

CITY OF NEWPORT
TASK ORDER NO. ~~15~~¹⁷
TO ENGINEERING SERVICES AGREEMENT
(CONSULTANT OF RECORD)
FOR THE AGATE BEACH SYSTEM IMPROVEMENTS

This TASK ORDER NO. ~~15~~¹⁷ to the Engineering Services Agreement dated April 12, 2010, hereinafter called Agreement, between the City of Newport, (CITY), and Brown and Caldwell, Inc., (ENGINEER).

A. SCOPE OF SERVICES

CITY agrees to utilize the services of ENGINEER and ENGINEER agrees to perform Phase 001 and 002 services set forth in Attachment A. Phase 003 through 005 will require City's written authorization to proceed.

B. CITY'S RESPONSIBILITIES

CITY to provide ENGINEER with the following information:

- Sanitary sewer and pump station as-built drawings (paper and/or electronic versions as available).
- Easement locations for the existing sewers and pump station.

CITY shall provide timely review of submitted products (2-week turnaround or as otherwise agreed upon).

C. COMPENSATION

1. CITY shall pay ENGINEER according to the fee schedule set forth in Amendment No. 3 to the Master Engineering Services Agreement.
2. CITY shall pay ENGINEER compensation for the only authorized Phases 001 and 002 services at this time as described in Attachment B, a fee not to exceed Three hundred nine thousand, Four hundred four Dollars **\$309,404**.
Phases 003 through 005 will require City's written authorization to proceed.

D. SCHEDULE

Upon receipt of Notice to Proceed, ENGINEER shall develop a detailed project schedule for submittal to CITY.

E. MISCELLANEOUS

All terms and conditions of the Agreement apply to this Task Order as though fully set forth therein. In the event of a conflict between this Task Order and the Agreement, the terms of this Task Order shall apply.

The parties do mutually agree to all mutual covenants and agreements contained within this Task Order No. 15.

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CITY OF NEWPORT:

By: Joe Smith

Title: Acting City Manager

Date: 1-15-2016

BROWN AND CALDWELL, INC.:

By: Spencer Parker

Title: Vice President

Date: 12-15-15

Attachment A

Scope of Services

The Scope of Services summarized below describes the engineering services to be performed for the City of Newport's (City) Agate Beach System Improvement project, which includes three sub-projects:

- Schooner Creek Pump Station (SCPS) and Schooner Creek Force Main (SCFM) projects
- 48th Street Pump Station (48PS) and 48th Street Force Main (48FM) projects
- Coast Highway Gravity Sewer (HGS) project

Project Description

The Agate Beach wastewater collection system consists of three pump stations, three force mains, and sections of gravity sewer. Wastewater is collected from approximately 5th Street in the south to the northern limits of the city. Design of the Big Creek Pumping Station and Force Main has been completed and construction is under way. The two remaining pump stations in the system are currently undersized for existing and projected future flows: SCPS and 48PS. In addition, the SCFM, 48FM, and HGS downstream of 48PS are also undersized. Replacement of these facilities is required to provide conveyance capacity for both existing and future flows. The general plan for these upgrades is documented in the *Agate Beach Wastewater Collection System Improvements Project: Preliminary Engineering Report* (Brown and Caldwell, June 2010).

This project will prepare bid documents for construction of each of the facilities. At this time, the bidding of the projects is expected to be separated into three packages:

- Package 1: HGS
- Package 2: SCPS and SCFM
- Package 3: 48PS and 48FM

As part of the preliminary design effort, alternative design and bidding options will be evaluated in efforts to reduce project costs. The effort will also include determining the appropriate phasing and sizing to best meet the long-term growth needs of the city and provide satisfactory conveyance service. This project will also include survey, permitting, and geotechnical evaluations as necessary to support the design of these projects.

Phase 1 Project Management

Objective To provide management of engineering services in support of the design, bidding, and construction of SCPS, SCFM, 48PS, 48FM, and HGS

Activities Phase 1 includes the following activities:

- Prepare a Project Management Plan that includes preliminary design team roles and responsibilities, schedule, budget, a quality assurance/quality control (QA/QC) plan, and a staffing plan required for execution of the project.
- Document meeting decisions and action items, assign the activities to team members, and follow up to ensure timely resolution.

- Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion.
- Monitor project activities for potential changes, anticipate changes whenever possible, and, with City approval, modify project tasks and subtask scope and budgets as required.
- Manage the quality control review of all work activities and project deliverables.
- Prepare and submit a monthly invoice with invoice summary report.

Deliverables The deliverables included in Phase 1 are summarized below:

- Monthly invoices with work summary
- Meeting notes, as required, will be submitted in electronic PDF format.

Assumption The design and construction services will take approximately 26 months.

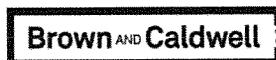
Phase 2 Preliminary Design Activities

Objective To provide engineering services in support of the preliminary design for SCPS, SCFM, 48PS, 48FM, and HGS

Task 2.1 Survey

Activities AKS Engineering and Forestry will perform the following survey services for the areas highlighted in Appendix A:

- Establish a permanent horizontal and vertical control network.
- Coordinate public utility locates.
- Elevate the project to an approved vertical datum (NAVD 88).
- Establish approximate right-of-way (ROW) lines by locating existing monuments of record.
- Survey street features (curb, edge of pavement, crown, sidewalk, etc.); driveways; striping; signage; landscaping; necessary existing ground; trees 6 inches in diameter and greater; ditches; retaining walls; fences; utilities including water, gas, power, telephone, cable, sanitary sewer, and storm sewer (including vaults, manholes with invert elevations, utility poles, and other structures); and other key features.
- Collect photos of sanitary manholes included in survey. At a minimum, photos shall include the inside of manholes with influent sewers and benches visible.
- Prepare a topographic/site/ROW map showing the above features, ROW, extent of wetland delineation, easements, approximate property lines, tax lot information, and 1-foot contours.
- The topographic/site/ROW map will be prepared in an AutoCAD format that can be used for design purposes.
- Provide traffic control as needed to accomplish the survey effort in accordance with the Oregon Temporary Traffic Control Handbook.
- Prepare up to three legal descriptions and plat maps for property acquisition services.



Deliverables The deliverables are summarized below:

- Any utility as-builts gathered during utility locates
- AutoCAD file of survey base file
- Photos of sanitary manholes

Task 2.2 Geotechnical Services

Activities

Foundation Engineering, Inc. (FEI) will serve as the geotechnical engineer for the project. FEI will conduct field explorations and other design-support activities that include the following:

- Submit a boring plan for review that includes boring locations and depth. Borings will be completed near the pump stations and on the shoulders or center turn lane of Highway 101. At a minimum, the following borings shall be completed:
 - One boring to a depth of 30 feet at the SCPS
 - One boring to a depth of 35 feet at the 48PS
 - Four borings to a depth of 10 feet along the SCFM
 - Two borings to a depth of 10 feet along the 48FM
 - Seven borings to a depth of 20 feet along the HGS
- In advance of the drilling, FEI will obtain an Oregon Department of Transportation (ODOT) work in ROW permit and a City work in ROW permit (if required). FEI will also mark the exploration locations and request utility locates.
- Conduct a subsurface investigation by drilling exploratory boreholes to a depth in accordance with the approved boring plan. Actual depths may be adjusted in the field depending on the encountered subsurface conditions.
- FEI will provide traffic control needed to accomplish the drilling work in accordance with the Oregon Temporary Traffic Control Handbook. FEI may require assistance from the City to prevent vehicles from parking in areas near the pump stations, where there are plans to drill.
- At a minimum, sampling shall be taken in the borings at 2½-foot intervals to ±20 feet and at 5-foot intervals thereafter. Soil samples will be taken using a split-spoon sampler as part of the Standard Penetration Test (SPT). Relatively undisturbed specimens may be obtained with thin-walled Shelby tubes if fine-grained soils are encountered. The soil samples will be retained for possible laboratory testing and observation. Up to ±15 feet of rock core may be taken at the 48PS.
- Boreholes will be backfilled with bentonite chips and capped with crushed rock and asphaltic concrete (AC) cold patch as appropriate to match the original ground surface. FEI has assumed that the drill cuttings will be drummed and dumped at a nearby disposal site provided by the City.
- FEI will provide laboratory testing to determine natural water content, percent fines, and/or Atterberg limit tests on selected samples to help classify soils and engineering properties.
- FEI will provide field testing to estimate the resistivity and pH of the soils at up to three locations.

- Interpret geotechnical conditions at the project site and prepare a technical memorandum (TM) to document findings that include information on excavation, shoring, dewatering, suitable backfill materials, base stabilization, seismic considerations, and compaction.
- Provide up to 20 hours of geotechnical engineering support during design and construction.

Deliverables The deliverables included in Task 2.2 are summarized below:

- Boring plan (electronic)
- TM draft and final (two hard copies, one electronic)

Assumptions The assumptions included in Task 2.2 are summarized below:

- An ROW permit will be required but the City will waive any fees.
- A Site-specific Seismic Hazard Study will not be required.
- An ODOT ROW permit will be required.
- Work will be completed during daylight hours. No night work is required.
- All boring locations will be accessible using a truck-mounted drill rig.
- No infiltrating testing, piezometers, or groundwater level monitoring will be required.

Task 2.3 Environmental Permitting

Activities Pacific Habitat Services, Inc. (PHS) will perform the wetland consulting services for the project. PHS will perform wetland delineation and have the delineation report approved by the Oregon Department of State Lands (DSL). PHS will also assist in obtaining permits and approvals for anticipated impacts to wetlands or waterways. Its full scope is outlined in Appendix B.

Deliverables The deliverables included in Task 2.3 are summarized below:

- A mark-up plan of the OHW (electronic)
- Wetland delineation report
- Joint permit application for U.S. Army Corps of Engineers and DSL

Assumptions The assumptions included in Task 2.3 are summarized below:

- Impacts to wetlands or waterways are temporary; the project should therefore meet the criteria of the State Local Operating Procedures for Endangered Species (SLOPES). A biological assessment is therefore not required.
- The City will handle all permit fees.
- The following reports and permit applications will be prepared
 - Wetland Delineation Report
 - Joint Permit Application

Task 2.4 Transient Analysis

Activities Perform transient analyses for the SCFM and 48FM to identify transient pressures in the force mains and determine if transient mitigation measures are required. The identification and mitigation (if required) of transient pressures will improve the long-term performance and reliability of the force main. A thorough analysis of transients will establish critical hydraulic performance criteria that will be the basis for final



design. Based on past project experience, it may be necessary to add air/vacuum release valve vault(s) or other surge pressure mitigation devices to reduce the risk of increased pressures or vacuums to the force main system. Task 2.4 includes the following activities:

- Prepare a TM documenting the transient analysis and mitigation recommendations to be included with the PDR.

Deliverables The deliverables included in Task 2.4 include a TM for both Schooner and 48th Street facilities documenting the transient analysis and mitigation (electronic). This TM will be included as part of Task 2.5, Preliminary Design Report.

Task 2.5 Preliminary Design Report

Activities Task 2.5 includes the following activities:

- Conduct a preliminary design workshop with City staff to collect information on the existing facilities and input on design requirements and preferences, and to discuss the Consultant's proposed alternatives if applicable. A meeting agenda and minutes will be provided.
- Prepare plans, estimates, and schedules to a 10% design level.
- Prepare a Preliminary Design Report (PDR) to include the following:
 - Recommendations for bid packaging
 - Analysis of integrated project delivery methods
 - Confirmation of design flowrates and sizing criteria
 - Material and equipment recommendations
 - Identification of permitting requirements

Deliverables The deliverables included in Task 2.5 are summarized below:

- Agenda and meeting minutes for the preliminary design workshop (electronic)
- PDR draft and final (three hard copies and one electronic copy)
- PDR draft and final (one hard copy to the Oregon Department of Environmental Quality [DEQ])

Assumptions The assumptions included in Task 2.5 are summarized below:

- The PDR will be in accordance with DEQ requirements
- Preliminary design drawings will illustrate an approximate 10% level of design.
- City staff will be available to provide operational details about the existing pump station and input into requirements for the new facilities
- Based on the results of this work, the scope and level of effort for engineering services for the SCPS, SCFM, 48PS, 48FM, and HGS will be adjusted, if necessary. Subsequent detailed design will not proceed without City written authorization.

Phase 3 Schooner Creek Pump Station and Force Main Project (requires City written authorization to proceed)

Objective: To provide engineering services in support of the final design for SCPS and SCFM

Task 3.1 50% Design Activities

Activities Task 3.1 includes the following activities:

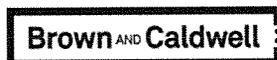
- Prepare draft plans and specifications to the 50% design levels. The draft documents will provide the information necessary for construction of the new SCPS and SCFM.
- Hold weekly team coordination meetings.
- Conduct an internal QA/QC and constructability review on the 50% design package.
- Prepare a cost estimate.
- Coordinate with ODOT.
- Hold a project review joint meeting with the City to review and collect comments on the 50% package.

Deliverables The deliverables included in Task 3.1 are summarized below:

- 50% plans and specifications to City and DEQ
- 50% cost estimate
- meeting notes, as required

Assumptions The assumptions included in Task 3.1 are summarized below:

- The documents will be prepared in 2011 Construction Specifications Institute (40 division) format.
- Three sets of draft plans (11" x 17") and specifications will be submitted to the City at each design phase for review and comment
- One set of draft plans (11" x 17") and specifications will be submitted to DEQ at each design phase for review and comment.
- An Erosion Sediment Control Plan will be prepared and included with the design drawings for the Contractor's use in acquiring the required 1200-C National Pollutant Discharge Elimination System (NPDES) stormwater permit.
- Design flow is approximately 1.6 million gallons per day (mgd) (this will be confirmed in Phase 2).
- The force main alignment will follow the general alignment of the existing force main and will stay within the City ROW.
- City engineering, operations, and maintenance staff will participate in deliverable review meetings and provide information as necessary for the final design services.
- The project manager and design lead will participate in the project review meeting
- Submittal will include general sheets, civil sheets (including plan and profile of the new force main), P&ID and control strategies, structural sheets (plan view only, no sections, no details), mechanical sheets (plan view only, no sections, no



details), and electrical information necessary for the modification of existing facilities and construction of the new facilities.

- The pump station will be designed according to the following guidelines:
 - Submersible pump station configuration
 - Valve/manifold vault
 - Separate flow meter and flow meter vault
 - Wet well, vaults, electrical/generator building to be expandable for future flows (approximately 2.6 mgd; this will be confirmed in Phase 2)
 - No odor control, chemical feed, or air injection system
 - Three variable-speed pumps with one pump redundant
 - Existing pump station will need to be in operation during construction and decommissioning of existing pump station will occur after new pump station has been successfully tested
 - Surge control will consist of air vacuum relief valves

Task 3.2 90% Design Activities

Activities Task 3.2 includes the following activities:

- Prepare draft plans and specifications to the 90% design levels. The 90% draft plans and specifications will further develop the design presented at the 50% level.
- Conduct an internal QA/QC and constructability review on the 90% design package.
- Hold weekly team coordination meetings.
- Update the 50% cost estimate.
- Hold a project review joint meeting with the City to review and collect comments on the 90% package.

Deliverables The deliverables included in Task 3.2 are summarized below:

- 90% plans and specifications to City and DEQ
- 90% cost estimate
- 50% comments and response spreadsheet
- Meeting notes, as required

Assumptions Design package will include general, civil, process and instrumentation, structural, mechanical, and electrical information necessary for the modification of existing facilities and construction of the new facilities. The 90% level drawings will include programmable logic controller (PLC) input/output schematic diagrams, and control diagrams.

Task 3.3 Final Design Activities

Activities Task 3.3 includes the following activities:

- Prepare final (100%) plans and specifications for soliciting construction bids and obtain the necessary construction permits for the project
- Hold weekly team coordination meetings

- Conduct an internal QA/QC and constructability review on the final design package
- Update the 90% cost estimate
- Prepare and submit camera-ready bid documents to Willamette Print and Blueprint or to City's preferred vendor for advertising the bid package

Deliverables The deliverables included in Task 3.3 are summarized below:

- Final plans and specifications to City and DEQ
- Final cost estimate
- Full-size plans and specifications to Willamette Print and Blueprint or to City's referred vendor
- 90% comments and response spreadsheet
- Meeting notes, as required

Assumption Drawings will be submitted full-size (ANSI D-size) for the final submittal to Willamette Print and Blueprint or to the City's preferred vendor.

Task 3.4 Services during Bidding

Activities Task 3.4 includes the following activities:

- Prepare responses to bidder questions as requested
- Prepare addenda
- Prepare pre-bid meeting agenda, attend the pre-bid meeting, and prepare meeting minutes and a list of Contractor questions and responses

Deliverables The deliverables included in Task 3.4 are summarized below:

- Request for information (RFI) responses (email)
- Addenda documents

Assumption Up to two addenda will be issued

Task 3.5 Services during Construction

Activities Task 3.5 includes the following activities:

- Attend pre-construction conference
- Attend field visits
- Review Contractor's submittals and provide responses
- Prepare responses to Contractor questions
- Prepare record drawings
- Prepare the operation and maintenance (O&M) manual

Deliverables The deliverables included in Task 3.5 are summarized below:

- RFI responses (email)
- Submittal responses (email)
- Record drawings
- O&M manual



Assumptions The assumptions included in Task 3.5 are summarized below:

- Record drawings will be submitted electronically and be based on a red-line drawings provided by the City
- O&M manual will be in accordance with DEQ requirements
- Up to 50 submittals will be reviewed
- Up to four field visits will be made
- Up to ten RFIs will be processed

Phase 4 48th Street Pump Station and Force Main Project

(requires City written authorization to proceed)

Objective To provide engineering services in support of the final design for 48PS and 48FM

Task 4.1 50% Design Activities

Activities Task 4.1 includes the following activities:

- Prepare draft plans and specifications to the 50% design levels. The draft documents will provide the information necessary for construction of the new 48PS and 48FM. Draft plans and specifications will be prepared that illustrate general, civil (including plan and profile of the new force main), process and instrumentation, structural, mechanical, and electrical information necessary for the modification of existing facilities and construction of the new facilities.
- Hold weekly team coordination meetings.
- Conduct an internal QA/QC and constructability review on the 50% design package.
- Prepare a cost estimate.
- Coordinate with ODOT.
- Hold a project review joint meeting with the City to review and collect comments on the 50% package.

Deliverables The deliverables included in Task 4.1 are summarized below:

- 50% plans and specifications to City and DEQ
- 50% cost estimate
- Meeting notes, as required

Assumptions The assumptions included in Task 4.1 are summarized below:

- The documents will be prepared in 2011 Construction Specifications Institute (40 division) format
- Three sets of draft plans (11" x 17") and specifications will be submitted to the City at each design phase for review and comment
- One set of draft plans (11" x 17") and specifications will be submitted to DEQ at each design phase for review and comment
- An Erosion Sediment Control Plan will be prepared and included with the design drawings for the Contractor's use in acquiring the required 1200-C NPDES stormwater permit

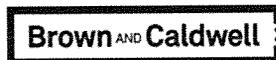
- Design flow is approximately 2.1 mgd (this will be confirmed in Phase 2)
- The force main alignment will follow the general alignment of the existing force main and will stay within the City ROW
- City engineering, operations, and maintenance staff will participate in deliverable review meetings and provide information as necessary for the final design services
- The project manager and design lead will participate in the project review meeting
- Submittal will include general sheets, civil sheets (including plan and profile of the new force main), P&ID and control strategies, structural sheets (plan view only, no sections, no details), mechanical sheets (plan view only, no sections, no details), and electrical information necessary for the modification of existing facilities and construction of the new facilities.
- The highway bore casing will not need to be upsized.
- No new highway crossing is included.
- The pump station will be designed according to the following guidelines:
 - submersible pump station configuration
 - valve/manifold vault
 - separate flow meter and flow meter vault
 - wet well, vaults, electrical/generator building to be expandable for future flows (approximately 3.8 mgd; this will be confirmed in Phase 2)
 - no odor control, chemical feed, or air injection system
 - three variable-speed pumps with one pump redundant
 - existing pump station will need to be in operation during construction and decommissioning of existing pump station will occur after new pump station has been successfully tested
 - surge control will consist of air vacuum relief valves

Task 4.2 90% Design Activities

Activities

Task 4.2 includes the following activities:

- Prepare draft plans and specifications to the 90% design levels. The 90% draft plans and specifications will further develop the design presented at the 50% level, including general, civil, process and instrumentation, structural, mechanical, and electrical information necessary for the modification of existing facilities and construction of the new facilities. The 90% level drawings will include PLC input/output schematic diagrams, instrument loop diagrams, and miscellaneous control diagrams.
- Hold weekly team coordination meetings.
- Conduct an internal QA/QC and constructability review on the 90% design package.
- Update the 50% cost estimate.
- Hold a project review joint meeting with the City to review and collect comments on the 90% package.



Deliverables The deliverables included in Task 4.2 are summarized below:

- 90% plans and specifications to City and DEQ
- 90% cost estimate
- 50% comments and response spreadsheet
- meeting notes, as required

Assumption Design package will include general, civil, process and instrumentation, structural, mechanical, and electrical information necessary for the modification of existing facilities and construction of the new facilities. The 90% level drawings will include PLC input/output schematic diagrams, and control diagrams.

Task 4.3 Final Design Activities

Activities Task 4.3 includes the following activities:

- Prepare final (100%) plans and specifications for soliciting construction bids and obtain the necessary construction permits for the project.
- Hold weekly team coordination meetings
- Conduct an internal QA/QC and constructability review on the 50% design package.
- Update the 90% cost estimate.
- Prepare and submit camera-ready bid documents to Willamette Print and Blueprint or to City's preferred vendor for advertising the bid package.

Deliverables The deliverables included in Task 4.3 are summarized below:

- final plans and specifications to City and DEQ
- final cost estimate
- full-size plans and specifications to Willamette Print and Blueprint or to City's preferred vendor
- 90% comments and response spreadsheet
- meeting notes, as required

Assumptions Drawings will be submitted full-size (ANSI D-size) for the final submittal to Willamette Print and Blueprint or to the City's preferred vendor.

Task 4.4 Services during Bidding

Activities Task 4.4 includes the following activities:

- Prepare responses to bidder questions as requested.
- Prepare addenda.
- Prepare pre-bid meeting agenda, attend the pre-bid meeting, and prepare meeting minutes and a list of Contractor questions and responses.

Deliverables The deliverables included in Task 4.4 are summarized below:

- RFI responses (email)
- addenda documents

Assumption Only two addenda will be issued.

Task 4.5 Services during Construction

Activities Task 4.5 includes the following activities:

- Attend pre-construction conference.
- Attend field visits as needed or requested.
- Review Contractor's submittals and provide responses.
- Prepare responses to Contractor questions.
- Prepare record drawings.
- Prepare the O&M manual.

Deliverables The deliverables included in Task 4.5 are summarized below:

- RFI responses (email)
- submittal responses (email)
- record drawings
- O&M manual

Assumptions The assumptions included in Task 4.5 are summarized below:

- Record drawings will be submitted electronically and be based on a red-line drawings provided by the City.
- O&M manual will be in accordance with DEQ requirements.
- Up to 50 submittals will be reviewed.
- Up to four field visits will be made.
- Up to ten RFIs will be processed.

Phase 5 Coast Highway Gravity Sewer Project

(requires City written authorization to proceed)

Objective To provide engineering services in support of the final design for HGS

Task 5.1 50% Design Activities

Activities Task 5.1 includes the following activities:

- Prepare draft plans and specifications to the 50% design levels. The draft documents will provide the information necessary for construction of the new gravity sewer. Draft plans and specifications will be prepared that illustrate plan and profile of the new gravity sewer and appurtenances.
- Conduct an internal QA/QC and constructability review on the 50% design package.
- Prepare a 50% cost estimate.
- Coordinate with ODOT.
- Coordinate with DSL and USACE.
- Hold a project review joint meeting with the City to review and collect comments on the 50% package.



Deliverables The deliverables included in Task 5.1 are summarized below:

- 50% plans and specifications to City and DEQ
- 50% cost estimate
- meeting notes, as required

Assumptions The assumptions included in Task 5.1 are summarized below:

- The documents will be prepared in 2011 Construction Specifications Institute (40 division) format.
- Three sets of draft plans (11" x 17") and specifications will be submitted to the City at each design phase for review and comment.
- One set of draft plans (11" x 17") and specifications will be submitted to DEQ at each design phase for review and comment.
- An Erosion Sediment Control Plan will be prepared and included with the design drawings for the Contractor's use in acquiring the required 1200-C NPDES stormwater permit.
- Design flow is approximately 2.9 mgd (this will be confirmed in Phase 2).
- The gravity sewer alignment will follow the general alignment of the existing gravity sewer and will stay within the City ROW.
- The highway bore casing will not need to be upsized.
- No new highway crossing is included.
- Two meetings will be held with ODOT.
- City engineering, operations, and maintenance staff will participate in deliverable review meetings and provide information as necessary for the final design services.

Task 5.2 90% Design Activities

Activities Task 5.2 includes the following activities:

- Prepare draft plans and specifications to the 90% design levels. The 90% draft plans and specifications will further develop the design presented at the 50% level.
- Conduct an internal QA/QC and constructability review on the 90% design package.
- Update the 50% cost estimate.
- Hold a project review joint meeting with the City to review and collect comments on the 90% package.

Deliverables The deliverables included in Task 5.2 are summarized below:

- 90% plans and specifications to City and DEQ
- 90% cost estimate
- 50% comments and response spreadsheet
- meeting notes, as required

Task 5.3 Final Design Activities

- Activities** Task 5.3 includes the following activities:
- Prepare final (100%) plans and specifications for soliciting construction bids and obtain the necessary construction permits for the project.
 - Conduct an internal QA/QC and constructability review on the 50% design package
 - Update the 90% cost estimate.
 - Prepare and submit camera-ready bid documents to Willamette Print and Blueprint or to City's preferred vendor for advertising the bid package.

- Deliverables** The deliverables included in Task 5.3 are summarized below:
- final plans and specifications to City and DEQ
 - final cost estimate
 - full-size plans and specifications to Willamette Print and Blueprint or to City's preferred vendor
 - 90% comments and response spreadsheet
 - meeting notes, as required

Assumption Drawings will be submitted full-size (ANSI D-size) for the final submittal to Willamette Print and Blueprint or to City's preferred vendor.

Task 5.4 Services during Bidding

- Activities** Task 5.4 includes the following activities:
- Prepare responses to bidder questions as requested.
 - Prepare an addendum.
 - Prepare pre-bid meeting agenda, attend the pre-bid meeting, and prepare meeting minutes and a list of Contractor questions and responses

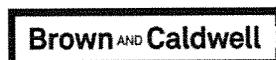
- Deliverables** The deliverables included in Task 5.4 are summarized below:
- RFI responses (email)
 - One addendum

Assumption Only one addendum will be issued.

Task 5.5 Services during Construction

- Activities** Task 5.5 includes the following activities:
- Attend pre-construction conference.
 - Attend field visits as needed or requested.
 - Review Contractor's submittals and provide responses.
 - Prepare responses to Contractor questions.
 - Prepare record drawings.
 - Prepare the O&M manual.

- Deliverables** The deliverables included in Task 5.5 are summarized below:
- RFI responses (email)



- submittal responses (email)
- record drawings
- O&M manual

Assumptions The assumptions included in Task 5.5 are summarized below:

- Record drawings will be submitted electronically and be based on a red-line drawings provided by the City.
- Up to 20 submittals will be reviewed.
- Up to two field visits will be made.
- Up to eight RFIs will be processed.