

AMENDMENT NO. 2

CONTRACT NO. 30003063

FOR

ALDER WASTEWATER PUMP STATION UPGRADE

This Contract was made and entered by and between Brown and Caldwell, Inc, hereinafter called Contractor, and the City of Portland, a municipal corporation of the State of Oregon, by and through its duly authorized representatives, hereinafter called City.

1. Additional compensation is necessary and shall not exceed \$352,329. The amended not-to-exceed contract amount is \$710,022.
2. Additional work is necessary and is described in the following modifications to the Scope of Work.

TASK 100 – PREDESIGN SERVICES

Additional services are required to complete the Preliminary Design Services task. These services include the following activities:

103 – Condition Assessment of Pump Station**ADD the following work to Subtask 103:**

Develop geotechnical engineering parameters for use in the Tier 1 Seismic Evaluation of the pump station. Provide parameters for use in computing design levels of ground shaking. Prepare and submit a written report that presents findings, conclusions, and recommendations.

ADD the following Subtask 120:**120 – Submersible Pump Station Arrangement**

Develop a preliminary submersible pump station design as follows:

1. Develop the site layout arrangement and prepare site drawings illustrating ingress and egress points from public streets bordering the site, stormwater collection and treatment, ADA accessibility features, and perimeter screen walls.
2. Develop a new Electrical/Control Building, including basic architectural design, and layout for all new electrical equipment and control panels within the Building.
3. Prepare pump sizing calculations, select submersible pumps, design trench style wet well, establish wet well geometry and dimensions, lay out pumps and piping, and prepare conceptual design of access platform inside the wet well.
4. Develop the concept and layout for ventilating the wet well as well the Control Building and make preliminary fan selections.

5. Develop demolition concepts and prepare basic structural configuration of caisson top slab with access hatches.
6. Design piping and valves for the storm pumps to allow exercising the storm pumps without discharging to the outfall pipeline.
7. Update technical memoranda to incorporate information on submersible pump arrangement and associated project changes.
8. Prepare preliminary design drawings to reflect submersible pump station arrangement.
9. Prepare a construction cost estimate for the proposed new submersible pump station facility.

Additional Task 100 Deliverables: Geotechnical report, additional preliminary layout drawings of a submersible pump station, updated technical memoranda, construction cost estimate for the proposed submersible pump station.

TASK 200 – DESIGN SERVICES

REPLACE Subtask 202 Prepare Construction Documents with the following:

202 – Prepare Construction Documents (REVISED)

Develop biddable Drawings and Specifications for the project based on the submersible pump station arrangement. Drawings and Specifications will be based on the final PDR developed in the Predesign phase. The final design is based on the following assumptions:

- The existing above-grade structure, ground floor concrete slab, and all internal separation walls will be demolished.
- All existing electrical and mechanical equipment will be removed, and either salvaged or disposed as specified in the final Contract Documents.
- The below-grade portion of the concrete caisson structure will remain and be used as a structural shoring system for construction of the new trench-type wetwell.
- The new sanitary flow and storm flow pumping systems will each consist of 2 submersible pumps.
- Sanitary pumps will discharge to a new discharge box which will be connected to an existing gravity sewer pipe.
- Storm pumps will discharge to the existing chamber within the caisson which will remain connected to an existing gravity sewer pipe.
- Flow meters will be installed on each discharge pipe from the sanitary pumps (pressurized flow) and on the gravity discharge pipe from the storm pump system.
- A monorail and structural supporting framework will be provided for moving the pumps out of the wet well and onto a service truck. The monorail will be supported by a canopy extending out from the new building.

- Piping and valves will be designed for re-routing pumped flow into the wet well to exercise the storm pumps without discharging to the storm sewer system that connects to the outfall pipeline.
- An access platform will be designed in the wet well to allow wet well maintenance functions. The final Contract Documents will provide an envelope for the limits of the platform as well as standard design details for its construction. Site improvements include: access driveways, retaining walls, and ADA access ramp.
- A temporary pumping system will be needed to allow construction to proceed and an example plan and the performance requirements for this system will be included in the final Contract Documents. Final design of the temporary pumping system will be by the construction Contractor, subject to review and acceptance by the Owner's Representative.
- The wet well will be ventilated with an exhaust fan that will discharge through the canopy. Odor treatment of the exhaust air, if necessary, would consist of an in-line carbon filter.
- An above grade Electrical/Control building will be a reinforced concrete masonry unit (CMU) structure with a steel-framed roofing system and eco-roof.
- The new Electrical/Control building will be designed to include an accessible restroom and electrical rooms for a new motor control center, control panels, lighting, systems, and instrumentation systems.
- The new Electrical/Control building will be designed with an eco-roof for stormwater management.
- The electrical power system will be replaced with a new system starting from the utility feeder.
- The existing generator system will be removed and a new standby power generator (packaged unit in a sound enclosure) will be installed.
- The existing fiber optic cable serving the station will be rerouted and reconnected.
- Owner Furnished Products (OFP) during construction will include three instrumentation panels; a Small Station Pump Controller (SSPC), a HYDRA communications panel, and a Combustible Gas Detection Panel. Contractor will coordinate the inclusion of these OFP panels in the final Contract Documents.
- BES will prepare and provide Division 0 Bid Documents and Division 1 Special Requirements; Contractor will assist in the development of these documents.
- Specifications will require the construction Contractor to develop materials, complete applications, and acquire dewatering permits, temporary discharge permit for discharging a dewatering system to the City's sewer collection system, and parking permits. Specific drawings for these permits are not part of the drawing set.

In addition to the assumptions above, Drawings and Specifications will include:

1. Erosion Control Drawings suitable to define bidding conditions. The construction Contractor will be responsible for customizing and adding additional detail for acquiring their NPDES 1200-C permit.
2. Right-of-way improvement drawings, if required, meeting Portland Bureau of Transportation (PBOT) requirements.

Specifications will be edited to incorporate project-specific requirements and will comply with 6-digit CSI format. A draft Bid Form will be prepared and provided to BES for review and for inclusion in the Contract Documents. Stamped and signed structural calculations for the non-performance based design elements will be provided for BES' Building Permit application to the Bureau of Development Services.

Contract Documents will consist of drawings and technical specifications and will be stamped and signed, ready for printing, and public bidding for construction. Contract Documents will also be suitable as supporting information for permit applications.

REPLACE Subtask 203 Design Review Submittal with the following:

203 – Design Review Submittals (REVISED)

Formal design submittals, consisting of drawings, specifications, updated construction cost estimate, and construction schedule, will be provided at the 75% and 100% design completion stages. Each design review submittal package will consist of electronically delivered PDF copies of all required design progress documents, along with the CAD files for at least one drawing from each discipline that will be reviewed for compliance with BES CAD standards. No paper copies will be required.

In lieu of additional formal design submittals, progress drawings and specifications will be reviewed during bi-weekly meetings with the BES PM and other BES staff as the design documents are advanced towards completion. In particular BES Construction Services Division staff will be invited to attend the bi-weekly meetings as-needed to provide constructability input for the design.

REPLACE Subtask 204 Cost Estimate and Schedule Updates with the following:

204 – Cost Estimate and Schedule Updates (REVISED)

Updated estimates of the construction cost and the construction schedule at the 75% and 100% level of completion will be done and included with each of the design review submittal packages. The updated construction schedule will include assumed construction sequencing for major elements of the project.

REPLACE Subtask 205 Conduct Design Review Workshops with the following:

205 – Conduct Design Review Workshops (REVISED)

Conduct a design review workshop following the submittal of the 75% design review package. Informal design review progress will take place during bi-weekly meetings as described in Subtask 203. It is not anticipated that a 100% design review workshop will be needed.

DELETE Subtask 207 Preliminary Electrical Distribution System Evaluation in its entirety

It is assumed that BES will perform the preliminary evaluation of the proposed electrical distribution system prior to the completion of the 100% design review package including a short circuit study, a protective device coordination study, and an Arc Flash Analysis. The analyses will be finalized during construction. The final Contract Documents will include a performance specification requiring the construction Contractor to prepare and submit a power system studying including a short circuit study, protective device coordination study, and an Arc Flash Study for review and acceptance by the Owner's Representative.

ADD the following Subtask 208

208 – Expanded Geotechnical Investigation

It is assumed that BES will provide the necessary geotechnical investigation required to obtain the data needed for the final design of structure foundations, retaining walls, and other structures. Contractor will provide input to the BES PM regarding the scope of the geotechnical investigation services. The geotechnical investigation and report will be provided through the BES Materials Testing Laboratory.

REPLACE Task 200 Assumptions with the following:

E10359 Task 200 Assumptions (REVISED)

BES will provide to Contractor drawings for the OFPs described in Subtask 202 to allow a coordinated design package. BES will arrange the production of the final Contract Documents for advertising and distribution to solicit construction bids.

REPLACE Task 200 Deliverables with the following:

Task 200 Deliverables (REVISED):

- Electronic PDF files of drawings, technical specifications, construction cost and construction schedule estimates at 75% and 100% design completion.
- AutoCAD files of at least one drawing from each discipline for review for compliance with BES CAD standards at 75% design completion.
- Meeting minutes from 75% Design Review Workshop
- Written responses to BES review comments on the 75% and 100% design review submittal packages, and any other review comments received through bi-weekly meetings.
- Final camera-ready documents, including:
 - ✓ One set of full-size sealed final drawings
 - ✓ One half-size set of sealed final drawings (unbound)
 - ✓ One set of final specifications
- AutoCAD and PDF files of sealed drawings
- Microsoft Word files of the final specifications
- Final construction cost and schedule estimates

- Draft proposed Bid Form
- Four sets of sealed structural calculations

TASK 300 – BID SERVICES

Contractor level of effort associated with providing support during bidding is expanded due to the increased scope and complexity of the project.

Task 300 Deliverables are modified to include two addenda rather than one addendum.

TASK 400 – SERVICES DURING CONSTRUCTION

Additional services are required to complete this Task due to the increased complexity of the design and the resulting increase in site visits, submittal reviews, changes, and RFIs. The scope of services is amended as follows:

Task 401 – General Technical Assistance and Design Support

The level of effort associated with the support services to be provided in under this task is increased due to additional shop drawings and submittals that will be submitted by the construction Contractor for review, additional RFIs that will be received, and extended duration of the construction.

Task 402 – Structural Observations

The number of site visits that will be needed to make Code-required structural observations is increased to approximately four site visits.

DELETE Subtask 406 – Special Inspections in its entirety

The City will provide all required Special Inspections.

REPLACE Subtask 407 Final Arc Flash Study with the following:

407 – Final Arc Flash Study (REVISED):

The final Contract Documents will include a performance specification requiring the construction Contractor to prepare and submit a final power system study for review and acceptance by the Owner's Representative.

ADD the following to Task 400 Assumptions:

- The amended level of effort includes an increase in the number of site visits from 4 to 8 to perform permit-required structural observations. Structural observations associated with deep foundations (micropiles) will be provided by the BES Materials Testing Laboratory.
- The amended level of effort for submittal reviews included in the Contractor's services during construction (SDCs) is based on the assumption that approximately 170 submittals and re-submittals will be received.

- The amended level of effort to review and develop responses to RFIs included in the Contractor's SDCs is based on the assumption that approximately 100 RFIs will be received.
- The amended level of effort for assistance with change orders is based on a revised total of 10 change orders at approximately 8 hours each, including CAD drafting.
- The amended level of effort for site visits and attendance at construction meetings is based upon 12 visits at an average duration of 3 hours for each site visit.

E10359 – TASK 500 – PROJECT MANAGEMENT

Additional work is required to complete the Project Management task due to the additional services described in this amendment and the increased subconsultant involvement.

SUBCONTRACTORS

The following subcontractors are removed from the list of subcontractors in the current Agreement as the City will be performing special inspections through the Materials Testing Laboratory:

- Columbia West (Special Inspections)

The following subcontractors are added to the list of subcontractors named in the current Agreement as the revised scope requires the services of an architect and a structural engineer to assist with the Electrical/Control Building:

- Michael Willis Architects (Architectural Design)
- Cascade Design Professionals (Structural Engineering)

COMPENSATION

The payment schedule is revised as follows:

Payment Schedule – Project & Project Task Budget Adjustments

Task #	Task Name/Description	Current Phase Budget	Budget Adjustment	Amended Task Budget
1.0	Predesign Services	\$85,474	81,601	\$167,075
2.0	Final Design	\$197,715	\$188,145	\$385,860
3.0	Bid Phase Services	\$5,285	\$5,114	\$10,399
4.0	Services During Construction	\$58,756	\$37,386	\$96,142
5.0	Project Management	\$10,463	\$40,083	\$50,546
TOTALS		\$357,693	\$352,329	\$710,022

M/W/ESB Participation:

The following table summarizes the Contractor's amended M/W/ESB subconsultant participation. M/W/ESB participation is increased from \$151,501 to \$234,689, but the percentage of the amended contract value is reduced to 33.1% as a result of the increased effort required by the other engineering disciplines to complete the amended scope of the project.

Subconsultant	M/W/ESB Certifications	Scope/Type of Work	Current Subcontract Amounts	Amended Subcontract Amounts
MEC Electrical Engineering	ESB	Electrical Engineering	\$88,961	\$97,790
Superelevation, Inc.	MBE/ESB	CADD	\$62,540	\$111,899
Cascade Design Professionals	MBE	Structural Engineering	\$0	\$25,000
M/W/ESB Total Amounts			\$151,501	\$234,689
Original and Amended Contract Amounts			\$357,693	\$710,022
M/W/ESB Percentage			42.3%	33.1%

The following hourly rates are added to the Hourly Rate Schedule:

Firm	Classification	Hourly ¹ Rate Range
MWA Architects, Inc.	Principal-In-Charge	\$214 - 248
	Project Manager (PM)	\$119 - 138
	Project Architect (PA)	\$105 - 121
	Project Designer (PD)	\$105 - 121
	Interior Designer (ID)	\$ 98 - 110
	Technical I (T-I)	\$ 86 - 99
	Technical II (T-II)	\$ 71 - 83
	Technical III (T-III)	\$ 67 - 77
	Clerical/Admin (CL)	\$ 71 - 83
Cascade Design Professionals	Principal-In-Charge	\$166 - 193
	Sr. Structural Engineer	\$133 - 154
	Structural Engineer	\$105 - 121
	Assistant Engineer	\$ 90 - 105
	CAD Technician 2	\$ 84 - 97
	CAD Technician 1	\$ 73 - 85
	Office Support	\$ 64 - 74

¹ Hourly rates listed are ranges for each classification. Actual rates will be charged at 3.1 multiplier on each individual's base salary.

This contract amendment may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one and the same contract amendment.

The parties agree the City and Contractor may conduct this transaction by electronic means, including the use of electronic signatures.

BROWN AND CALDWELL, INC.

By: 

Date: 7-14-14

Name: Bryan K. Paulson

Title: Vice-President

Contract No. 30003063

Amendment/Change Order No. 2

Contract Title: Alder Wastewater Pump Station Upgrade

CITY OF PORTLAND SIGNATURES:

By: n/a Date: _____
Bureau Director

By: n/a Date: _____
Chief Procurement Officer

By: _____ Date: _____
Elected Official

Approved:

By: _____ Date: _____
Office of the City Auditor

Approved as to Form:

By: _____ Date: _____
Office of City Attorney