



August 10, 2023

BCC Agenda Date/Item: _____

Board of County Commissioners
 Acting as the governing body of Water Environment Services
 Clackamas County

Approval of Amendment #2, for Contract #5222 with Consor North America, Inc. to begin Phase II final design work on the Intertie 2 Pump Station & Force Main Expansion. Amendment value is \$735,558.00 extending the contract date to 6/30/2025, and increasing Total contract value to \$1,836,266.00. Funding is through Water Environment Services Sanitary Sewer Construction Fund. No County General Funds are involved.

Previous Board Action/Review	Presented at Issues – August 8, 2023.		
Performance Clackamas	1. This project supports the WES Strategic Plan to provide Enterprise Resiliency, infrastructure Strategy and Performance and Operational Optimization. 2. This project supports the County’s Strategic Plan of building a strong infrastructure that delivers services to customers and honors, utilizes, promotes and invest in our natural resources.		
Counsel Review	Yes	Procurement Review	Yes
Contact Person	Jeff Stallard	Contact Phone	503-278-2311

EXECUTIVE SUMMARY: The Intertie 2 Pump Station diverts flow in excess of the Kellogg Creek Water Resource Recovery Facility (WRRF) capacity to the Tri-City WRRF. The pump station is at capacity and was constructed so that pumps can be added to increase capacity. The 30-inch pressurized force main from the pump station to the Tri-City WRRF was partially constructed during the original construction of the pump station and force main. The purpose of this project is to construct the remaining segments of the 30-inch force main to increase the pumping capacity of the Intertie 2 Pump station to accommodate future peak flows as identified in the Sanitary Sewer Master Plan.

The design and construction of the improvements for this system have been broken into two separate bid packages (Force Main and Pump Station). This amendment includes the work to develop both bid packages; for the pump station and diversion structure, this amendment includes the development of the improvements identified in the conceptual design which

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was part of the original contract; for the force main, additional work around utility conflicts and bidding support.

WES anticipates additional amendments on this project for engineering services during construction as was identified in the initial procurement of these services.

RECOMMENDATION: Staff recommends the Board approve the amendment between Water Environment Services and Consor North America, Inc. for Phase II final design Work on the Intertie 2 Pump Station & Force Main Expansion.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Greg L Geist", with a long horizontal flourish extending to the right.

Greg Geist
Director, WES

Attachment: Contract 5222

AMENDMENT #2
TO THE CONTRACT DOCUMENTS WITH CONSOR NORTH AMERICA, INC. FOR
INTERTIE 2 PUMP STATION & FORCE MAIN EXPANSION
Contract #5222

This Amendment #2 is entered into between **CONSOR North America, Inc.** (“Contractor”) and Water Environment Services (“District”) and shall become part of the Contract documents entered into between both parties on **March 24, 2022** (“Contract”).

The Purpose of this Amendment #2 is to make the following changes to the Contract:

1. ARTICLE I, Section 1. **Effective Date and Duration** is hereby amended as follows:
The Contract termination date is hereby changed from June 30, 2024 to **June 30, 2025**.
2. ARTICLE I, Section 2. **Scope of Work** is hereby amended as follows:
District has authorized an increase to Scope of Work for Contractor to begin Phase II final design Work on the Intertie 2 Pump Station & Force Main Expansion as contemplated by the original Contract Scope of Work. The supplemental Scope of Work for Phase II is hereby attached and incorporated by reference as Exhibit C.
3. ARTICLE I, Section 3. **Consideration** is hereby amended as follows:
District is authorizing an additional \$735,558.00 for Phase II Work to be performed. Contractor’s Fee Schedule for Phase II Work is hereby attached and incorporated by reference as Exhibit D. The maximum compensation authorized under this Contract shall not exceed \$1,836,266.00.

ORIGINAL CONTRACT	\$ 1,100,708.00
AMENDMENT #1	Name Change
<u>AMENDMENT #2</u>	<u>\$ 735,558.00</u>
TOTAL AMENDED CONTRACT	\$ 1,836,266.00

Except as expressly amended above, all other terms and conditions of the Contract shall remain in full force and effect. By signature below, the parties agree to this Amendment #2, effective upon the date of the last signature below.

CONSOR North America, Inc.



Authorized Signature 07-26-2023
Date

Michael Carr

Printed Name

Water Environment Services

Chair

Recording Secretary

Date

Approved as to Form



County Counsel 7/28/23
Date

Exhibit C
Scope of Work for Phase II

SCOPE OF WORK

INTERTIE 2 PUMP STATION & FORCE MAIN

EXPANSION PROJECT – PHASE 2

CLACKAMAS WATER ENVIRONMENT SERVICES

Introduction

Clackamas County Water Environmental Services (WES) requires that the capacity of its Intertie 2 Diversion Pump Station and force main system be expanded. Constructed in 2011, the pump station has a firm capacity of 10 million gallons per day (mgd) and features two 5-mgd and two 10-mgd submersible pumps. The station pumps to the Tri-City Water Resource and Recovery Facility (WRRF), an approximate distance of 4 miles, through a 20-inch diameter ductile iron force main. The pump station and force main were designed to allow expansion to a firm capacity of approximately 27 mgd through the addition of one 10-mgd pump and a parallel 30-inch diameter force main. Approximately two miles of the future 30-inch diameter force main was constructed in 2012 alongside the 20-inch diameter pipeline, in six separate sections.

The goal of the expansion project includes adding a fifth pump with 10-mgd capacity and completing installation of the parallel 30-inch diameter pipeline. This will increase the total station capacity to over 19 mgd as recommended in the Sanitary Sewer Master Plan (2019).

Phase 1 of the expansion project was initiated in 2022 to perform final design of the remaining 30-inch diameter force main sections and preliminary design for the pump station improvements. The preliminary design efforts included hydraulic analysis of the wet well, diversion structure and force main, and development of operational strategies for the expanded diversion facilities.

This scope of work includes the following professional services to complete Phase 2 of the expansion project: 1) develop the bid-ready documents for the pump station improvements, including furnishing and installing the new 10-mgd pump and associated electrical and mechanical appurtenances; 2) develop bid-ready documents for improvements to the existing diversion structure, to include civil, mechanical, structural, electrical, and instrumentation and control elements; and 3) perform bid period services for the pump station and diversion structure improvements. The scope of work also includes additional design services needed to complete the 30" force main contract documents for Phase 1 of the project.

The Phase 2 scope of work included herein is anticipated to be added by contract amendment. Construction support services for the two construction packages are anticipated to be added to the contract in future amendments.

General Assumptions

- Existing conduits will be used for electrical and control wiring between the pump station and diversion structure for two control gates. Currently there are four conduits shown in existing Intertie 2 Pump Station drawings.
- Improvements to the pump station building structure to meet current building code, where not required due to scoped modifications, are not included.
- Project meeting space will include a large screen or projector to facilitate presentation to attendees, or will be conducted remotely using Zoom, Teams, or similar platform.
- District staff will provide comments within two weeks of workshop presentations or submitted deliverables.
- Consultant shall use 49 Division format master specifications. Consultant shall provide Division 1 and technical specifications for project use and District review and comment.
- Where deliverable documents are identified, hereinafter, four (4) hard copies of the deliverable will be provided in addition to an electronic version in .PDF and original .DOC format.
- The Consultant's standard CAD software (AutoCAD) will be used to produce the drawings, following its own drafting standards. Final record drawings files will be delivered to WES in AutoCAD format.

District-Provided Services

The District will provide the following services for this project:

- Provide as-built drawings, condition studies, master plans, or other relevant documents that can be used to develop schematic designs.
- Provide access to the pump station site and diversion structure and be present to explain operating procedures and maintenance issues to the Consultant.
- Provide a Project Manager who will act as point of contact for requests for information and deliverables reviews.
- Provide Division 0 specifications using EJCDC.
- Furnish consolidated written review comments on deliverables.
- Organize meetings with WES staff as needed to solicit input.
- Sign permit applications forms and pay fees directly to the agency.

- Lead the bid period services for the diversion facilities construction package.

Scope of Services

Task 1 - Project Management (Existing Task Supplement)

Objective:

Provide leadership and team strategic guidance aligned with WES staff objectives. Coordinate, monitor, and control the project resources to meet the technical, communication, and contractual obligations required for developing and implementing the project scope.

Activities:

- Conduct regular status meetings with District PM
- Prepare monthly invoices and progress reports

Deliverables:

- Regular project status meeting notes
- Monthly invoices with progress report, task-level budget report
- Project schedule updated and submitted with invoices

Task 2 – Quality Management (Existing Task Supplement)

Objective:

Consultant shall monitor the quality of the Project and perform internal quality assurance/quality control (QA/QC) reviews as described herein.

Activities:

- Conduct quality reviews in accordance with the Quality Management Plan (QMP). Prepare documentation demonstrating the quality review process is complete and review comments are adequately addressed. Quality Review Forms shall be prepared, collected, and properly stored in the project records system.

Deliverables:

- Documentation of QC reviews will be provided on Consultant’s standard QA/QC form, as requested.

Assumptions:

- QA/QC reviews will be performed by consultant staff not directly involved with the project design team.

Task 5 – Prepare Force Main 90% Contract Documents (Existing Task Supplement)

Objective:

Perform additional activities needed for development of 90% Contract Documents for the force main bid set.

Task 5.1 – Utility Coordination at 90% Design (Existing Task Supplement)

- Perform additional utility potholing at locations coordinated with District staff, with numbered survey pin to provide a reference mark for survey. Prepare potholing reports noting the depth from the surface to the top and bottom of the utility structure.
- Perform field surveying to locate the utility potholing record pins. Perform associated tasks to coordinate and process the potholing data.
- Perform coordination with affected utility owners to plan and execute the utility locating work, share results, and determine if further investigations beyond the total number assumed below may be necessary.
- Coordinate and provide field observations of utility potholing and directing subcontractor operations.

Deliverables:

- Potholing plan and maps identifying pothole location and utility owner.
- Updated Utility Conflict Plan Sheets and Utility Conflict List.
- Utility meeting agenda and minutes and email documentation.

Assumptions:

- A maximum of 50 additional utility location potholes will be performed. Additional utility location potholes are beyond the scope of these services and will require additional fee.
- Budget includes 10 days of on-site field observations.

Task 5.2 – Prepare Force Main 90% Design (Existing Task Supplement)

Activities:

- Respond to District review comments in Quality Review Form (QRF).
- Prepare 90% design level drawings for four (4) relocations of Clackamas River Water (CRW)-owned water facilities as identified in the 60 percent design submittal and as discussed with CRW staff and acknowledged by District staff.
- Include in the 90% design level drawings coordination with City of Gladstone and City of Oregon City regarding contractor potholing and review of existing thrust restraint and potential conflict with City-owned water facilities as identified in the 60 percent design submittal and as discussed with City staff and acknowledged by District staff.
- Prepare 90% design level drawings for constructing one additional new Odor and Air Valve Assembly (OAVA) site, and improving one additional existing OAVA site, as identified in the 60 percent design submittal and by District staff.
- Coordinate Division 0 specifications for anticipated contract time and description of work.
- Provide technical specifications for waterline relocation work in Division 48 format.
- Prepare a Class 2 Construction Cost Estimate.
- Update the estimated construction schedule.

Deliverables:

- 90% Design Development Drawings and Specifications.
- Class 2 Construction Cost Estimate.

Assumptions:

- Waterline relocations: 6 individual waterline plan sheets, 2 CRW detail sheets (Assume 8 drawings)
- New OAVA Site 6A: 1 Site plan, details (Assume 2 drawings)

- New OAVA Vault (1A) at Existing OAVA Site 1: Plan View and OAVA Site Plan Detail, 1 EC, 1 TC, 1 Vault Detail (Assume 4 drawings)

Task 6 – Prepare Force Main Bid Documents (Existing Task Supplement)

Activities:

- Address and modify the contract documents to address District comments, affected water utility owner comments, and permit plan review comments related to added design elements listed under “Assumptions” section of Task 5.2 (waterline relocations and OAVA Site additions)
- Coordinate standard details to be included.
- Prepare deliverable documents and submit to WES.

Deliverables:

- Final sealed construction documents in PDF format
- Design drawing files in AutoCAD

Assumptions:

- Standard details will be separately bound as 8.5-inch x 11-inch sheets, provided in PDF format only.

Task 7 – Force Main Construction Permits and Approvals (Existing Task Supplement)

Objective:

Perform additional activities needed to assist WES in obtaining permits and approvals from local agencies for construction of the force main project. The additional approvals are listed in Table 1 below.

Table 1 – Force Main Permit Summary

Agency	Anticipated Permits
Oregon Dept. of Transportation (ODOT)	Permit to Work in the Right-of-Way

Activities:

- Coordinate with ODOT to verify applicable permits required and obtain applicable permit application forms.
- Prepare application materials and coordinate with WES for signatures.
- Submit applications on behalf of WES and coordinate with ODOT for conditions of approval.

Deliverables:

- ODOT Right-of-Way permit and application.

Assumptions:

- ODOT permit expected for work at Washington Street and Agnes Avenue.
- No land use review is anticipated to be required for installation.
- Wetland impacts are not anticipated.
- State or federal environmental permits are not included in the scope of work.
- Surface Water Management plan from Clackamas County will not be required.

Task 10 – Diversion Facilities 60% Design Development Documents

Objective:

The purpose of this task is to prepare a 60% Design for the improvements to the pump station and diversion structure (diversion facilities). The 60% documents shall include Division 1 specifications, specifications for major equipment, drawings to the 60% completion level and common details.

Task 10.1 – Topographic Surveying

Activities:

Provide topographic survey services for final design of the diversion facilities as follows:

- Review and compile available information for the pump station site, diversion structure, and connecting facilities.
- Call for one-call utility locate paint marks and as-built maps.

- Establish survey control and field locate existing centerline monuments as well as any monuments that have the potential to be disturbed within the limits of construction.
- Perform detailed topographic survey, to include field survey of existing above ground features (i.e., edge of pavement, buildings, improvements, trees, utilities, etc.) and elevations with one-foot contour intervals. Survey the below ground utilities from one-call locate paint marks and existing as-built maps, manhole dips etc. Survey area is provided in Figure 1 below.
- Incorporate historical wetland limits provided by the District into the survey.
- Order four title reports for the tax lots within SE Johnson Road along the diversion facilities corridor.
- Fly the new survey corridor with a drone to prepare an orthophoto in CAD.
- Prepare an existing conditions base map using the above data, to be used for the development of plan sheets for the length of the proposed improvements.
- Research Clackamas County survey records for recorded surveys, subdivision plats and road drawings that show the location of survey monuments previously set within the planned work limits.
- Field-verify presence of monuments within the planned work limits of the utility construction.
- Using the research described above, markup of the recorded locations for inclusion in the design documents.
- Notify County surveyor of public land corners that may be affected by construction activities.

Deliverables:

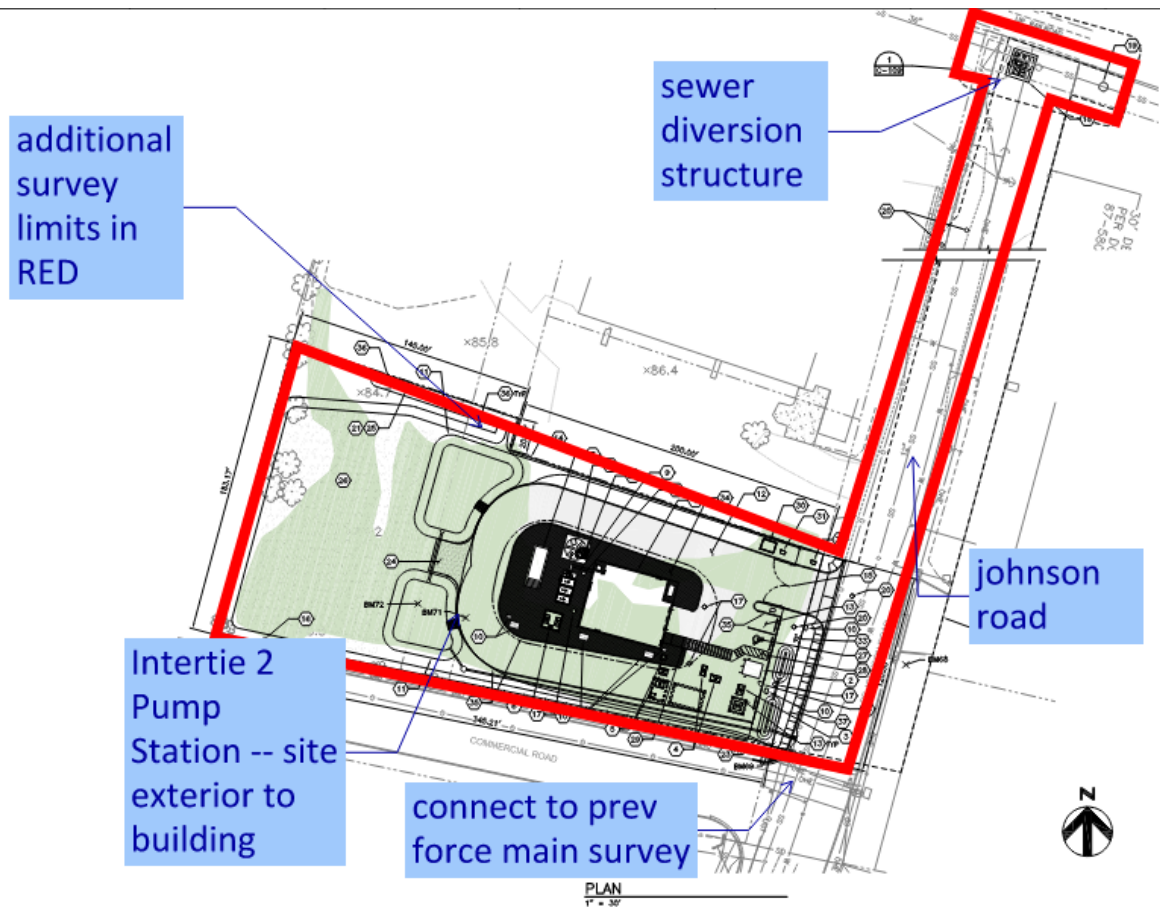
- AutoCAD drawings with resolved right-of-way and existing surface files.
- AutoCAD files with control and monument ties for use in resetting monuments disturbed by construction.

Assumptions:

- Horizontal control points will be established using the Oregon Coordinate Reference System (OCRS), Portland Zone. Vertical control will be referenced to NGVD29 datum.

- The force main survey performed in Phase 1 was originally scoped to use the Oregon State Plane reference system but was changed to OCRS as recommended by the the surveyor and as authorized by the District.
- Right-of-way lines will be computed and shown based on the monument ties and right-of-way research performed under this task.
- District will provide wetland limits in CAD format.

Figure 1 – Survey Area



Task 10.2 – Hydraulics and Controls Design Development

Objective:

Refine pump controls, diversion gate modulation curves, and pump settings for two dry-weather and two wet-weather control strategies, using REPLICA model and Phase 1 controls concepts.

Activities:

- Recommend diversion structure gate dimensions and settings, weir settings, gate operational set points and control locations for integration into the 60-percent design.
- For the downstream discharge to the treatment facility, recommend and document updates to bypass strategies including discharge to headworks and/or existing influent pump station during larger events that exceed treatment capacity in the near-term and long-term (after treatment capacity is improved).
- Advise on placement of fins at pump intakes to reduce hydraulic risk of cavitation and update computational fluid dynamics modeling to confirm questions related to fin placement and benefit.
- Attend two meetings with District staff to discuss design development of the hydraulics and controls systems.
- Attend two meetings with District staff to coordinate with adjacent WES projects including the Mt. Scott Interceptor and the Tri-City WRRF Influent Pump Station.

Deliverables:

- Draft and final hydraulics and controls technical memorandum.
- Meeting agendas and notes.

Task 10.3 – Prepare Diversion Facilities 60% Design

Objective:

Advance the design and prepare documents to the 60% submittal stage.

Activities:

- Prepare and facilitate design kick-off meeting to review standards for equipment, materials, and details.
- Prepare and facilitate design kick off meeting to identify common standards for equipment, materials, and details.
- Finalize equipment selection and collect equipment data sheets.
- Develop layouts and profiles for yard piping to accommodate new diversion control strategy, reconfigure yard piping at south exterior of building.
- Size and specify new dry-pit submersible pumps and base foundation.

- Prepare plans and sections for pigging vault, flow meter vault, motorized plug valve vault, force main intertie valve vault, and air release valve vault on the IT2 pump station site.
- Design gantry beam for check valve removal in the pump room.
- Coordinate landscaping restoration preferences with WES staff and develop landscape restoration plan.
- Recommend final configuration for the diversion structure and prepare draft plan and sections to describe improvements.
- Prepare 60% structural drawing sheets, structural technical specifications.
- Evaluate electrical equipment requirements for MCCs, panel boards, and other electrical appurtenances.
- Review size of existing electrical rooms, evaluate required size of electrical equipment. Recommend preliminary layout of electrical equipment and appurtenances.
- Develop backup power/generator options and alternative. Provide air quality tabletop review with regulators, design team, and Client. Document in summary draft memorandum.
- Prepare draft generator sizing based on load demands and facilitate coordination meetings between District and Utility.
- Develop preliminary plans to manage flows at the diversion structure during construction.
- Prepare draft erosion and sediment control plans.
- Prepare drawings to the 60% design level as noted in the Drawing List provided as Attachment A.
- Assemble County or WES standard details for each required discipline.
- Develop draft Division 1 Technical Specifications and for major equipment
- Prepare bid item list and Class 3 Construction Cost Estimate.
- Develop preliminary construction sequence, constraints, and construction schedule.
- Conduct one interim design meeting with WES staff to review design development prior deliverable submittal. Meeting will be attended by Consor’s Project Manager, Project Engineer, and multi-disciplinary subconsultants.

- Conduct 60% design review meeting. Consultant will conduct one two-hour workshop to review the 60% design submittal with District staff. Meeting will be attended by Consor's Project Manager, Project Engineer, and multi-disciplinary subconsultants.

Deliverables:

- 60% Design drawings as identified in Drawing List in Attachment A.
- Division 01 Technical Specifications and major equipment specifications
- 60% Construction Cost Estimate using proposed bid item list.
- 60% Construction Sequence Narrative with estimated construction schedule.
- Meeting agendas and summaries.

Assumptions:

- Specifications will be provided in word and pdf format.
- Drawings will be provided in pdf format.

Task 11 – Prepare Diversion Facilities 90% Contract Documents

Objective:

Advance the design of the improvements at the pump station and diversion structure and prepare 90% Contract Documents.

Activities:

- Review and address 60% design review comments from WES staff or other stakeholders.
- Prepare final hydraulics and controls technical memorandum.
- Prepare 90% design level drawings for each bid set as noted in the Drawing List included in Attachment A.
- Prepare technical specifications to include Division 01 through Division 48.
- Review and coordinate Division 0 bid documents provided by WES.
- Prepare a Class 2 Construction Cost Estimate.
- Update the estimated construction schedule.

- Conduct one interim design meeting with WES staff to review contract documents prior deliverable submittal.
- Conduct one two-hour meeting to review the 90% design submittal with District staff.

Deliverables:

- 90% Design Development Drawings, see Drawing List in Attachment A.
- 90% Construction Specifications and draft bid documents
- Class 2 Construction Cost Estimate.
- Final hydraulics and controls technical memorandum.
- Meeting agenda and summaries.
- Documentation of resolution of 60% review comments by District and other external stakeholders.

Assumptions:

- Specifications will be provided in word and pdf format.
- Drawings will be provided in pdf format.

Task 12 – Prepare Diversion Facilities Bid Documents

Objective:

Prepare final sealed contract documents to be used for publicly bidding the diversion facilities improvements project.

Activities:

- Address and modify the contract documents to address District review comments.
- Prepare deliverable documents and submit to District.
- Develop REPLICA training outline and example simulations that demonstrate how to modify and test pump station and diversion controls.
- Provide two (2) days of REPLICA model training to District staff.
- Provide 40 hours of on-call support to assist District staff in utilizing REPLICA model.

Deliverables:

- Final sealed construction documents in PDF format
- Design drawing files in AutoCAD
- REPLICA model and training materials.

Assumptions:

- Standard details will be separately bound as 8.5-inch x 11-inch sheets, provided in PDF format only.

Task 13 – Diversion Facilities Construction Permits and Approvals

Objective:

Assist WES in obtaining permits and approvals from local agencies for construction of the diversion facilities improvements project. The anticipated approvals are listed in Table 2 below.

Table 2 –Pump Station Permit Summary

Agency	Anticipated Permits
City of Gladstone	Right-of-Way Street Permit Utility Permit (waterline relocations)
City of Oregon City	Right-of-Way Street Permit
Clackamas County	Right-of-Way Street Permit Erosion Control Permit Development Permit
Oregon DEQ	Air Quality Permit for Generator

[1] Building permits include structural review for equipment anchorage (S) and trade electrical (E), mechanical (M), and plumbing (P) permits from Clackamas County.

Activities:

- Coordinate with each local agency to verify applicable permits required and obtain applicable permit application forms.
- Prepare application materials and coordinate with WES for signatures.
- Submit applications on behalf of WES and coordinate with agencies for conditions of approval.
- Submit for Clackamas County Trade Permits through Development Direct using final stamped drawings. Coordinate with WES for payment.

- Prepare and submit DEQ air quality permit as required for the generator.

Deliverables:

- Rights-of-Way Construction Permits application submittal packages.
- Erosion Control Permit application submittal package.
- Building and Trade Permit application materials
- Permit plan sets in pdf format

Assumptions:

- No land use permits are anticipated to be required for diversion facilities improvements.
- WES will sign necessary application forms and pay application fees.
- Wetland impacts are not anticipated.
- State or federal environmental permits are not included in the scope of work.

Task 14 – Diversion Facilities Bid Period Services

Objective:

Provide support to WES staff during bid phase of the diversion facilities bid documents.

Activities:

- Attend the pre-bid conference.
- Review and respond to technical questions as requested.
- Prepare technical material for addenda as needed.
- Review bids and provide comments.

Deliverables:

- Written documentation of responses to technical questions.
- Summary of pre-bid conference.
- Technical addenda to the contract documents.
- Written recommendation of contract award

Assumptions:

- Preparation of technical materials for two addenda is budgeted.
- WES will advertise and distribute bid documents and addenda.

Task 15 – Early Equipment Procurement (*Contingency Task*)

Objective:

This contingency task will only be completed after approval from the District. The Consultant will prepare equipment procurement packages for long lead equipment, provide bidding and equipment submittal services.

Activities:

- Prepare technical specifications and relevant design drawings for up to three (3) equipment procurement packages that the District may use to solicit bids from equipment suppliers and electrical panel fabricators for long lead equipment. This includes one for the pump, one for the standby power system, and one for the VFD panel.
- Provide procurement bidding services which includes responding to bidder questions and developing up to 1 addendum for each procurement package.
- Review procurement equipment submittals for conformance with the equipment technical specification requirements.

Deliverables:

- Three separate procurement packages: 1) Pump and accessories, 2) Standby Power System, and 3) VFD Panel.
- 1 addendum for each procurement package.
- Equipment submittal reviews.

Assumptions:

- The procurement packages for the pump and standby power system will be technical specifications only.
- Plans for the VFD panel include panel elevations and schedule, interior arrangement, control and wiring diagrams, PLC I/O sheets, and control block diagrams, as needed, for panel fabricators to bid and construct the panels. VFD technical specifications will also be provided.

- District will develop the procurement bidding documents.
- Bidding phase services assume that no drawing updates will be required.
- One original submittal and one resubmittal for each piece of equipment is included.

Budget

Payment will be made at the billing rates for personnel working directly on the project, which will be at the Consultant’s Hourly Rates, plus Direct Expenses incurred. Billing rates, expenses, and outside services are listed below.

Personnel

Labor will be invoiced at direct labor with a 3.15 multiplier. Maximum rate is \$250 per hour.

Project Expenses:

Expenses incurred in-house that are directly attributable to the project will be invoiced at actual cost. These expenses include the following:

Mileage (allowed where one-way trip exceeds 25 miles)	Current IRS Rate
Postage and Delivery Services	At Cost
Printing and Reproduction	At Cost
Travel, Lodging, and Subsistence	At Cost

Outside Services:

Outside technical, professional, and other services will be invoiced at actual cost-plus 5 percent.

Anticipated Project Milestones

The project milestones listed below are intended to show the anticipated schedule through completion of the project. Phase II milestones for work included in this scope of work are provided as approximate dates based on the assumed Notice to Proceed date and may be refined based on actual project start.

Phase II Schedule (included in this contract)	
Notice to Proceed	August 1, 2023
Diversion Facilities 60% Design Submittal	December 1, 2023
Diversion Facilities 90% Design Submittal	March 15, 2024
Diversion Facilities Bid Documents Submittal	May 2024
Diversion Facilities Bid/Award Period Completion	July 2024

Attachments

- Attachment A: Drawing List
- Attachment B: Technical Specifications List
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ATTACHMENT A

DRAWING LIST

INTERTIE 2 PUMP STATION & FORCE MAIN

EXPANSION PROJECT – PHASE 2

CLACKAMAS COUNTY WATER ENVIRONMENT SERVICES

The following list of drawings are anticipated for the Phase 2 portion of the project.

*Denotes drawings to be included with 60% Design Submittal

Bid Set 2: Intertie 2 Pump Station Improvements (60 drawings)

General (6 drawings)

- Cover Page & Vicinity Map*
- Index of Drawings*
- Abbreviations, Symbols & Legend
- General Notes
- Pump Station Design Data Summary Table & System-Head Capacity Curves*
- Code Summary

Civil (12 drawings)

- Diversion Facilities Site Plan*
- Pump Station Grading and Paving Plan*
- Pump Station Site Piping Plan*
- Pump Station Site Piping Profiles
- Pump Station Flow Meter Vault and Motorized Plug Valve Vault Plan and Section
- Pump Station Pigging Station Vault Plan and Section
- Pump Station Intertie Valve Vault and ARV Valve Vault Plan and Section
- Diversion Structure Site Plan*
- Diversion Structure Bypass Plan*
- Civil Details (2 sheets)
- WES Standard Details

Erosion & Sediment Control (6 drawings)

- General Erosion Control Cover Sheet*
- General Erosion Control Notes*
- Erosion Control Plan – Pump Station and Diversion Sites* (2 sheets)

Landscaping (2 drawings)

Landscape Restoration Plans
Landscape Details

ATTACHMENT B

TECHNICAL SPECIFICATIONS
INTERTIE 2 PUMP STATION & FORCE MAIN
EXPANSION PROJECT – PHASE 2
CLACKAMAS COUNTY WATER ENVIRONMENT SERVICES

The following list of specifications are anticipated for the Phase 2 portion of the subject project.

(60) Denotes specifications developed for 60% design submittal for construction work sequencing and major equipment.

Section **Title**

Division 01 – General Requirements

01 10 00	Summary of Work (60)
01 12 16	Work Sequence (60)
01 22 20	Unit Price Measurement and Payment
01 33 00	Submittal Procedures
01 45 00	Quality Control
01 56 39	Temporary Tree and Plant Protection
01 57 19.11	Temporary Sewage Control and Bypass Piping (60)
01 75 16	Testing, Training and System Start-Up (60)

Division 02 - Existing Conditions

02 41 00	Demolition
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Division 03 - Concrete

03 21 00	Reinforcing Steel
03 33 00	Cast In Place Concrete Work
03 60 00	Grouting

Division 05 - Metals

05 50 00	Metal Fabrications
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Division 09 - Finishes

09 90 00 Painting and Coating

Division 10 – Specialties

10 14 10 Identifying Devices

Division 26 - Electrical

26 05 02 Basic General Requirements (60)
26 05 04 Basic Electrical Materials and Methods (60)
26 05 05 Conductors (60)
26 05 26 Grounding and Bonding for Electrical Systems (60)
26 05 33 Raceway and Boxes for Electrical Systems (60)
26 05 70 Electrical Systems Analysis (60)
26 08 00 Commissioning of Electrical Systems (60)
26 24 16B Panelboards (60)
26 24 19 Low Voltage Motor Control (60)
26 27 26 Wiring Devices (60)
26 29 23 Low Voltage Adjustable Frequency Drive System (60)
26 32 13 Diesel Engine Generator Set (60)

Division 31 - Earthwork

31 05 13 Soils for Earthwork
31 05 16 Aggregates for Earthwork
31 10 00 Site Clearing
31 22 13 Rough Grading
31 23 16 Excavation
31 23 17 Trenching
31 23 18 Rock Removal
31 23 19 Dewatering
31 23 23 Fill
31 23 24 Flowable Fill
31 50 00 Excavation Support and Protection

Division 32 - Exterior Improvements

32 11 23 Aggregate Base Courses
32 12 16 Asphaltic Concrete Pavement

Division 33 - Utilities

33 01 30.13 Sewer and Manhole Testing
33 05 13 Manholes
33 05 17 Precast Concrete Vaults *

33 11 50	Existing Pipe Abandonment
33 13 00	Testing of Utility Piping
33 13 00	Testing and Disinfecting of Utility Piping
33 31 10	Sanitary Utility Sewerage Piping
33 41 10	Storm Utility Drainage Piping

Division 40 - Process Integration

40 05 13	Common Work Results for Process Piping
40 05 23	Common Work Results for Process Valves
40 05 23.15	Gate Valves
40 05 23.21	Plug Valves
40 05 23.24	Check Valves
40 05 23.72	Miscellaneous Valves
40 27 02	Process Valves and Operators (60)
40 90 00	Instrumentation and Control For Process Systems (60)
40 91 00	Instrumentation and Control Components (60)
40 91 07	Level Detection Devices
40 91 08	Submersible Level Sensor
40 91 09	Pressure Detection Devices
40 91 10	Combustible Gas Detector
40 91 11	Air Flow Switches
40 91 12	Intrusion Detection Switches
40 91 13	Alarm Indicators
40 91 14	Smoke Detectors
40 91 23	Flow Process Measurement Devices
40 92 00	Control Panels and Components
40 93 00	Control Strategy
40 95 11	PLC Control System Hardware

Division 43 - Process Gas & Liquid Handling

43 21 00	Liquid Pumps
43 21 39	Submersible Liquid Pumps (60)

Exhibit D
Fee Schedule

INTERTIE 2 PUMP STATION & FORCE MAIN EXPANSION - PHASE 2
 CLACKAMAS WATER ENVIRONMENT SERVICES
 PROPOSED FEE ESTIMATE

Estimated Average Billing Rate Staff Name	LABOR CLASSIFICATION (HOURS)													Hours	Labor	Subconsultants				Multiplier % Markup	Subconsultant Total with Markup	Expenses	Total
	Principal Engineer IV	Principal Engineer II	Professional Engineer VII	Professional Engineer VII	Professional Engineer III	Professional Engineer III	Engineering Designer I	Engineering Designer VI	Technician III	Administrative III	Project Coordinator III	Administrative II	Cost Estimator III			Structural	E&C	Survey	Utility Locating				
	\$250 Carr	\$227 Crafts	\$198 Kreipe	\$195 Luce	\$148 Ebbighausen	\$122 Crow	\$109 Coles	\$160 CloudJ	\$112 McFaddin	\$135 Haught	\$136 Cutlip	\$80 Steinberg	\$250 Griesinger										
<i>Task 1 -- Project Management (Existing Task Supplement) Subtotal</i>	46	0	30	10	0	0	0	0	0	4	16	0	0	106	\$ 22,105	\$ -	\$ 10,500	\$ -	\$ -		\$ 11,025	\$ -	\$ 33,130
<i>Task 2 -- Quality Management (Existing Task Supplement) Subtotal</i>	24	24	0	0	0	0	0	0	0	0	0	0	0	48	\$ 11,447	\$ -	\$ 1,620	\$ -	\$ -		\$ 1,701	\$ -	\$ 13,148
<i>Task 5 -- Force Main 90% Contract Documents (Existing Task Supplement) Subtotal</i>	24	0	0	152	104	0	176	0	104	0	0	8	4	572	\$ 83,396	\$ -	\$ -	\$ -	\$ 50,000		\$ 57,908	\$ 100	\$ 141,303
<i>Task 6 -- Prepare Force Main Bid Documents (Existing Task Supplement) Subtotal</i>	2	0	0	16	0	0	0	0	16	0	0	4	2	40	\$ 9,369	\$ -	\$ -	\$ -	\$ -		\$ -	\$ 200	\$ 9,369
<i>Task 7 -- FM Construction Permits & Approvals (Existing Task Supplement) Subtotal</i>	2	0	0	6	4	0	8	0	4	0	0	0	0	24	\$ 9,798	\$ -	\$ -	\$ -	\$ -		\$ -	\$ 200	\$ 9,798
<i>Task 10 -- Diversion Facilities 60% Design Development Documents Subtotal</i>	60	0	104	12	0	98	108	72	116	0	4	8	8	590	\$ 89,177	\$ 25,800	\$ 101,137	\$ 18,200	\$ -		\$ 152,394	\$ 200	\$ 241,571
<i>Task 11 -- Diversion Facilities 90% Contract Documents Subtotal</i>	50	0	110	8	0	88	124	48	72	0	2	22	8	532	\$ 79,716	\$ 16,450	\$ 56,471	\$ -	\$ -		\$ 76,567	\$ 200	\$ 156,283
<i>Task 12 -- Prepare Diversion Facilities Bid Documents Subtotal</i>	8	0	56	4	0	40	52	32	52	0	0	18	4	266	\$ 37,716	\$ 8,610	\$ 40,101	\$ -	\$ -		\$ 51,147	\$ 500	\$ 88,862
<i>Task 13 -- Diversion Facilities Construction Permits & Approvals Subtotal</i>	8	0	18	0	0	0	24	0	18	0	0	0	0	68	\$ 10,179	\$ 1,720	\$ 7,520	\$ -	\$ -		\$ 9,702	\$ 500	\$ 19,881
<i>Task 14 -- Diversion Facilities Bid Period Services Subtotal</i>	10	0	16	0	0	0	18	0	8	0	0	0	0	52	\$ 8,515	\$ 847	\$ 1,818	\$ -	\$ -		\$ 2,798	\$ -	\$ 11,314
<i>Task 15 -- Prepare Equipment Procurement Package (Contingency Task) Subtotal</i>	10	0	24	0	0	44	0	0	0	0	0	0	0	78	\$ 12,598	\$ -	\$ 7,304	\$ -	\$ -		\$ 7,669	\$ -	\$ 20,268
TOTAL - ALL TASKS	244	24	358	208	108	270	510	152	390	4	22	60	26	2376	\$ 364,647	\$ 53,427	\$ 226,471	\$ 23,350	\$ 50,000		\$ 370,910	\$ 1,900	\$ 735,558