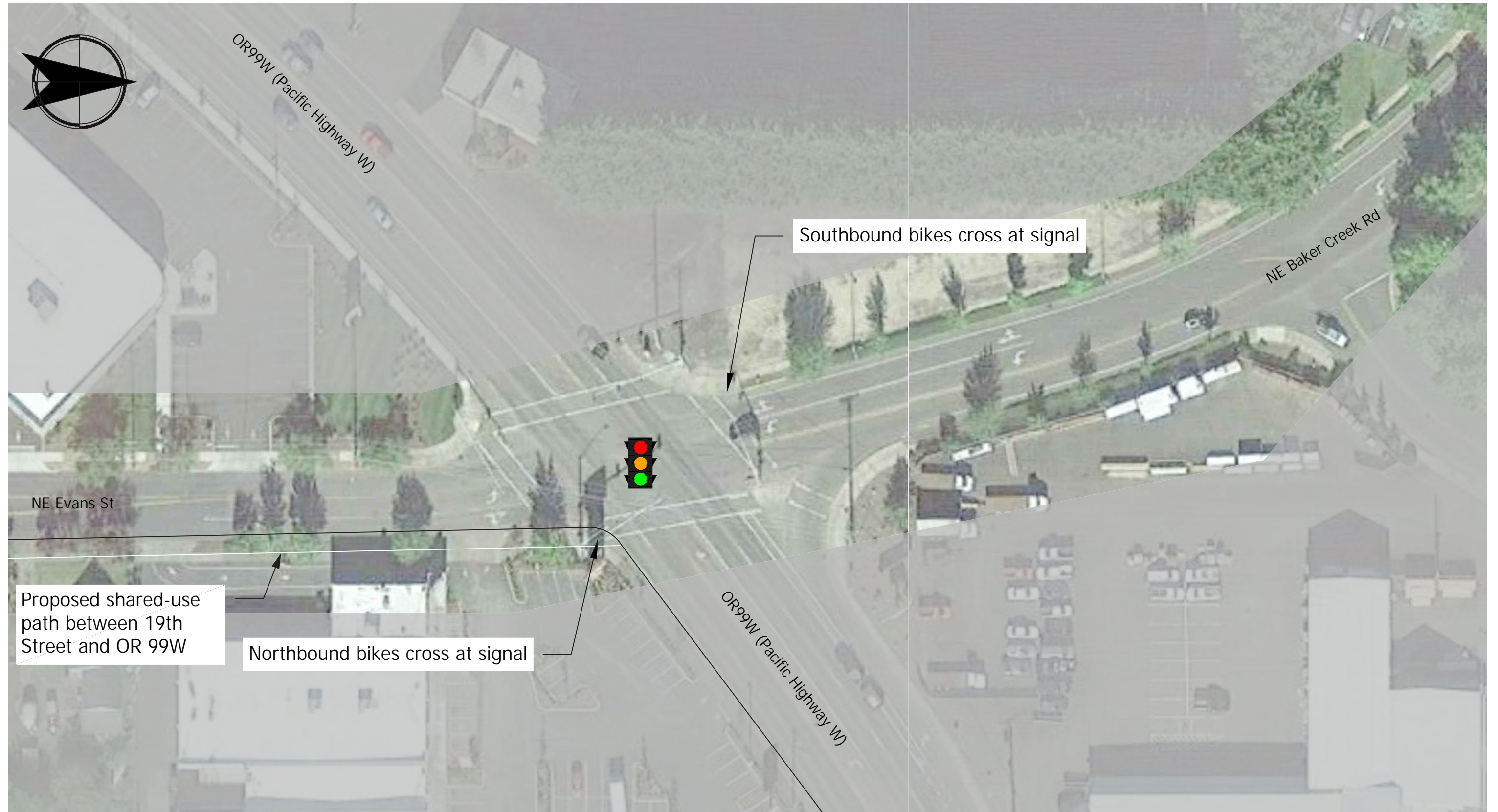
Neighborhood Greenway on Davis Street



**FIGURE**  
**24**



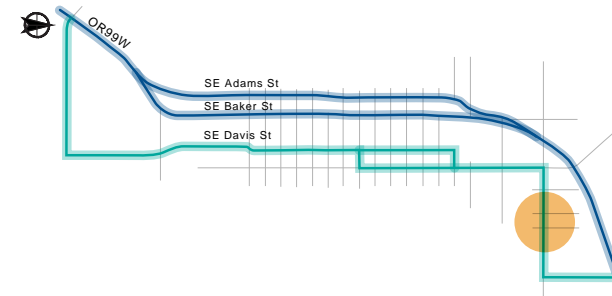
Neighborhood Greenway on Davis Street



**FIGURE**  
**25**



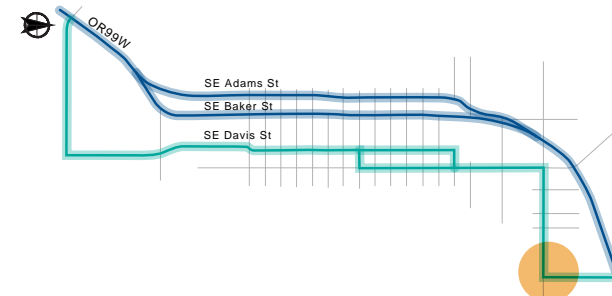
Neighborhood Greenway on Davis Street



**FIGURE**  
**26**



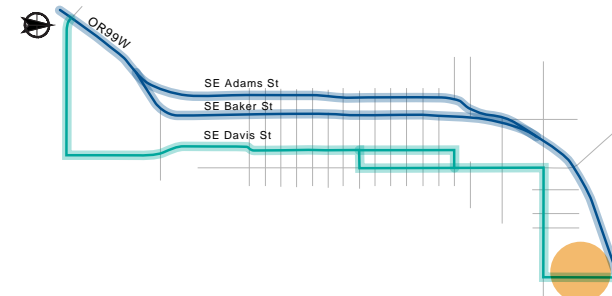
Neighborhood Greenway on Davis Street



**FIGURE**  
**27**



Neighborhood Greenway on Davis Street



**FIGURE**  
**28**



Neighborhood Greenway on Davis Street

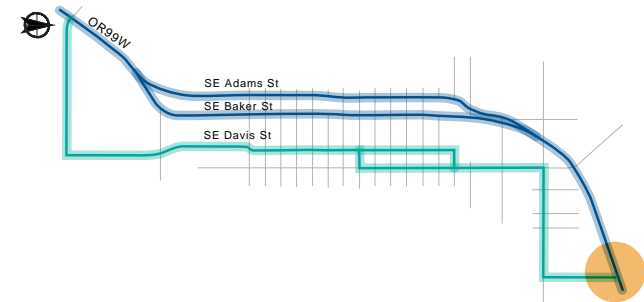


FIGURE  
29



## What Puts the Preferred Alternative in the Lead?

- The Davis Street Greenway provides low-stress facilities and a safe crossing at 3rd Street for users of all ages and abilities.
- The Davis Street Greenway is a low-cost option and potential diverters can be introduced as pilot projects.
- The existing character of Davis Street is more conducive to neighborhood greenway facilities; the northerly segment of Evans Street would likely require more substantial traffic calming efforts to serve as a low-stress facility due to speeds and volumes.
- The intersection of Davis Street/3rd Street is signalized, providing a more comfortable intersection crossing than the two-way, stop-controlled intersection of Evans Street/3rd Street.
- The OR 99W Buffered Bike Lanes provide direct access for people biking through the couplet and to destinations west of the couplet.
- The OR 99W Buffered Bike Lanes are a moderate-cost option that can be easily added to pavement projects along the couplet.
- Concept 2 and 3A were the public's top choices in the project survey.

### PEOPLE WHO PREFER CONCEPT 2, BUFFERED BIKE LANES ON ADAMS STREET AND BAKER STREET, THINK THAT:

- It is the most intuitive and practical (due to directional flow)
- It has low maintenance requirements
- It provides direct access to businesses on OR 99W
- People would continue biking on Baker Street even if there was a two-way facility on Adams Street

### PEOPLE WHO PREFER CONCEPT 3A, NEIGHBORHOOD GREENWAY ON DAVIS STREET, THINK THAT:

- It is attractive and sensible (due to low traffic volumes and speeds)
- It supports children and beginner cyclists
- It is already used as a parallel route today
- There is no advantage to making OR 99W more bike friendly because there is no need to use it in town
- Other options on OR 99W would increase congestion

## Near- and Long-Term Solutions

These concepts can be broken into near-and long-term solutions to streamline construction while providing opportunities to continue making McMinnville a safer, more comfortable place to walk, bike, and roll.

The near-term solutions provide the opportunity to pilot and try out some of the design solutions, such as traffic diverters and flex-post delineators. A pilot approach can introduce McMinnville residents to lower-cost ways to calm traffic and support active modes in a temporary manner. If the “pilot” is well received, then the solutions can be left in place or installed more permanently.

### NEIGHBORHOOD GREENWAY ON DAVIS STREET

#### Near-Term Solutions

- Sharrows
- Signage
- Traffic calming

#### Long-Term Solutions

- Evaluate success of traffic diverters and consider adding additional traffic calming features.

- Expand the network of neighborhood greenway routes in McMinnville.
  - » Potential connections include a multiuse path on Evans Street between 17th Street and OR 99W and bike lanes or sharrows along Lafayette Avenue, 3rd Street, 4th Street, 5th Street, Birch Street, and Alder Street. Lafayette Avenue has existing bike lanes, and 5th Street has existing sharrows.

### BUFFERED BIKE LANES ON ADAMS STREET AND BAKER STREET

#### Near-Term Solutions

- Construct buffered bike lanes with repaving project
- Provide vertical separation at intersections with high-turn volumes along Adams Street and consistently south of 2nd Street where there are no driveway conflict points.

#### Long-Term Solutions

- Explore additional opportunities for vertical separation with future access consolidations associated with capital and/or redevelopment projects.

# 7 / Enhanced Pedestrian Crossings

Not only did the project team look at ways for all modes to travel north and south through the study area, but they also evaluated the need for safely crossing the highway—connecting people to neighborhoods and other destinations. Based on analysis, public feedback, and PAC recommendations, the project team selected the following enhanced crossing treatments at the identified crossing locations:

- High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs
- Advance Stop Here For Pedestrians sign and stop line
- Rectangular rapid flashing beacon (RRFB)

Locations recommended for enhanced pedestrian crossings are shown in Figure 1 (pp 26-27), Figure 4 (pp 32-33), Figure 6 (pp 36-37), and Figure 8 (pp 40-41).

The planning-level cost associated with high visibility crosswalk markings with RRFB is \$125,000 per location. This estimate includes construction and professional fees for ADA ramp reconstruction on both sides of the roadway, striping, signage, and the RRFB. The estimate does not include right-of-way, utility relocations, or bicycle detection on approaches.

Coordination with Yamhill County Transit is recommended to consider relocating existing transit stops to enhanced crossing locations to facilitate transit use in the area.

“This intersection is **not pedestrian friendly!** Cars are looking out for themselves only. I actively avoid crossing Evans or OR 99W at this corner.”

—Public comment about the corner of OR 99W and Evans Street



Rectangular Rapid Flashing Beacon





# 8 / Making the Preferred Concept a Reality

## Adoption Process

This plan represents the project management team's preferred concepts based on information provided by the project team, the PAC's guidance, and stakeholder feedback received throughout the planning process. This preferred concept plan will be presented at hearings with the following decision-making bodies for consideration in amending the City of McMinnville's Transportation System Plan:

- McMinnville Planning Commission
- McMinnville City Council

Concept Plan design elements must be vetted through ODOT Region 2's Technical Center and, where applicable, the Oregon Mobility Advisory Committee, to ensure they meet the documented project context and goals.

To ensure projects can be funded through ODOT preservation or enhancement programs, City capital project budgets, or private development fees, the project team has prepared an Urban Design Concurrence Document for review by the Mobility Advisory Committee and approval by the Region 2 Roadway Manager following adoption by the City of McMinnville. The subsequent steps are:

- Moving to final design and construction
- Monitoring, operating, and maintaining\*

The Concept Plan and Urban Design Concurrence Document will form the basis of these subsequent steps.

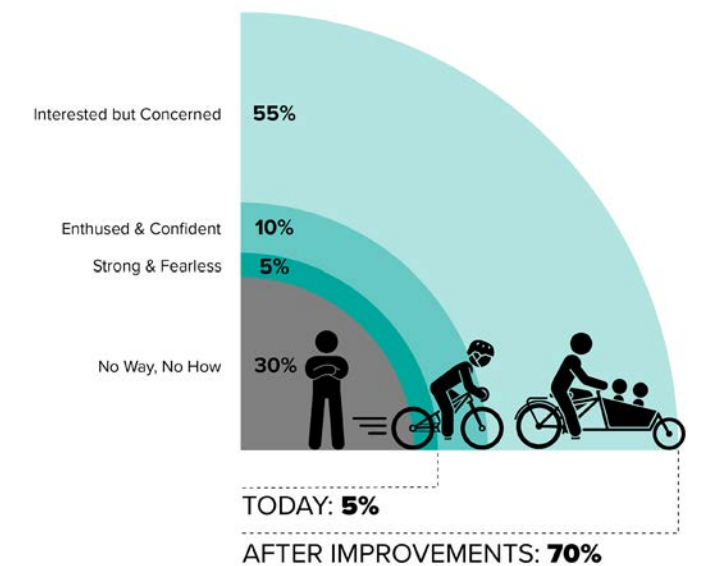
If future phases differ from this Concept Plan, the project team should revisit the Corridor Vision Statement Memorandum and Urban Design Concurrence Document, and determine if the original intended outcomes for the project should change. If a change appears appropriate, then justification should be provided and documented.

\* For additional information, see the [Blueprint for urban Design](#).

## Implementation and Funding

The McMinnville OR 99W (Linfield to McDonald) Active Transportation Concept Plan solutions can be separated into distinct projects to support incremental implementation as funding sources are identified. Securing funding for construction of the Davis Street Neighborhood Greenway should be prioritized. If funding sources are identified for any other project, however, that project may be implemented first. Timing and potential funding sources for each project are outlined on the following page.

### Community Needs Met



## Serving the Interested but Concerned

Facilities for people biking along the OR 99W corridor today are suitable only for 'strong and fearless' cyclists—those comfortable cycling under any conditions. Making the preferred concepts presented in this plan a reality will provide protected facilities for bicyclists, increasing the likelihood the 'interested but concerned' majority will feel safe traveling through McMinnville by bike.



## Potential Funding Sources

Project	Priority Order	Timing	Preliminary Budget for Near-Term Recommendations	Potential Funding Sources
Davis Street Neighborhood Greenway	1	As soon as funding can be made available	\$141,000	<ul style="list-style-type: none"> <li>Safe Routes to Schools</li> </ul>
OR 99W Buffered Bike Lanes	2	Improvements should occur as part of the next resurfacing preservation project	\$418,000	<ul style="list-style-type: none"> <li>Safe Routes to Schools</li> <li>STIP Preservation funding</li> </ul>
Adams Street/15th Street Enhanced Crossings	3	Construct these two crossings at the same time,* or with development	\$250,000	<ul style="list-style-type: none"> <li>Private development</li> <li>Transportation Safety Division grants</li> <li>STIP Preservation funding</li> </ul>
Baker Street/Cowls Street Enhanced Crossing	4	Time with upcoming development	\$125,000	<ul style="list-style-type: none"> <li>Upcoming private development</li> <li>Transportation Safety Division grants</li> <li>STIP Preservation funding</li> </ul>
Adams Street/8th Street Enhanced Crossing Baker Street/8th Street Enhanced Crossing	5	Construct these two crossings at the same time,** or with development	\$250,000	<ul style="list-style-type: none"> <li>Private development</li> <li>Transportation Safety Division grants</li> <li>STIP Preservation funding</li> </ul>
Adams Street/3rd Street Enhanced Crossing	6	Time with upcoming development	\$125,000	<ul style="list-style-type: none"> <li>Private development</li> <li>Transportation Safety Division grants</li> <li>STIP Preservation funding</li> </ul>
Adams Street/Walgreens Crossing	7	Time with upcoming development	\$125,000	<ul style="list-style-type: none"> <li>Private development</li> <li>Transportation Safety Division grants</li> <li>STIP preservation funding</li> </ul>

\* The priority order of enhanced crossing projects was established based on PAC input.

\*\* Constructing enhanced crossings in pairs may reduce costs and help make the full connection across the couplet, however enhanced crossings can be designed and constructed separately if there is only available funding for one crossing.

\*\*\* A midblock enhanced crossing at Adams Street across from the Baker Street/Cowls Street Enhanced Crossing was added based on input from the PAC, PMT, Planning Commission, and City Council. Formal analysis was not conducted at that location as part of this planning effort.

### SENATE BILL 408 REQUIREMENTS

Oregon Senate Bill (SB) 408 requires balancing competing interests on facility plans (e.g., Concept Plan) developed by ODOT. An example of competing interest is described in ODOT’s Oregon Greenhouse Gas Reduction Toolkit: Strategy Report (Reference 2): “Preserving the economic interests of property owners (who place a high value on convenient access to their property) will require finding a balance between private property interests and the safety and operations of public roadways.”

The concepts developed to address the multimodal needs along OR 99W are not anticipated to impact the access to or reduce capacity of the OR 99W corridor. The neighborhood greenway will not impact facilities along OR 99W; the buffered bike lanes maintain a minimum of 11-foot-wide travel lanes along the couplet and include flex posts along limited segments of the corridor where there are no access management or parking concerns.

# 9 / Supporting Documentation

- Detailed Cost Estimates
- Blueprint for Urban Design Documentation
- Technical Memoranda
- Public Involvement & PAC Meeting Notes



