

**RESOLUTION NO. 2023 -20**

A Resolution approving Amendment No. 2 to the December 10, 2021, Professional Services Agreement with Jacobs Engineering Group, Inc. (Jacobs) for Services During Construction of the SOLIDS TREATMENT CAPACITY IMPROVEMENTS PROJECT, Project No. 2019-10 (Project), formerly known as Water Reclamation Facility Biosolids Storage Tank and Grit System Expansion.

**RECITALS:**

**Whereas**, in 2019, the City undertook a formal procurement process to request proposals (RFP) for the Project; and

**Whereas**, Jacobs was the successful proposer and the City executed a Professional Services Agreement on April 6, 2020, for development of a Project Definition Report; and,

**Whereas**, The City entered into a second agreement with Jacobs on December 10, 2021, for Schematic Design of the Project; and,

**Whereas**, the City executed Amendment No. 1 to this Agreement on May 22, 2022, for final design services; and,

**Whereas**, on March 15, 2023, the City received final design plans and specifications for the Project; and,

**Whereas**, final design services have been completed and professional services during construction and startup of the project are required; and

**Whereas**, the City has negotiated the type of services, scope of work, project team, sub-consultants, fee, and schedule with Jacobs for Services During Construction, as Amendment No. 2 to the December 10, 2021, Agreement; and

**Whereas**, the total fee for this scope of work is not to exceed \$2,257,962.00; and

**Whereas**, project funding is included in the adopted FY 22/23 and 24/25 Wastewater Capital Fund (77) budget for the professional services during construction of the Project.

**NOW, THEREFORE, BE IT RESOLVED BY THE COMMON COUNCIL OF THE CITY OF MCMINNVILLE, OREGON, as follows:**

1. That execution of Amendment No. 2 to the December 10, 2021, Professional Services Agreement with Jacobs Engineering Group, Inc., for Services During Construction of the SOLIDS TREATMENT CAPACITY IMPROVEMENTS PROJECT, Project No. 2019-10, in the amount of \$2,257,962.00 is hereby approved.
2. The City Manager is hereby authorized and directed to execute the contract with Jacobs, attached as Exhibit 1.
3. That this resolution shall take effect immediately upon passage and shall continue in full force and effect until revoked or replaced.


Adopted by the Common Council of the City of McMinnville at a regular meeting held the 9<sup>th</sup> day of May 2023 by the following votes:

Ayes: Geary, Menke, Chenoweth, Peralta, Garvin

Nays: \_\_\_\_\_

Approved this 9<sup>th</sup> day of May 2023.

\_\_\_\_\_  
MAYOR

Approved as to form:  
  
\_\_\_\_\_  
City Attorney

Attest:  
  
\_\_\_\_\_  
City Recorder

**CITY OF McMinnville**  
**SECOND AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT**

**Water Reclamation Facility Solids Treatment Capacity Improvements**  
**Project No. 2019-10**

This Second Amendment to Professional Services Agreement (“Second Amendment”) is effective the \_\_\_\_\_ day of \_\_\_\_\_ 2023 (“Effective Date”), by and between the **City of McMinnville**, a municipal corporation of the State of Oregon (“City”), and **Jacobs Engineering Group Inc.**, a Delaware corporation (“Consultant”), upon the terms and conditions set forth below.

**RECITALS**

WHEREAS, the City entered into a Professional Services Agreement (“Agreement”) with Consultant on December 10, 2021, relating to the Solids Treatment Capacity Improvements Project, Project Number 2019-10 (“Project”); and

WHEREAS, the City executed Amendment No. 1 to this Agreement on May 22, 2022, for final design services; and,

WHEREAS, the City received final design plans and specifications for the Project on March 15, 2023; and,

WHEREAS, final design services have been completed and professional services during construction and startup of the project are required; and

WHEREAS, the City has negotiated the type of services, scope of work, project team, sub-consultants, fee, and schedule with Jacobs for Services During Construction, as Amendment No. 2 to the December 10, 2021, Agreement; and

WHEREAS, Consultant represents that Consultant is qualified to perform the Additional Services described herein on the basis of familiarity with the proposed project, specialized experience and technical expertise; and

WHEREAS, Consultant is prepared and able to timely provide such Additional Services as the City does hereinafter require;

NOW, THEREFORE, in consideration of these mutual promises and the terms and conditions set forth herein, the parties agree as follows:

**AGREEMENT**

The Agreement is amended as follows:

**Section 1. Additional Services To Be Provided**

Consultant will perform all of the Additional Services more particularly described in **Exhibit A**, attached hereto and incorporated by this reference herein, for the Project pursuant to all original terms of the Agreement, except as modified herein.

**Section 2. Time for Completion of Additional Services**

The Additional Services provided by Consultant pursuant to this Second Amendment shall be completed by no later than January 31, 2026.

**Section 3. Compensation**

The City agrees to pay Consultant on a monthly or periodic basis for hours of time incurred and materials expended. Compensation is guaranteed by Consultant not to exceed the maximum sum of TWO MILLION TWO HUNDRED FIFTY SEVEN THOUSAND NINE HUNDRED AND SIXTY TWO DOLLARS (\$2,257,962) for performance of the Additional Services (“Additional Compensation Amount”) set forth on **Exhibit A** attached hereto. Consultant’s estimate of time and materials to be incurred for various tasks is attached hereto as **Exhibit A**, and incorporated herein by reference, but shall be subject to the maximum not to exceed Compensation amount set forth above for the scope of services described on **Exhibit A**.

**Section 4. All Other Terms**

Except as amended by Amendment No. 1 and this Second Amendment, all of the other terms and conditions of the Agreement shall remain in full force and effect, as therein written. Unless otherwise defined herein, the defined terms of the Agreement shall apply to this Second Amendment.

The Consultant and the City hereby agree to all provisions of this Second Amendment.

**CONSULTANT:**

JACOBS ENGINEERING GROUP INC.

By: \_\_\_\_\_

Print Name:\_\_\_\_\_

As Its:\_\_\_\_\_

Employer I.D. No. \_\_\_\_\_

**CITY:**

CITY OF McMinnville

By:\_\_\_\_\_

Print Name:\_\_\_\_\_

As Its: \_\_\_\_\_

**APPROVED AS TO FORM:**

\_\_\_\_\_  
City Attorney  
City of McMinnville, Oregon

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**Exhibit A  
To Amendment 2  
Agreement for Professional Services for the  
City of McMinnville  
Water Reclamation Facility (WRF) Solids Treatment Capacity  
Improvements Project  
Project 2019-10**

The following is a scope of services for professional engineering services during the construction phase for the Water Reclamation Facility Solids Treatment Capacity Improvements Project.

**BACKGROUND**

McMinnville’s Water Reclamation Facilities Plan (2009, CH2M HILL/West Yost) recommended expanding the WRF in conjunction with reducing collection system infiltration and inflow (I&I) to address future wastewater treatment needs. Related to the solids treatment and headworks processes, the Facilities Plan included: construction of a 1-MG biosolids storage tank and mixer; construction of a dewatering process and dry biosolids storage; upgrade of odor control; expansion of grit removal; modification of the influent screens; and, addition of thermal drying. Since the Facilities Plan: the City has deferred some of the recommended projects; population growth, thus flows and lows, have not increased as projected; and, technologies have changed.

The Project Definition Report (2021, Jacobs) for the Biosolids Storage Tank and Grit System Expansion recommended implementation of the Solids Treatment Capacity Improvements (STCI) Project. The STCI project design was completed and advertised for bidding in March 2023. Construction Contractor notice to proceed is expected in May 2023. This document describes the scope of engineering services for the construction phase of the project.

The Work is proposed on a Time & Materials basis with a not-to-exceed budget of \$2,257,962.

**BASIS OF ENGINEERING SERVICES DURING CONSTRUCTION  
(SDC) SCOPE AND FEE DEVELOPMENT**

The following key assumptions were used when determining the scope, level of effort and compensation to the Consultant. These assumptions are in addition to those included in the Scope of Services.

**Services During the Construction Phase**

1. The duration of the construction period will not exceed 20 months and will commence by May 22, 2023.
2. The project will be constructed under one general contract for construction.

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3. Desk space and high-speed internet access for Consultant field staff will be provided by the Construction Contractor.

## **CITY-PROVIDED SERVICES**

1. City will provide to Consultant all information in City's possession regarding existing conditions that pertain to the Project. Consultant shall reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City.
3. City will make its facilities accessible to Consultant as required for Consultant's performance of its services.
4. City will give prompt notice to Consultant whenever City observes or becomes aware of any development that affects the scope or timing of Consultant's services, or of any defect in the work of Consultant or the Construction Contractor.
5. The City will examine information submitted by Consultant and render in writing or otherwise provide decisions in a timely manner.
6. The City will furnish required information and approvals in a timely manner.
7. The City will cause all agreements with the Construction Contractor to be consistent with Consultant's Agreement.
8. The City will participate in construction meetings.

## **SCOPE OF SERVICES**

The Consultant will provide the City with the services described herein. The Consultant's scope of services consists of the following major tasks:

Task 1: Project Management

Task 2: Conformed Documents

Task 3: Services During Construction

Task 4: Commissioning and Training

Task 5: Software Development and Testing

Task 6: Services During the Close-Out Phase and Warranty Services

Task 7: Pavement Assessment

Task 8: Professional Services Reserve

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## **Task 1: Project Management**

The purpose the Project Management task is to establish and monitor compliance with project budget and schedule.

### **Task 1.1: Progress Meetings and Updates**

The Consultant's project manager will talk or email with the City's project manager weekly to review project progress and discuss upcoming work activities. The Consultant's project manager will provide monthly email summaries of work completed, upcoming activities and unresolved issues. All in-person meetings and workshops will be held at the WRF unless noted otherwise. When possible, meetings will be conducted over video conference.

### **Task 1.2: Project Management Plan**

The Project Management Plan includes project instructions and a project health and safety plan for the Consultant's team. The plan developed in the previous design phase will be modified and used for the construction phase.

### **Task 1.3: Invoicing, Cost and Schedule Control**

The Consultant's project manager will manage, administer, coordinate, and integrate work of the Consultant's team as required to deliver the project within budget and on schedule. The Consultant's project manager will prepare and submit to the City's project manager on a monthly basis, a brief cost and schedule status report and updated summary project schedule showing actual versus projected. The report shall include a narrative description of progress to-date, actual costs for each major task, estimates of percent complete, and potential cost variances.

*Task 1 Deliverables: Monthly status reports and invoices.*

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## **Task 2: Conformed Documents**

Consultant shall incorporate addendum items into the Contract Documents and prepare Conformed Documents (drawings, specifications, and design details).

*Task 2 Deliverables: Conformed Documents in PDF format. 5 hardcopies will be provided.*

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### **Task 3: Services During Construction**

Consultant shall provide services to assist in coordinating the site activities, administering the contract for construction, monitoring the Construction Contractor's performance, responding to design and technical submittals, and closing out the contract for construction.

The presence or duties of Consultant's personnel at a construction site, whether as onsite representatives or otherwise, do not make Consultant or Consultant's personnel in any way responsible for those duties that belong to City and/or the Construction Contractor or other entities, and do not relieve the Construction Contractor or any other entity of their obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction Contract Documents and any health or safety precautions required by such construction work.

Consultant and Consultant's personnel have no authority to exercise any control over any Construction Contractor or other entity or their employees in connection with their work or any health or safety precautions and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the Construction Contractor or other entity or any other persons at the site except Consultant's own personnel.

The presence of Consultant's personnel at a construction site is for the purpose of providing to City a greater degree of confidence that the completed construction work will conform generally to the contract for construction and that the integrity of the design concept as reflected in the contract for construction has been implemented and preserved by the Construction Contractor. Consultant neither guarantees the performance of the Construction Contractor nor assumes responsibility for Construction Contractor's failure to perform work in accordance with the contract for construction.

#### **Task 3.1: Document Management System and Procedures**

Consultant shall establish a system and set of procedures for managing, tracking and storing all relevant documents between the Construction Contractor, Consultant and City produced during the Construction and Closeout phases of the project. The Consultant shall setup and maintain an electronic document management system and provide direct access to Contractor and Owner. Minimal hard copy records are anticipated. All relevant documentation shall be delivered to City at the end of the project.

Consultant shall implement procedures for the logging and tracking of all relevant correspondence and documents. Consultant shall assist the City in monitoring all outstanding decisions, approvals or responses required from the City.



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## **Task 3.2: Site Coordination**

### **Task 3.2.1 Pre-Construction Conference**

Consultant shall coordinate and attend one pre-construction conference with the Construction Contractor to review the project communication, coordination and other procedures and discuss the Construction Contractor's general work plan and requirements for the Project. Consultant shall take minutes or otherwise record the results of this conference.

### **Task 3.2.2 Mobilize On-Site Team**

Consultant shall mobilize a team on site full-time for the duration of the construction to provide site coordination, contract administration and monitor the performance of the Construction Contractor. The Consultant will provide one Resident Project Representative (RPR) at the site. The RPR will be supported by the design team, located in the Consultant's Corvallis, Oregon office.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

### **Task 3.2.3 Communications**

Consultant shall implement and maintain regular communications with the Construction Contractor during the construction. Consultant shall receive and log all communications from the Construction Contractor and will coordinate the communications between the City and Construction Contractor.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

### **Task 3.2.4 Project Site Meetings**

Consultant shall conduct weekly on site construction coordination meetings with the Construction Contractor and prepare the minutes of these meetings.

At the start of construction, then quarterly thereafter, Consultant will facilitate and participate in partnering meetings with the City and Construction Contractor.

### **Task 3.2.5 Field Instructions and Orders**

Consultant shall issue field instructions, orders or similar documents during construction as provided in the contract for construction.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

*Task 3.2 Deliverables: Pre-construction conference agenda and minutes; project site meeting minutes; field instructions.*

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### **Task 3.3: Construction Contract Administration**

#### **Task 3.3.1 Permits, Bonds and Insurance**

Consultant shall verify that the required permits, bonds and insurance have been obtained and submitted by the Construction Contractor.

#### **Effort associated with this task is accounted for within Task 3.8 Field Inspection. Task 3.3.2 Payments to Construction Contractor**

Consultant shall receive and review the Construction Contractor's requests for payment. Consultant shall determine whether the amount requested reflects the progress of the Construction Contractor's work and is in accordance with the contract for construction.

Consultant shall provide recommendations to the City as to the acceptability of the requests. Consultant shall advise the City as to the status of the total amounts requested, paid, remaining to be paid, and retainage, under the terms of the contract for construction. Recommendations by Consultant to the City for payment shall be based upon Consultant's knowledge, information and belief from its observations of the work on site and selected sampling that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by Consultant to ascertain that the Construction Contractor has completed the work in exact accordance with the contract for construction; that Consultant has made an examination to ascertain how or for what purpose the Construction Contractor has used the moneys paid; that title to any of the work, materials or equipment has passed to the City free and clear of liens, claims, security interests, or encumbrances.

#### **Task 3.3.3 Correspondence and Communications**

Consultant shall coordinate all written communications among the Construction Contractor, Consultant and City during the construction phase. Consultant shall prepare written communications to the Construction Contractor and provide recommendations to the City for written communications between the City and Construction Contractor.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

*Task 3.3 Deliverables: Payment recommendation, written communication to Construction Contractor.*

### **Task 3.4: Changes**

#### **Task 3.4.1 Minor Variations in the Work**

Consultant may authorize minor variations in the work which do not involve an adjustment in the Construction Contractor's contract price nor time for construction and are not inconsistent with the intent of the contract documents.

#### **Effort associated with this task is accounted for within Task 3.8 Field Inspection. Task 3.4.2 Coordinate Issuance of Changes**

Consultant shall assist the City with the issuance of changes to the contract for construction. Design and engineering services to prepare drawings, specifications and other information for City-requested changes may be considered additional services and entitle Consultant to additional compensation for the services.

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Consultant shall receive and review the Construction Contractor's response to the request for change and will obtain such further information as is necessary to evaluate the basis for the Construction Contractor's proposal.

Consultant shall assist the City with negotiations of the proposal and, upon approval by the City, prepare final change order documents for execution by the City and Construction Contractor.

An allowance of 120 hours is provided for this task.

**Task 3.4.3 Review of Construction Contractor's Requested Changes**

Consultant shall review all Construction Contractor-requested changes to the contract for construction.

Consultant shall make recommendations to the City regarding the acceptability of the Construction Contractor's request and, upon approval of the City, assist the City in negotiations of the requested change. Upon agreement and approval, Consultant shall prepare final change order documents.

**An allowance of 120 hours is provided for this task. Task 3.4.4 Change Order Reports**

Consultant shall generate from the electronic document management system monthly reports to the City about the status of Change Orders. The report will include issued Change Orders, pending Change Orders, and Change Order amounts.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

*Task 3.4 Deliverables: Change Order documents and status reports*

**Task 3.5: As Built Drawings and Record Documents**

Consultant shall coordinate the Construction Contractor's submittal of as-built drawings, specifications and other as-built or record documents and will transmit these to the City.

Consultant shall meet with the Construction Contractor as necessary, but at least monthly, to review the preparation and submittal of as-built or record drawings. This task does not include on-going Consultant CAD work for as-built or record drawings. All CAD work will occur under Task 6.5 Record Drawings as part of project closeout.

**Task 3.6: Claims and Disputes**

Consultant shall receive, log, and notify the City about all letters and notices from the Construction Contractor concerning claims or disputes between the Construction Contractor and City pertaining to the acceptability of the work or the interpretation of the requirements of the contract for construction. Consultant shall review all such letters and notices and discuss them with the Construction Contractor as necessary to understand each such claim or dispute.

Consultant shall advise the City regarding the Construction Contractor's compliance with the contract requirements for such claims and disputes. Consultant shall assist the City in discussions with the Construction Contractor to resolve claims and disputes. An allowance of 16 hours is included.

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Consultant shall issue decisions on claims and disputes. Consultant shall not, except as part of Professional Services Reserve, participate in judicial procedures for the claims or disputes.

### **Task 3.7: Project Controls**

#### **Task 3.7.1 Construction Contractor's Schedule Submittal**

Consultant shall review the Construction Contractor's construction schedule and verify that it is consistent with the requirements of the contract for construction. Consultant shall advise the Construction Contractor of any areas where the schedule is not in compliance with the contract for construction. Consultant shall provide comments to the City to assist the City in approving, accepting or taking other action on the Construction Contractor's schedule, in accordance with the contract for construction.

Consultant's review and comments will not be considered as a guarantee or confirmation that the Construction Contractor will complete the work in accordance with the contract for construction.

#### **Task 3.7.2 Construction Contractor's Schedule Updates**

Consultant shall review the Construction Contractor's periodic schedule updates or other schedule submissions. Consultant shall advise the Construction Contractor if the updates or other submissions are not in accordance with the contract for construction. Consultant shall provide comments to the City regarding the updates or other submissions.

#### **Task 3.7.3 Effect of Change Orders**

Consultant shall review information submitted by the Construction Contractor regarding the effect of proposed or issued Change Orders upon the construction schedule, duration and completion date. Consultant shall advise the City as to the potential impact of proposed or issued Change Orders. Consultant shall assist the City in discussions with the Construction Contractor concerning the potential impact of proposed or issued Change Orders.

An allowance of 16 hours is provided for this task.

*Task 3.7 Deliverables: Monthly reports as to the status of the construction schedule, date of completion, contract price, retainage, pending changes to the contract price or completion date and other issues material to the cost and time for completion of the construction.*

### **Task 3.8: Field Inspection**

Consultant shall provide one full-time (40 hours per week) RPR for a period of eighteen months, from June 2023 through December 2024. An additional 2 months of part-time (20 hours per week) presence is included at the beginning and end of the construction period, 1 month at the beginning and 1 month at the end.

#### **Task 3.8.1. Field Office**

Consultant shall staff a field office on the project site for purposes of providing inspectors to observe the work of the Construction Contractor.

#### **Task 3.8.2 Independent Testing and Inspection Services**

Consultant shall retain a Special Inspection and Testing firm to perform code-required special inspections, material testing, or other services related to verifying the quality of the

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Construction Contractor's work. Consultant shall review the reports and other information prepared by the independent firm. Consultant shall assist in coordinating inspection scheduling and the transmittal of reports, findings or other information to the Construction Contractor and/or the City. Consultant shall not be responsible for the accuracy or completeness of the work and reports of the independent testing and inspection firm.

An allowance of \$75,000 has been included for this activity.

**Task 3.8.3 Review of Work**

Consultant shall conduct on-site observations of the Construction Contractor's work for the purposes of determining if the work generally conforms to the contract for construction and that the integrity of the design concept as reflected in the contract for construction has been implemented and preserved by the Construction Contractor. Observations by Consultant's RPR will occur approximately 4-5 days per week, depending on the Construction Contractor's activities.

Consultant shall arrange for monthly photographs of the work in progress by the Construction Contractor, which will be made available to the City.

Consultant's observation of the work is not an exhaustive observation or inspection of all work performed by the Construction Contractor. Consultant does not guarantee the performance of the Construction Contractor. Consultant's observations shall not relieve the Construction Contractor from responsibility for performing the work in accordance with the contract for construction, and Consultant shall not assume liability in any respect for the construction of the project. Consultant shall, with the assistance of the City, obtain written plans from the Construction Contractor for quality control of its work, and shall monitor the Construction Contractor's compliance with its plan.

**Task 3.8.4 Deficient and Non-Conforming Work**

Should Consultant discover or believe that any work by the Construction Contractor is not in accordance with the contract for construction, or is otherwise defective, or not conforming to requirements of the contract or applicable rules and regulations, Consultant shall bring this to the attention of the Construction Contractor and the City. Consultant shall thereupon monitor the Construction Contractor's corrective actions and shall advise the City as to the acceptability of the corrective actions.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

**Task 3.8.5 Design Team Visits**

Consultant shall coordinate visits to the site by the design team members to review progress and quality of the work. The visits shall observe the general quality of the work at the time of the visit and review any specific items of work that are brought to the attention of the design team members by the Construction Contractor or the City.

**Task 3.8.6 Factory and Off-Site Tests and Inspections**

Factory and off-site tests and inspections are not included.

**Task 3.8.7 Performance and Witness Testing**

Consultant shall attend, and witness field performance tests as specified in the contract for construction. This includes process, odor, and electrical equipment. Control system testing is included in Task 5.

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**Task 3.8.8 Regulatory and Third-Party Testing and Inspections**

Consultant shall monitor the Construction Contractor's coordination of inspection and testing by regulatory and third-party agencies that have jurisdiction over the project.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

**Task 3.8.9 Subsurface and Physical Conditions**

Whenever the Construction Contractor notifies Consultant or City of subsurface or physical conditions at the site which the for which the contract for construction requires notification, Consultant shall advise the City and inspect the conditions at the site. Consultant shall advise the City as to the appropriate action(s) and shall assist the City in responding to the Construction Contractor.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

**Task 3.9: Shop Drawings, Samples and Submittals****Task 3.9.1 Submittal Schedule**

Consultant shall obtain from the Construction Contractor a proposed shop drawing and submittal schedule, which will identify all shop drawings, samples and submittals required by the contract for construction, along with the anticipated dates for submission.

**Task 3.9.2 Review of Shop Drawings, Samples and Submittals**

Consultant shall coordinate with the design team for the reviews of the Construction Contractor's shop drawings, samples, and other submittals. Consultant shall log and track all shop drawings, samples and submittals.

Consultant's review of all shop drawings, samples and submittals will be for general conformance with the design concept and general compliance with the requirements of the contract for construction. Such review will not relieve the Construction Contractor from its responsibility for performance in accordance with the contract for construction, nor is such review a guarantee that the work covered by the shop drawings, samples and submittals is free of errors, inconsistencies or omissions.

The level of effort for this subtask includes review of up to 300 submittals at 5.5 hours per submittal, including resubmittals (up to two) allowed in the construction contract.

**Task 3.9.3 Scope of Review**

Consultant's scope is based upon the scope of work in the contract for construction and shall include a maximum of two submissions by the Construction Contractor for each shop drawing, sample or submission. Should there be additional reviews required of Consultant and design team, Consultant may be entitled to additional compensation.

*Task 3.9 Deliverables: Submittal log, submittal review comments.*

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### **Task 3.10: Construction Contractor Clarifications and Requests for Information**

#### ***Task 3.10.1: Requests for Information***

Consultant shall review the Construction Contractor's requests for information (RFI) or clarification of the contract for construction. Consultant shall coordinate such review with the design team and with the City. Consultant shall coordinate and issue responses to the requests. Consultant shall log and track the Construction Contractor's requests. Revised Specifications and CAD drawings are not included but will be updated as Record Drawings at the end of the project.

The level of effort includes review and response of up to 200 RFIs at 3.5 hours per RFI.

#### ***Task 3.10.2: Proposed Substitutions***

Consultant shall assist the City in reviewing and responding to the Construction Contractor's requests for substitution of materials and equipment. Consultant shall review such requests and advise the City as to the acceptability of such substitutions.

An allowance of 32 hours is provided for this task.

*Task 3.10 Deliverables: Consultant request log, responses to requests.*

### **Task 3.11: Safety**

Consultant shall manage the health, safety and environmental activities of its staff and the staff of its subcontractors to achieve compliance with applicable health and safety laws and regulations.

Consultant shall coordinate its health, safety and environmental program with the responsibilities for health, safety and environmental compliance specified in the contract for construction. Consultant shall coordinate with responsible parties to correct conditions that do not meet applicable federal, state and local occupational safety and health laws and regulations, when such conditions expose Consultant staff, or staff of Consultant subcontractors, to unsafe conditions.

Consultant shall notify affected personnel of any site conditions posing an imminent danger to them which Consultant observes.

Consultant is not responsible for health or safety precautions of construction workers. Consultant is not responsible for the Construction Contractor's compliance with the health and safety requirements in the contract for construction, or with federal, state, and local occupational safety and health laws and regulations.

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## **Task 4: Commissioning and Training**

### **Task 4.1: Startup Support**

Consultant shall furnish assistance to the City in plant startup and initial plant operation to the extent to be mutually agreed upon by both parties. This assistance includes support for the following process startups:

- Biofilter
- Thickened Sludge Pumping
- ATAD system
- Decant

### **Task 4.2: Operations and Maintenance Manual**

Consultant shall develop an Operations and Maintenance (O&M) manual describing the operation of the Project facilities and systems. This manual will explain the various primary modes of operation that may be used, including both normal operation and initial emergency operation procedures. The manual will explain the purpose and basic concept of the various processes that are incorporated into the overall plant. Where appropriate, reference will be made to the manufacturer's detailed O&M submittals. It will include instructions for process operations and test or laboratory procedures that may be required to monitor the performance of the facilities. The manual will be suitable for use as an operational tool and to facilitate operator training. The manual will be produced in an electronic format and delivered in PDF format. A draft O&M manual shall be submitted for City review prior to 50% completion of construction.

*Task 4.2 Deliverables: Electronic draft and final O&M Manuals.*

### **Task 4.3: Operation and Maintenance Training**

Consultant shall provide instruction to the City's staff in the design intent for operation of the equipment provided under this Project. This instruction will cover both the basic operational concept and actual operation and control of the systems and components under both normal and abnormal operations that are likely to occur.

Consultant shall provide one training session for each of the primary process elements: odor control; ATAD/SNDR; thickened sludge pumping; and, decant.

*Task 4.3 Deliverables: Five copies of training materials.*

### **Task 4.4: Vendor Operation and Maintenance Manuals, Training**

Consultant shall coordinate with the Construction Contractor for the submission of required manuals provided by equipment suppliers for operation and maintenance and for training of the City's staff by the Construction Contractor.



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## Task 5: Software Development and Testing

Consultant has recently provided design services for the WRF, including upgrade of the solids treatment process, including associated packaged control system, other related process upgrades, and replacement of the existing Headworks PLC with Allen-Bradley ControlLogix platform. The project includes the following specific elements:

**PLC Replacement:** Replacement of the existing main Allen-Bradley 1771 platform PLCs in the Headworks building with an Allen-Bradley 1756 ControlLogix platform PLC and remote I/O (RIO) racks. The project will remove the two existing independent PLCs associated with the gravity belt thickeners (GBTs) and provide new RIO racks and network infrastructure from each of the new RIO racks back to the new Headworks PLC. The new PLC will be connected by fiber optic to the plantwide SCADA system. The work will eliminate the existing Data Highway Plus (“blue hose”) cable. Physical PLC replacement work has been designed by Consultant and will be procured and installed by the Construction Contractor.

**Software Development:** PLC and HMI software modifications are required to support the Headworks PLC replacement and addition of new process equipment associated with the solids treatment process changes. Software will be developed by Jacobs, including the following tasks:

- Finalization of PLC I/O Lists.
- Development of loop descriptions for PLC/HMI programming.
- PLC and HMI programming. (Note – versions are to be per existing versions.)
- Startup and Testing:
  - SCADA software factory testing and field testing.
- To be completed by Construction Contractor:
  - All construction, field installation, wiring, and testing.
  - Production of red-line markups for PLC I/O wiring drawings.

### Task 5.1: Loop Description Development

Consultant will provide up to 200 hours of labor for development of:

- Loop descriptions to define the new automated monitoring and control functions associated with the new process equipment and for the replacement PLC.
- Final PLC I/O assignment including reassignment for PLC-30 and GBT 1 and 2 PLCs.
- Rockwell Automation PLC conversion planning.
- Export InTouch tag database.
- HMI/PLC coordination with ATAD equipment vendor to identify SCADA HMI monitoring, PLC minor and major alarms, control interfaces, and all PLC tags.

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- Quality control review of loop descriptions and PLC replacement approaches.

### **Task 5.2: Loop Description Review Workshops**

Consultant will provide up to 60 hours of labor to lead up to three four-hour onsite workshops to review draft loop descriptions with City staff so they can be finalized for programming. This effort includes effort to plan the detailed software conversion of the two existing GBT 1 and GBT 2 PLCs, the existing PLC-30, and the integration of the ATAD equipment vendor PLC. Tasks include:

- Review revised PLC I/O list with new tags for PLC-30, GBT 1, GBT 2.
- Detailed documentation of existing InTouch graphics to be modified.
- Up to three onsite workshops and documentation.

### **Task 5.3: SCADA PLC/HMI Software Programming and Factory Testing (Offsite)**

Consultant will provide programming and factory testing of the PLC and HMI software to provide the new automated monitoring and control functions defined in the final approved loop descriptions. The scope of work includes development of new ControlLogix PLC programs, new HMI graphics, modifications to existing HMI graphics, and alarm dialer and historian modifications. Consultant will lead up to two (2) 4-hour onsite workshops with City staff to review the final draft HMI graphics. Consultant will provide all PLC programming, all HMI configuration, and will perform software factory testing at Consultant's Corvallis, Oregon office.

- GBT 1 new program.
- GBT 2 new program.
- PLC-30 new program of all existing I/O.
- PLC-30 new program for new I/O (including interface to ATAD vendor system).
- Coordination with ATAD vendor for plant SCADA HMI including graphics, alarms, historical trending.
- Two HMI graphics and operations workshops.
- Edit of existing plant SCADA HMI graphics to link graphics to new PLC-30 tags.
- Alarm dialer configuration, testing, implementation.
- Historian configuration.
- Software factory testing and quality control review.
- Data exchange to the HachWIMS operational system.

Consultant's estimated level of effort is based on approximately 510 hours of programming, 40 hours (1 week) of factory testing, and up to 60 hours to push data to the existing HachWIMS reporting tool. (Note - all HachWIMS report configuration to be by the City). Consultant will provide up to a total of 610 hours of labor for this task.

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## Task 5.4: Field Testing

Consultant will provide onsite testing of the new SCADA PLC and HMI software functions following completion of the programming and factory testing effort. Consultant will coordinate with plant staff to plan for SCADA system downtime to accommodate the field-testing effort. Consultant will document field test completion for record.

Consultant will provide up to allowance of 100-hours of onsite labor for component and functional field-testing coordination with the Contractor, plus up to 64-hours for Consultant to provide support via remote access connection. The level of effort estimate assumes 31 days (10 hours per day) of effort in accordance with Section 01 91 14 for Software Operational Testing. All Owner operations training will be provided during the Software Operational Testing.

- Software Operational Testing durations (per Specification 01 91 14) are:
  - PLC-30 replacement – 15 days
  - GBT 1 – 5 days
  - GBT 2 – 5 days
  - Odor Fan – 4 days
  - Thickened Sludge Pumps – 2 days
- Component/Functional Test Support – allowance of 10 days
- Post startup support – allowance of 8 days

**Task 5 Deliverables:** *Consultant will provide one electronic PDF copy of each deliverable identified below via email. Native document copies will be provided with the final deliverables. No hard copies will be provided.*

- *Final PLC I/O lists*
- *Draft and final loop descriptions*
- *Loop description review meeting notes and action log*
- *Final loop description acceptance forms*
- *Final PLC programs and HMI system configurations (also via electronic PLC and HMI files)*
- *Factory test documentation*
- *Field test documentation*

### **Assumptions**

- The project will duplicate the existing SCADA software control functions by replacing the existing PLC 5 ladder logic with ControlLogix ladder logic. The scope of work assumes Consultant will reverse engineer the existing PLC software functions and document them in written loop descriptions for review by City staff prior to commencement of programming. The existing HMI graphics will remain

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the same except to replace the existing PLC 5 tags with the new ControlLogix PLC tags.

- For software planning:
  - City staff will provide review and approval of final loop descriptions in workshops prior to commencement of programming. Changes to software functions after City acceptance of loop descriptions will constitute a change warranting additional compensation. The project approach is intended to provide review and input by City staff but eliminate the potential for re-work after the programming effort has begun.
  - The City's software standards have been defined on previous work at the WRF. The scope of work does not include development of written software standards. Separate scope and fee can be negotiated if the City desires written documentation of the SCADA standards.
- For SCADA software programming and factory testing:
  - Scope is limited to programming for PLC, HMI, historian, and software alarm dialer. No other programming is included.
  - All PLC and HMI programming will be done using City's standard approaches.
  - The estimated level of effort for development of the new HMI graphics is based on reusing the plant's existing HMI graphics, new graphics for new equipment, and following similar VNC remote approach to the new ATAD package system as was done for the recent UV project. The level of effort assumes Consultant will only create graphics for new process equipment and process flow and include provisions for the new automated monitoring and control functions.
  - It is assumed that I/O for the new vendor package ATAD system is communicated to the main plant PLC over ethernet.
  - The level of effort assumes that animation for process piping will NOT be used.
  - SCADA software factory testing will be accommodated using ControlLogix PLC hardware provided within the Contract Documents.
  - All ATAD package system PLC and PanelView programming required for this project will be provided by the ATAD package vendor.
- For construction and field testing:
  - The migration of PLC systems to ControlLogix will affect plant operation, typically requiring manual control and some plant operations staff overtime for periods of time. When a system is migrated, the existing PLC will be taken offline and disconnected before the new PLC system is installed and wired. Major software testing and process startup will only begin after all of

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the new PLC rack's I/O wiring is re-terminated. Labor for a loop-by-loop migration from the existing PLC to the new ControlLogix PLC is included in accordance with the durations in Section 01 91 14.

- A remote access connection will be available for system troubleshooting and maintenance by Consultant staff.
- The scope of work assumes the plant's existing infrastructure is in good working order. Consultant has not included labor effort for troubleshooting existing systems or infrastructure.
- The following work is NOT INCLUDED:
  - Any configuration of temporary PLC programs or HMI graphics. We assume programming and field testing for each system can be done in one effort. Multiple versions of programs or temporary programming for system migration or new construction are not required.
  - Any PanelView programming.
  - Any PLC programming for package system PLCs.
  - Any work associated with automated reports configuration. The level of effort estimate does not include any labor associated with automated reports.

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## **Task 6: Services During the Closeout and Warranty Phases**

Consultant shall assist the City in closing out the contract for construction and commencement of the City's use of the completed work. Consultant's services will include the following:

### **Task 6.1: Substantial and Final Completion**

Consultant shall assist the City in issuing documents for substantial completion and acceptance of the work. Consultant shall advise the City on payment and partial release of retention.

Consultant shall assist the City in issuing documents for final completion and acceptance of the work. Consultant shall advise the City on final payment, release of retention, and release of insurance and bonds.

### **Task 6.2: Occupancy and Start-Up Permits**

Consultant shall assist the City with securing occupancy and start-up permits. Should the contract for construction require the Construction Contractor to secure such permits, Consultant shall monitor the Construction Contractor's efforts and will advise the City of the Construction Contractor's progress. Should the City be required to secure such permits, Consultant shall assist the City by coordinating final inspections, submitting documents to Yamhill County and coordinating inspections by the County.

### **Task 6.3: Warranties, Guarantees, Lien Releases**

Consultant shall coordinate with the Construction Contractor for the submission of required warranties, guarantees, lien releases and other similar documents as required by the contract for construction. Consultant shall advise the City as to the acceptability and compliance of these documents with the contract for construction.

Effort associated with this task is accounted for within Task 3.8 Field Inspection.

### **Task 6.4: Close-out File and Records**

Consultant shall provide to the City an organized set of project documents and records. This will be an electronic record from the document management system.

*Task 6.4 Deliverables: Organized set of project documents and records.*

### **Task 6.5: Record Drawings**

Consultant shall revise the original design drawings to reflect available record information provided by the Construction Contractor and equipment suppliers. One CD-based electronic copy in AutoCAD format and three hard copies will be submitted to the City.

*Task 6.5 Deliverables: Three 11 x 17 hard copies, one full size set, and one CD-based electronic copy in AutoCAD and PDF format.*

### **Task 6.6: Warranty Period Services**

Consultant shall provide the following warranty performance review services during the one-year warranty period to assist the City in coordinating corrections of deficient equipment or construction:

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- Participate in an end-of-warranty period inspection one month prior to completion of the warranty period and provide a letter identifying any deficiencies found and recommended actions.
  - Provide periodic onsite observation during correction of the deficiencies. Three (3) visits are included.

An allowance of 120 hours is provided for this task.

***Task 6.6 Deliverables:*** *Written warranty performance review findings, site visit notes.*

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## **Task 7: Pavement Assessment**

The McMinnville WRF was constructed in 1995, and much of the asphalt pavement is original. The City has requested that Consultant conduct a pavement condition assessment and recommendations report to assist the City in developing a maintenance plan.

### **Task 7.1: Data Collection**

Consultant will review past project documentation to understand paving history at the WRF.

### **Task 7.2: Site Visit**

Two members of Consultant's staff shall visit the WRF site to review and document existing conditions. Documentation will include photos of representative areas of paving and measurements. Testing of asphalt and/or subgrade is not included.

### **Task 7.3: Report**

Consultant shall prepare a report that documents existing pavement conditions and recommends repairs. Repair method and repair priority will likely vary, depending on conditions found. The report will document an estimated timeline of recommended repairs and future maintenance.

*Task 7 Deliverables: Pavement Assessment Report.*



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**Task 8: Professional Services Reserve**

The Level of Effort includes an allowance for additional services that are requested by the City. The Consultant shall provide the services upon written authorization of the City.

Summary  
 Estimated Level of Effort  
 McMinnville WRF Solids Treatment Capacity Improvements Project  
 Services During Construction Phase

| Task No. | Task/Subtask                                     | Jacobs Labor |                    | Jacobs Expenses | Total Jacobs Labor and Expenses | Total Subconsultants |                     |
|----------|--|--------------|--------------------|-----------------|---------------------------------|----------------------|---------------------|
|          |  | Hours Total  | \$ Total           |                 |                                 |                      |                     |
| 1.0      | Project Management                               |              | \$60,034           | \$0             | \$60,034                        | \$ -                 |                     |
|          | Task Hours                                       | 300          |                    |                 |                                 |                      |                     |
| 2.0      | Conformed Documents                              |              | \$14,267           | \$500           | \$14,767                        | \$ -                 |                     |
|          | Task Hours                                       | 76           |                    |                 |                                 |                      |                     |
| 3.0      | Services During Construction                     |              | \$1,349,467        | \$25,643        | \$1,375,110                     | \$ 79,000            |                     |
|          | Task Hours                                       | 7009         |                    |                 |                                 |                      |                     |
| 4.0      | Commissioning and Training                       |              | \$114,117          | \$500           | \$114,617                       | \$ -                 |                     |
|          | Task Hours                                       | 588          |                    |                 |                                 |                      |                     |
| 5.0      | Software Development and Testing                 |              | \$349,281          | \$11,000        | \$360,281                       | \$ 26,000            |                     |
|          | Task Hours                                       | 1684         |                    |                 |                                 |                      |                     |
| 6.0      | Services During the Closeout and Warranty Phases |              | \$77,308           | \$750           | \$78,058                        | \$ -                 |                     |
|          | Task Hours                                       | 446          |                    |                 |                                 |                      |                     |
| 7.0      | Pavement Assessment                              |              | \$9,179            | \$0             | \$9,179                         | \$ -                 |                     |
|          | Task Hours                                       | 50           |                    |                 |                                 |                      |                     |
| 8.0      | Professional Services Reserve                    |              | \$99,983           | \$0             | \$99,983                        | \$ -                 |                     |
|          | Task Hours                                       | 466          |                    |                 |                                 |                      |                     |
|          | <b>TOTAL</b>                                     | <b>10619</b> | <b>\$2,073,636</b> | <b>\$38,393</b> | <b>\$2,112,029</b>              | <b>\$ 105,000</b>    |                     |
|          |  |              |                    |                 | <b>\$2,112,029</b>              | <b>\$ 105,000</b>    |                     |
|          |  |              |                    |                 | 2024 Jacobs Labor Escalation    | <b>\$40,933</b>      | <b>\$ 2,257,962</b> |

**Detailed  
Estimated Level of Effort  
McMinnville WRF Solids Treatment Capacity Improvements Project  
Services During Construction Phase**

| Task No. | Task/Subtask  | J Koch<br>PM<br>\$ 243 | L Sherwood<br>CM<br>\$ 190 | Senior QC<br>\$ 295 | B Reistad<br>Process<br>(Solids)<br>\$ 239 | T Greeley<br>Process<br>\$ 195 | L Bhaumik<br>Geotech<br>\$ 134 | K Galardi<br>Odor<br>\$ 235 | T Cotten<br>Geotech<br>\$ 300 | A Firth<br>Structural<br>\$ 267 | E Gray<br>Arch<br>\$ 142 | S Kummer<br>Landscape<br>\$ 183 | S Chandler<br>Civil<br>\$ 162 | J Cutz<br>Bldg Serv<br>\$ 144 | S Baar<br>Mech<br>\$ 131 | A Sittel<br>Proj Site<br>\$ 128 |
|----------|---|------------------------|----------------------------|---------------------|--|--------------------------------|--------------------------------|-----------------------------|-------------------------------|---------------------------------|--------------------------|---------------------------------|-------------------------------|-------------------------------|--------------------------|---------------------------------|
| 1.0      | <b>Project Management</b>                               | \$ 31,587              | \$ 17,100                  | \$ -                | \$ -                                       | \$ -                           | \$ -                           | \$ -                        | \$ -                          | \$ -                            | \$ -                     | \$ -                            | \$ -                          | \$ -                          | \$ -                     | \$ -                            |
|          | Task Hours  | 130                    | 90                         | 0                   | 0  | 0                              | 0                              | 0                           | 0                             | 0                               | 0                        | 0                               | 0                             | 0                             | 0                        | 0                               |
| 2.0      | <b>Conformed Documents</b>                              | \$ 2,916               | \$ -                       | \$ -                | \$ -                                       | \$ -                           | \$ -                           | \$ -                        | \$ -                          | \$ -                            | \$ -                     | \$ -                            | \$ -                          | \$ -                          | \$ -                     | \$ -                            |
|          | Task Hours  | 12                     | 0                          | 0                   | 0  | 0                              | 0                              | 0                           | 0                             | 0                               | 0                        | 0                               | 0                             | 0                             | 0                        | 0                               |
| 3.0      | <b>Services During Construction</b>                     | \$ 258,529             | \$ 659,870                 | \$ -                | \$ 20,055                                  | \$ 45,257                      | \$ 12,899                      | \$ 43,272                   | \$ -                          | \$ 58,782                       | \$ 20,492                | \$ 12,421                       | \$ 20,101                     | \$ 18,677                     | \$ 84,517                | \$ 6,651                        |
|          | Task Hours  | 1064                   | 3473                       | 0                   | 84   | 232                            | 96                             | 184                         | 0                             | 220                             | 144                      | 68                              | 124                           | 130                           | 646                      | 52                              |
| 4.0      | <b>Commissioning and Training</b>                       | \$ 26,242              | \$ 1,520                   | \$ 2,360            | \$ 8,595                                   | \$ 17,166                      | \$ -                           | \$ 16,932                   | \$ -                          | \$ -                            | \$ 1,138                 | \$ 731                          | \$ 1,297                      | \$ 4,597                      | \$ 7,327                 | \$ -                            |
|          | Task Hours  | 108                    | 8                          | 8                   | 36   | 88                             | 0                              | 72                          | 0                             | 0                               | 8                        | 4                               | 8                             | 32                            | 56                       | 0                               |
| 5.0      | <b>Software Development and Testing</b>                 | \$ 11,663              | \$ -                       | \$ -                | \$ 9,550                                   | \$ 7,803                       | \$ -                           | \$ 7,526                    | \$ -                          | \$ -                            | \$ -                     | \$ -                            | \$ -                          | \$ 2,299                      | \$ 3,140                 | \$ -                            |
|          | Task Hours  | 48                     | 0                          | 0                   | 40   | 40                             | 0                              | 32                          | 0                             | 0                               | 0                        | 0                               | 0                             | 16                            | 24                       | 0                               |
| 6.0      | <b>Services During the Closeout and Warranty Phases</b> | \$ 22,354              | \$ 19,760                  | \$ -                | \$ -                                       | \$ 1,561                       | \$ -                           | \$ 1,881                    | \$ -                          | \$ 2,138                        | \$ 1,138                 | \$ -                            | \$ -                          | \$ 1,149                      | \$ 8,373                 | \$ -                            |
|          | Task Hours  | 92                     | 104                        | 0                   | 0  | 8                              | 0                              | 8                           | 0                             | 8                               | 8                        | 0                               | 0                             | 8                             | 64                       | 0                               |
| 7.0      | <b>Pavement Assessment</b>                              | \$ 972                 | \$ 1,140                   | \$ 1,180            | \$ -                                       | \$ -                           | \$ -                           | \$ -                        | \$ -                          | \$ -                            | \$ -                     | \$ -                            | \$ 5,511                      | \$ -                          | \$ -                     | \$ -                            |
|          | Task Hours  | 4                      | 6                          | 4                   | 0  | 0                              | 0                              | 0                           | 0                             | 0                               | 0                        | 0                               | 34                            | 0                             | 0                        | 0                               |
| 8.0      | <b>Professional Services Reserve</b>                    | \$ 52,483              | \$ 47,500                  | \$ -                | \$ -                                       | \$ -                           | \$ -                           | \$ -                        | \$ -                          | \$ -                            | \$ -                     | \$ -                            | \$ -                          | \$ -                          | \$ -                     | \$ -                            |
|          | Task Hours  | 216                    | 250                        | 0                   | 0  | 0                              | 0                              | 0                           | 0                             | 0                               | 0                        | 0                               | 0                             | 0                             | 0                        | 0                               |
|          | <b>TOTAL</b>  |                        |                            |                     |  |                                |                                |                             |                               |                                 |                          |                                 |                               |                               |                          |                                 |
|          | <b>Cost</b>   | \$ 406,745             | \$ 746,890                 | \$ 3,540            | \$ 38,199                                  | \$ 71,787                      | \$ 12,899                      | \$ 69,611                   | \$ -                          | \$ 60,920                       | \$ 22,769                | \$ 13,151                       | \$ 26,909                     | \$ 26,722                     | \$ 103,357               | \$ 6,651                        |
|          | <b>Hours</b>  | 1674                   | 3931                       | 12                  | 160  | 368                            | 96                             | 296                         | 0                             | 228                             | 160                      | 72                              | 166                           | 186                           | 790                      | 52                              |

Estimated Level of Effort  
 McMinnville WRF Solids Treatment Capacity Improvements Project  
 Services During Construction Phase

| Task No. | Task/Subtask                                     | L Wood       | G Erb        | K Brown      | T Scott      | M Valenzuela         | K Malin         | R Cowan       | N Huber           | B Gyaourova         | H Jochimsen          | J Turney          | B Kiser            | C McCoy            | J Boss            | M Schymtzik      |
|----------|--|--------------|--------------|--------------|--------------|----------------------|-----------------|---------------|-------------------|---------------------|----------------------|-------------------|--------------------|--------------------|-------------------|------------------|
|          |  | IC<br>\$ 295 | IC<br>\$ 274 | IC<br>\$ 190 | IC<br>\$ 212 | Electrical<br>\$ 130 | Specs<br>\$ 168 | DDL<br>\$ 183 | Mech CAD<br>\$ 89 | Civil CAD<br>\$ 110 | Struct CAD<br>\$ 134 | Arch CAD<br>\$ 76 | Odor CAD<br>\$ 111 | Elect CAD<br>\$ 77 | I&C CAD<br>\$ 108 | Editor<br>\$ 188 |
| 1.0      | Project Management                               | \$ -         | \$ -         | \$ -         | \$ -         | \$ -                 | \$ -            | \$ -          | \$ -              | \$ -                | \$ -                 | \$ -              | \$ -               | \$ -               | \$ -              | \$ -             |
|          | Task Hours                                       | 0            | 0            | 0            | 0            | 0                    | 0               | 0             | 0                 | 0                   | 0                    | 0                 | 0                  | 0                  | 0                 | 0                |
| 2.0      | Conformed Documents                              | \$ -         | \$ -         | \$ -         | \$ -         | \$ -                 | \$ 4,021        | \$ 7,331      | \$ -              | \$ -                | \$ -                 | \$ -              | \$ -               | \$ -               | \$ -              | \$ -             |
|          | Task Hours                                       | 0            | 0            | 0            | 0            | 0                    | 24              | 40            | 0                 | 0                   | 0                    | 0                 | 0                  | 0                  | 0                 | 0                |
| 3.0      | Services During Construction                     | \$ 11,800    | \$ 16,426    | \$ 27,781    | \$ -         | \$ 31,940            | \$ -            | \$ -          | \$ -              | \$ -                | \$ -                 | \$ -              | \$ -               | \$ -               | \$ -              | \$ -             |
|          | Task Hours                                       | 40           | 60           | 146          | 0            | 246                  | 0               | 0             | 0                 | 0                   | 0                    | 0                 | 0                  | 0                  | 0                 | 0                |
| 4.0      | Commissioning and Training                       | \$ -         | \$ 5,475     | \$ 3,806     | \$ -         | \$ 5,193             | \$ -            | \$ -          | \$ -              | \$ -                | \$ -                 | \$ -              | \$ -               | \$ -               | \$ -              | \$ 7,514         |
|          | Task Hours                                       | 0            | 20           | 20           | 0            | 40                   | 0               | 0             | 0                 | 0                   | 0                    | 0                 | 0                  | 0                  | 0                 | 40               |
| 5.0      | Software Development and Testing                 | \$ 21,830    | \$ 20,258    | \$ 146,896   | \$ 114,736   | \$ 2,077             | \$ -            | \$ -          | \$ -              | \$ -                | \$ -                 | \$ -              | \$ -               | \$ -               | \$ -              | \$ 1,503         |
|          | Task Hours                                       | 74           | 74           | 772          | 540          | 16                   | 0               | 0             | 0                 | 0                   | 0                    | 0                 | 0                  | 0                  | 0                 | 8                |
| 6.0      | Services During the Closeout and Warranty Phases | \$ -         | \$ -         | \$ 1,522     | \$ -         | \$ 1,039             | \$ -            | \$ 7,331      | \$ 1,789          | \$ 2,208            | \$ 1,339             | \$ 758            | \$ 1,113           | \$ 774             | \$ 1,082          | \$ -             |
|          | Task Hours                                       | 0            | 0            | 8            | 0            | 8                    | 0               | 40            | 20                | 20                  | 10                   | 10                | 10                 | 10                 | 10                | 0                |
| 7.0      | Pavement Assessment                              | \$ -         | \$ -         | \$ -         | \$ -         | \$ -                 | \$ -            | \$ -          | \$ -              | \$ -                | \$ -                 | \$ -              | \$ -               | \$ -               | \$ -              | \$ 376           |
|          | Task Hours                                       | 0            | 0            | 0            | 0            | 0                    | 0               | 0             | 0                 | 0                   | 0                    | 0                 | 0                  | 0                  | 0                 | 2                |
| 8.0      | Professional Services Reserve                    |              | \$ -         | \$ -         | \$ -         | \$ -                 | \$ -            | \$ -          | \$ -              | \$ -                | \$ -                 | \$ -              | \$ -               | \$ -               | \$ -              | \$ -             |
|          | Task Hours                                       | 0            | 0            | 0            | 0            | 0                    | 0               | 0             | 0                 | 0                   | 0                    | 0                 | 0                  | 0                  | 0                 | 0                |
|          | <b>TOTAL</b>                                     |              |              |              |              |                      |                 |               |                   |                     |                      |                   |                    |                    |                   |                  |
|          | <b>Cost</b>                                      | \$ 33,630    | \$ 42,159    | \$ 180,005   | \$ 114,736   | \$ 40,249            | \$ 4,021        | \$ 14,661     | \$ 1,789          | \$ 2,208            | \$ 1,339             | \$ 758            | \$ 1,113           | \$ 774             | \$ 1,082          | \$ 9,393         |
|          | <b>Hours</b>                                     | 114          | 154          | 946          | 540          | 310                  | 24              | 80            | 20                | 20                  | 10                   | 10                | 10                 | 10                 | 10                | 50               |

Estimated Level of Effort  
 McMinnville WRF Solids Treatment Capacity Improvements Project  
 Services During Construction Phase

| Task No. | Task/Subtask                                     | G Bates / L<br>Hurt<br>Project<br>Controls | T Riddle<br>Admin | Jacobs Labor   |                    | Jacobs Expenses | Total Jacobs<br>Labor and<br>Expenses | Total<br>Subconsultants                          |
|----------|--|--|-------------------|----------------|--------------------|-----------------|---------------------------------------|--|
|          |  | \$ 142                                     | \$ 106            | Hours<br>Total | \$<br>Total        |                 |                                       |  |
| 1.0      | Project Management                               | \$ 11,347                                  | \$ -              |                | \$60,034           | \$0             | \$60,034                              | \$ -   |
|          | Task Hours                                       | 80   | 0                 | 300            |                    |                 |                                       |  |
| 2.0      | Conformed Documents                              | \$ -                                       | \$ -              |                | \$14,267           | \$500           | \$14,767                              | \$ -   |
|          | Task Hours                                       | 0  | 0                 | 76             |                    |                 |                                       |  |
| 3.0      | Services During Construction                     | \$ -                                       | \$ -              |                | \$1,349,467        | \$25,643        | \$1,375,110                           | \$ 79,000  |
|          | Task Hours                                       | 0  | 0                 | 7009           |                    |                 |                                       |  |
| 4.0      | Commissioning and Training                       | \$ -                                       | \$ 4,223          |                | \$114,117          | \$500           | \$114,617                             | \$ -   |
|          | Task Hours                                       | 0  | 40                | 588            |                    |                 |                                       |  |
| 5.0      | Software Development and Testing                 | \$ -                                       | \$ -              |                | \$349,281          | \$11,000        | \$360,281                             | \$ 26,000  |
|          | Task Hours                                       | 0  | 0                 | 1684           |                    |                 |                                       |  |
| 6.0      | Services During the Closeout and Warranty Phases | \$ -                                       | \$ -              |                | \$77,308           | \$750           | \$78,058                              | \$ -   |
|          | Task Hours                                       | 0  | 0                 | 446            |                    |                 |                                       |  |
| 7.0      | Pavement Assessment                              | \$ -                                       | \$ -              |                | \$9,179            | \$0             | \$9,179                               | \$ -   |
|          | Task Hours                                       | 0  | 0                 | 50             |                    |                 |                                       |  |
| 8.0      | Professional Services Reserve                    | \$ -                                       | \$ -              |                | \$99,983           | \$0             | \$99,983                              | \$ -   |
|          | Task Hours                                       | 0  | 0                 | 466            |                    |                 |                                       |  |
|          | <b>TOTAL</b>                                     |  |                   | <b>10619</b>   | <b>\$2,073,636</b> | <b>\$38,393</b> | <b>\$2,112,029</b>                    | <b>\$ 105,000</b>                                |
|          | <b>Cost</b>                                      | \$ 11,347                                  | \$ 4,223          |                |                    |                 |                                       |  |
|          | <b>Hours</b>                                     | 80   | 40                |                |                    |                 |                                       |  |
|          |  |  |                   |                |                    |                 | 2024 Jacobs Labor Escalation          | \$ 2,112,029 \$ 105,000<br>\$40,933 \$ 2,257,962 |