

EXHIBIT A**Scope of Work****Structural Rehabilitation of Taggart Outfall 30****BACKGROUND AND OVERVIEW**

The City of Portland Bureau of Environmental Services (BES) has identified the need to structurally rehabilitate portions of the Taggart Outfall. The outfall is a brick sewer constructed in 1906. It is approximately 5700 feet long, with up to 67 feet of cover. The diameter ranges from 64 to 120 inches. BES completed a condition assessment and identified portions of the outfall needing structural rehabilitation. BES decided to use trenchless rehabilitation techniques wherever feasible to minimize surface disruption as well as maximize use of an existing resource. In addition to structurally rehabilitating portions of the outfall, the project includes manhole repair and local hydraulic improvements.

This scope of services describes the design services that will be provided by Consultant to refine the selection of segments to be rehabilitated, select the rehabilitation methods to be applied, assist BES with public involvement, obtain needed permits, design the improvements, assist BES in obtaining competitive bids, and assist BES with constructing and commissioning the improvements.

WORK TO BE PERFORMED BY BES

The City has assigned a project manager to oversee the work and provide support as needed. Specific duties the City will perform include:

- a) Hydraulic System Modeling (performed by BES Systems Analysis Group) in accordance with project inputs and definitions provided by Consultant.
- b) Right-of-Way and easement acquisition services with exhibits provided by Consultant.
- c) Primary survey control points (ASCII point file along with field sketches showing location of points) for project boundary and survey requirements provided by Consultant.
- d) Permits: BES will submit permit applications and pay any permit fees.
- e) Street coring work and coring report with inventory request created by Consultant.
- f) Project oversight including work product review and written comment.
- g) Participation in workshops
- h) Construction management and inspection. BES will advertise the project and evaluate all bids submitted and prepare a bid analysis and evaluation report.
- i) Printing of documents: BES will be responsible for printing and distributing the final set of bidding documents, addenda, and conformed documents.
- j) Printing of public involvement materials: BES will print public involvement materials
- k) BES will provide available and requested technical background data on the project including as-builts.
- l) Soil/water testing will be performed by the City's Water Pollution Control Laboratory with inventory request created by Consultant. Costs shall be paid internally by BES.
- m) Consultant has assumed that BES will print and mail project information publications; secure locations for and schedule open houses, neighborhood meetings, and business meetings; and host the website and email server.

WORK TO BE PERFORMED BY CONSULTANT**1. PROJECT MANAGEMENT SERVICES**

Project management services will include activities needed to initiate the project, coordinate project activities, and close the project. The expected duration of the project is a minimum of 18 months to a maximum of 36 months, depending on construction sequencing, including Task 5 Design Services during Construction.

The deliverables from Task 1 include:

- Meeting agenda
- Meeting minutes
- Project management plan
- Monthly invoicing and updates including dashboard report, status report, and updated project schedule
- Project schedule
- Monthly subcontract management and monthly subconsultant payment and utilization report
- Decision log
- Project risk register
- Quality management plan

The scope of work for Task 1 is based on the following assumptions:

- 36 month project duration

The following subtasks will be completed as part of the project management task:

- 1.1. Develop and submit project management plan. Consultant will prepare a project management plan. The project management plan will address project background including challenges, objectives, and goals; project success factors; scope of services provided by Consultant; work to be performed by BES; team members, roles, responsibilities, and contact information; communication protocols; project files and record management - Consultant will use a SharePoint site accessible by Consultant, subconsultant, and BES staff for project record-keeping; field safety instructions for site visits; emergency procedures; work breakdown structure; decision log (developed in Task 1.7); Change management procedures providing for review and approval by BES; project schedule; quality management plan (developed in Task 1.8); and a closeout plan. The project management plan will include instructions for coding email and other documents in the TRIM naming protocol as much as possible.
- 1.2. Project meetings
 - 1.2.1. Kick-off meeting. Consultant will organize and participate in a kick-off meeting with the BES project management team to review the project management plan, project success factors, communication protocols, team member interfaces and dependencies, and project schedule. The meeting will be attended by the key members of the Consultant project management team.
 - 1.2.2. Monthly project review meetings (up to 35 depending on construction sequencing). The Consultant project manager will communicate with the BES project manager once each month to review decision log, schedule, risk register, invoice, dashboard report and status report. Consultant will check-in by telephone or email with BES project manager every other week to review work in progress or done, work to be done, and obstacles.
 - 1.2.3. Meeting agenda and notes. Consultant will prepare an agenda and meeting notes for each project meeting.
- 1.3. Project monitoring and controls. Consultant will use earned value to monitor and control the project. A project dashboard (earned value) report will be used to report monthly progress

against planned progress. The dashboard report will show approved changes, pending changes, cumulative value completed, cumulative expenditures, monthly expenditures, earned value statistics (planned value, earned value, actual cost, cost performance index, schedule performance index, budget at completion, estimate at completion, previous (last month) estimate at completion), monthly variance estimate, contract financials, and rate of expenditure. A monthly status report summarizing recent and anticipated activities for active tasks, information needs, earned value, and issues needing resolution will be prepared and submitted along with the project dashboard report. The report will be submitted with the monthly invoice. Consultant will use a project SharePoint site accessible by Consultant, subconsultant, and BES staff to make project monitoring and controls information available to the entire team.

- 1.4. Develop project schedule and update monthly. Consultant will develop an overall project schedule including preliminary design, design, and construction showing proposed meeting dates, subtask start and completion dates, submittal dates, review periods, and other milestones. The schedule will be updated monthly and submitted with the monthly invoice.
- 1.5. Monthly invoicing. Consultant will submit monthly invoices in a format acceptable to BES.
- 1.6. Subcontract management and monthly subconsultant payment and utilization report. This subtask includes the activities needed to negotiate scope of work and fee with each subconsultant, verify that health and safety requirements are met, a Subconsultant Payment and Utilization Report will be prepared monthly and submitted with each invoice.
- 1.7. Create and maintain decision log. Decisions that are made as the project progresses will be recorded and tracked on a written decision log.
- 1.8. Develop risk register. The risk register will be updated as the project proceeds. The risk register will track project and construction risks to manage risk identification, mitigation, reduction, and elimination for the project from beginning to end.
- 1.9. Quality assurance and quality control. Consultant will prepare a Quality Management Plan. The plan will identify the quality requirements for the project, the procedures to be followed to achieve the quality requirements, quality reviews that are required for each submittal, and the quality review team. Each deliverable will include a cover sheet listing and initialed by primary author, peer reviewer, and QA/QC reviewer.

2. PREDESIGN SERVICES

Predesign design activities will determine rehabilitation locations and rehabilitation methods by location and initiate public involvement and permitting. A technology panel that includes representatives with detailed knowledge of specific rehabilitation techniques will provide input to the selection of rehabilitation methods and locations. Because the choice of rehabilitation techniques partly depends on keeping surface impacts within limits acceptable to the community, a public information strategy will be developed and implemented in conjunction with BES staff during preliminary design.

The deliverables from Task 2 include:

- Meeting agenda
- Meeting minutes
- Workshop materials
- QA/QC comment and disposition lists
- Technical memorandum summarizing review of existing information
- Preliminary geotechnical report
- Environmental site assessment reports
- Preliminary hydraulic analysis technical memorandum
- Pipe penetrating radar technical memorandum

- Manhole inspection technical memorandum
- Summary technical memorandum to supplementary investigations
- Preliminary public involvement technical memorandum
- Public involvement contact reports
- Public involvement materials for printing and distribution by BES
- Draft and final evaluation criteria and tools technical memorandum
- Draft and final identify rehabilitation locations technical memorandum
- Draft and final identify rehabilitation technologies technical memorandum
- List of required permits
- Permitting technical memorandum
- Permit applications
- Project implementation schedule
- Draft and final preliminary design report (Basis of design report)
- Pipe entry and safety plan(s).

The scope of work for Task 2 is based on the following assumptions:

- Workshops can be scheduled to complete predesign by October 2014
- Receipt of BES provided material early in project
- BES will secure and schedule the open house locations, neighborhood meetings, and business meetings
- BES will host the public involvement website and email responses
- BES will print and mail public involvement materials

The following subtasks will be completed during preliminary design:

- 2.1. Review existing information. Consultant will review existing data, records, and reports and summarize our findings in a technical memorandum.
 - 2.1.1. Existing construction records, inspector's notes, drawings. Determine if inspector's notes for the original construction were archived. If additional records are available from BES archives, they will be reviewed as part of this task. This work would be performed by Consultant utilizing City Archives and other historical sources.
 - 2.1.2. Condition assessment performed by BES. Consultant will review the existing condition assessment prepared by Brown and Caldwell for BES. The condition assessment will be provided to the vendor panel and the geotechnical engineer (Rhino 1) for review.
 - 2.1.3. CCTV Data Review. Existing CCTV records will be reviewed to supplement previous BES analysis, using Consultant, subconsultant, and Technology Panel input. The review will particularly look for penetrations, lateral connections, hydraulic connections, hydraulic constrictions, localized failures, and deformation. This review will be used in Task 2.5 to confirm locations for rehabilitation. The locations shown on the CCTV tapes will be matched with surface locations to develop an understanding of possible impacts on existing structures. The CCTV data will be provided to the Technology Panel for review.
 - 2.1.4. Laser profiling. Existing laser profiling records will be reviewed for deformation of the outfall pipeline. The laser profiling data will be provided to the Technology Panel for review.
 - 2.1.5. Other historic condition assessment information available from BES not included in the above items 2.1.1-2.1.4 will be reviewed if it is beneficial to identifying rehabilitation locations or methods.
 - 2.1.6. Geotechnical data. Existing geotechnical information from ODOT, TriMet, Eastside Tunnel, and other construction projects in the area will be collected and reviewed by Rhino 1.

- 2.1.7. Technical memorandum. Draft and final detailed technical memoranda will be prepared for each task to summarize the review of existing information. The memoranda will identify additional investigations that are needed to reduce uncertainty of the decision regarding rehabilitation locations. This memorandum will be consolidated in the Preliminary Design Report (Task 2. 9.).
- 2.2. Supplementary investigations. Supplementary site investigations will be performed to provide information that will reduce the uncertainty associated with both selecting rehabilitation locations and rehabilitation techniques.
- 2.2.1. Preliminary Geotechnical Investigations. This subtask will include soil sampling to below the bottom of the existing pipe at possible shaft locations. Due to the logistical advantages of completing the drilling in one field mobilization, soil sampling will be completed at up to 10 possible shaft locations, with the shaft locations allowing access for the variety of rehabilitation techniques that might be applied. Soil borings will be made at 10 locations with a total cumulative depth of approximately 280 feet. Samples will be obtained during drilling for analysis by the BES Water Quality Laboratory. The drilling will be completed with a Sonic Drill Rig to comply with environmental requirements. The data obtained from soil sampling will be combined with the data from review of existing geotechnical information completed in Task 2.1.6 to produce a preliminary geotechnical report discussing geotechnical conditions along the length of the existing pipe and the impact of those soil conditions on pipe stability, groundwater, and design conditions for access shaft construction. The information in the report will be used to guide the selection of locations to be rehabilitated and the choice of rehabilitation technique. Five 2-Inch diameter piezometers will be installed with a total estimated footage of 150 feet at locations determined during geotechnical investigations. Traffic rated monuments will be used for completion.

Laboratory tests to determine soil index properties needed for design of the access shafts will be performed. The following tests will be performed:

- Sixty-five (65) Natural Moisture Contents (ASTM D 2216)
- Twelve (12) Atterberg Limits Test (ASTM D 4318)
- Twelve (12) Grain Size Analysis (ASTM D 422)
- Ten (10) pH (ASTM D G51), ten (10) Sulphates (ASTM D 516), ten (10) Chloride (ASTM D 512) and five (5) electrical resistivity (ASTM G57)

This task includes traffic control and permitting of lane closures for drilling. Samples will be collected by Consultant and transported to the water Pollution Control Laboratory using a documented chain of custody. Soil and water testing will be performed by the City's Water Pollution Control Laboratory, to be paid for internally by BES. This task does not include the cost of disposing of contaminated media if it is encountered during drilling.

The geotechnical report will be peer-reviewed by Staheli Trenchless Consultants.

- 2.2.2. Level I and II ESA. The area adjacent to the Taggart Outfall is known to have localized pockets of contaminated soil. A Level I and Level II Environmental Site Assessment (ESA) will be completed to help guide the selection of rehabilitation techniques. The Level I ESA will identify hazardous waste and leaking underground storage tank sites using State of Oregon DEQ and USEPA databases as well as a field reconnaissance of the pipeline alignment. The Level II assessment will be completed using data from laboratory analysis of soil samples by the BES Water Quality Laboratory.

The Level I ESA will generally be conducted in accordance with ASTM E1527-13 Standard Practice for Environmental Site Assessments: Level I Environmental Site Assessment Process, as modified by this scope of work. The Level I Assessment will include an environmental records search of the Standard Environmental Records Sources detailed in ASTM E-13. The database search will include the alignment of the pipe segments to be rehabilitated and adjoining property. Federal National Priorities List, Federal RCRA CORRACTS, and Oregon ECSI sites will be reviewed for sites within one-quarter mile of the alignment. Portland Fire Bureau records of residential heating oil tank (HOT) installation permits within one-quarter mile of the alignment will be reviewed. With the exception of altering Standard Environmental Record Source radius search distances, this scope of work generally consists of Sections 8.2.1, 8.2.2, and 8.2.3 of ASTM E1527-13. The deliverable from the Level I ESA will be a memorandum describing findings with an annotated map showing locations of potential environmental concern.

The Level II ESA will be generally conducted in accordance with ASTM E 1903 Standard Guide for Level II Environmental Site Assessments. Based on the Level I Assessment findings, prepare a Contaminated Media Assessment Work Plan including a Project specific Sampling and Analysis Plan ("SAP"), Quality Assurance Plan ("QAP"), and Health and Safety Plan ("HSP") to address Project changes since the FEIS was issued for the Project.

Soil samples will be collected from the material excavated during geotechnical drilling. Sonic drilling methods will be used. Up to five monitoring wells will be installed as part of the geotechnical drilling effort. Groundwater samples will be collected from the monitoring wells. Traffic control for soil sampling is included in the geotechnical investigation budget. Traffic control for groundwater sampling is included in the ESA budget. Samples will be delivered to the BES Water Quality Laboratory for analysis.

The deliverable from the Level II ESA will be a memorandum describing field sampling procedures, analytical methods, location of samples, and findings. Contaminant concentrations will be to Oregon DEQ generic risk-based concentrations for excavation and construction workers and clean fill screening criteria and disposal characterization. The estimation of the area environmentally impacted will be within the limits of excavation.

- 2.2.3. Preliminary hydraulic analysis. The current capacity of the Taggart sewer and expected flows will be evaluated to determine the existing and required baseline capacity of the Outfall. The analyses will be performed by the BES Systems Analysis Group using existing models. Consultant will coordinate with BES modeling staff.
- 2.2.4. Conduct Pipe Penetrating Radar (PPR) Survey. A pipe penetrating radar survey will be performed to provide information regarding possible voids surrounding the pipe. The presence of voids would raise concerns about the integrity of the pipe and surface subsidence. The PPR survey will be conducted on three lines from Milwaukie west to the outfall. This task includes traffic control, permitting of lane closures, health and safety support needed for sewer entry and extraction, and a plan documenting the entry procedures. This work will need to be conducted during the dry season as it requires personnel entry of the sewer. Due to the limited availability of qualified contractors, the work will need to be scheduled well in advance of the inspection period. This task includes preparation of a draft pipe entry and safety plan, submittal for review by BES, and finalization of the plan to address BES comments. The results will be reviewed by a Senior Technical Advisor and Staheli Trenchless Consultants

- 2.2.5. Manhole inspection. Manhole inspection will be performed to provide detailed data for design of manhole rehabilitation and preparation of contract documents. Consultant anticipates conducting manhole inspection in conjunction with the PPR survey to minimize impacts on traffic and reduce costs. Manhole inspection will be completed using a camera on an extension pole. No entry other than that needed for the PPR survey is anticipated for this task.
- 2.2.6. Technical memoranda. A separate technical memorandum will be prepared for each investigation. A summary Technical Memorandum will be prepared combining Technical Memorandum from each of the five supplemental investigations. The preparation of the individual memorandum as well as quality assurance and quality control have been budgeted with the individual investigations.
- 2.3. Preliminary Public Involvement Assistance. The public involvement program will provide information helping to guide the selection of rehabilitation techniques. Access requirements vary with each technique, so it will be important to factor community impacts into the selection of rehabilitation locations and methods. Working with BES public involvement staff, a public involvement plan will be developed for the project. It will be desirable to meet with the businesses potentially affected by the project (including Ross Island Sand and Gravel and Darigold) to factor their feedback into the predesign and design process. Limited public involvement activities will be conducted prior to conducting the preliminary geotechnical investigation and the PPR survey to determine how to limit impacts on adjoining businesses. Consultant has assumed that BES will print and mail project information publications; secure locations for and schedule open houses, neighborhood meetings, and business meetings; and host the website and email server.

12 hours for Preliminary discussions with highly impacted businesses; 8 hours for project fact sheet, 20 hours to adapt 4 rehabilitation graphics from design effort for use in public presentations, 20 hours to prepare for and attend 4 neighborhood meetings, 24 hours to develop content for project website, 20 hours to conduct up to 6 site visits with affected businesses, 12 hours to develop stakeholder mailing list, 24 hours to monitor email box and assist BES with responding to questions, 24 hours to track community comments and responses

- 2.4. Develop Risk Based Decision Criteria for the Alternatives Analysis Approach. The evaluation factors will be derived from and aligned with BES' Strategic Plan. A pre-meeting will be conducted with the BES project manager to establish a method/path consistent with BES processes. These strategic values will be converted into specific and measurable evaluation factors. The evaluation factors will include cost and non-cost factors. Non-cost factors may include reliability; technical factors such as performance and hydraulic capacity, ability to accommodate surcharging, compatibility with geotechnical conditions, structural capacity, compatibility with host pipe, and advantages and risks of innovative technology; community and permitting factors such as impacts from access shafts, sustainability, permitting complexity, environmental impacts, and need for in-water work; constructability factors such as lessons learned from previous projects, availability of skilled installers (especially grouting subcontractors), bypass pumping requirements, access shaft construction (especially impacts on adjacent structures), and staging area requirements; and safety of workers and the community. The risk register will be updated as this task proceeds.

Three subtasks will be completed as part of the effort to develop evaluation tools and criteria:

- 2.4.1 Workshop preparation. This subtask will develop potential criteria and tools for design and evaluation of alternatives for discussion in the workshop. A pre-meeting will be

- conducted with the BES project manager to establish a method and assessment path that matches BES processes.
- 2.4.2 Technical memorandum. A draft technical memorandum will be prepared to present evaluation criteria and the tools and processes that will be presented for discussion in the workshop. The technical memorandum will be finalized following a workshop with BES.
- 2.4.3 Workshop 1. A workshop will be conducted with BES staff to review and finalize evaluation criteria and the tools and processes that will be applied to determine what to rehabilitate and how to rehabilitate.
- 2.5. Identify Rehabilitation Locations. As a result of completing the condition assessment, BES has identified segments of the Taggart Outfall for rehabilitation. This task will confirm or make recommendations for changes to the segments identified by BES for structural rehabilitation. The analysis will draw on existing information plus the supplemental information gathered as part of this project and will consider the consequences and probability of failure. Consultant will draw on the experience of BES, Consultant rehabilitation technology experts and the rehabilitation technology support panel. The risk register will be updated as this task proceeds.
- 2.5.1. Workshop preparation. Consultant will prepare presentation, discussion, and evaluation materials for the workshops. The vendor panel will provide input that will be incorporated in the workshop materials. Consultant will solicit input from BES staff. The materials will include proposed risk matrices that address likelihood and consequences of failure associated with outfall pipeline reaches with similar characteristics. The matrices will be populated through workshop discussions.
- 2.5.2. Workshop 2A. A two-day workshop will be conducted with BES staff to apply the evaluation criteria, process, and tools developed in Task 2.2 to the selection of rehabilitation locations. The workshop will be attended by the Consultant Project Manager, Design Manager, Senior Technology Advisors, and Lead Rehabilitation Engineer.
- 2.5.3. Discretionary Workshop 2B. If needed a second workshop will be conducted to complete the evaluation of locations to be rehabilitated.
- 2.5.4. Technical Memorandum. A technical memorandum summarizing the results of the analysis will be prepared. A draft technical memorandum will be prepared to discuss at the workshops and finalized after the evaluation workshops are completed.
- 2.6. Select Rehabilitation Technologies. Vendor panel members with knowledge of specific rehabilitation techniques will provide input to the alternatives analysis. A series of workshops with BES staff will be conducted to compile input, evaluate rehabilitation alternatives, and present the recommended rehabilitation techniques. The risk register will be updated as this task proceeds.
- 2.6.1. Workshop preparation. Rehabilitation techniques will be screened for those suitable for use on the Taggart Outfall. The relative costs, limitations, advantages, and disadvantages of each technique will be identified. Consultant will solicit input from BES staff. The vendor panel members, each with detailed knowledge of a particular rehabilitation technique, will provide input based on their detailed knowledge of the particular rehabilitation technique that they represent to help evaluate rehabilitation techniques. Available staging areas and access will be included in the analysis.
- 2.6.2. Draft Technical memorandum. A draft technical memorandum summarizing rehabilitation techniques, relative costs, advantages, and disadvantages will be prepared. The technical memorandum will be finalized after the workshops are completed.
- 2.6.3. Workshop 3A. This two-day workshop with BES staff will evaluate slip lining, side folded liners, spiral lining, cured in place pipe, carbon fiber wrap, spray applied linings, geopolymers, segmental tunnel liner, grouting, and pointing. The workshop will be led by

- the Senior Technology Advisors. In addition, members of the vendor panel will individually describe application of rehabilitation technologies on the project, drawing on their product knowledge and review of background information including the condition assessment, CCTV data, laser profiling data, geotechnical evaluations, and PPR data. The workshop will be attended by the Consultant Project Manager, Design Manager, Senior Technology Advisors, and Lead Rehabilitation Engineer.
- 2.6.4. Discretionary Workshop 3B. If needed a second workshop with BES staff will be used to evaluate other technologies or re-visit previously discussed technologies.
- 2.6.5. Workshop 4A. This workshop with BES staff will apply the understanding of each rehabilitation technique with the updated condition assessment to pick the best combination of rehabilitation techniques. The decision criteria, processes, and tools identified in Task 2.4 will be applied. The workshop will be attended by the Consultant Project Manager, Design Manager, Senior Technology Advisors, and Lead Rehabilitation Engineer. This workshop will be led by the Senior Technology Advisors.
- 2.6.6. Update Technical Memorandum. The draft technical memorandum prepared in Task 2.6.2 will be updated to include the recommended rehabilitation technique for each segment of the Taggart Outfall. The memorandum will summarize rehabilitation techniques, relative costs, advantages, and disadvantages will be prepared to update the draft. The Technical Memorandum will also include the outcome of the workshops where rehabilitation locations and methods have been established.
- 2.6.7. Final hydraulic analysis of proposed improvements. After the combination of rehabilitation techniques has been selected and specific segments have been identified for rehabilitation, the hydraulic analysis initiated in task 2.2.3 will be updated to assess the hydraulic capacity of the proposed rehabilitated system. The hydraulic analysis will be performed by the BES Systems Analysis Group using existing models and rehabilitation information provided by Consultant. A technical memorandum will be prepared that provides the results of this analysis.
- 2.6.8. Discretionary Workshop 4B. If needed a second workshop with BES staff will be used to complete the selection of rehabilitation technologies. A workshop will be conducted with BES to review recommendations for rehabilitation techniques.
- 2.6.9. Final Technical Memorandum. A final technical memorandum summarizing rehabilitation techniques, relative costs, advantages, and disadvantages will be prepared to update the draft memorandum prepared in Task 2.6.2 and 2.2.6. The Technical Memorandum will summarize the outcome of the workshops and the recommended rehabilitation locations and methods.
- 2.7. Identify required permits and easements. Permitting will be started in preliminary design due to the time needed to apply for permits and complete agency reviews. Where possible, activities will be permitted under nationwide permits to speed permitting. Potentially regulated activities may include work from a barge in the Willamette River at the outfall, construction of a riprap dissipation pad, hazardous material removed from excavations, hazardous chemicals used to complete installation of liners, discharge of flushing water, traffic diversions, and construction access. In addition to permits for in-water work, it is expected that street opening permits from the Portland Bureau of Transportation, temporary use zoning permits, and Greenway Review. Temporary use zoning permits are likely to be needed for six construction staging areas. The permit requirements will include fencing, erosion control, and site restoration. The areas west of Grand Avenue has a Greenway Overlay. We will conduct an early assistance Meeting with the Bureau of Development Services to determine if a greenway review will be required and what the likely mitigation requirements will be if a greenway review is required.

- 2.7.1. Permit identification. A list of potentially regulated activities, required permits, regulatory agency, and application lead time will be prepared. The application process will be summarized for each permit. Meetings and discussions with permitting agencies will be held to identify means to avoid permits and/or minimize permitting requirements. The outcome of these meetings will be a document summarizing agency meetings and the design elements needed to satisfy permitting agency requirements.
- 2.7.2. Easement identification and memorandum.
- 2.7.3. Technical memorandum. A technical memorandum summarizing permitting requirements will be prepared.
- 2.7.4. Permit applications. Due to the lead time needed to obtain some permits, it may be necessary to start the permit application process in preliminary design to be certain of having permits when construction starts.
- 2.8. Develop detailed project schedule. Consultant will develop a detailed project schedule for implementation of the selected rehabilitation approach. The schedule will be prepared in MS Project. The schedule will address scheduling constraints including seasonal limitations on in-water work and work in the outfall, holiday moratoriums, scheduled neighborhood events, and coordination with existing operations.
- 2.9. Prepare Draft and Final Preliminary Design Report (Basis of Design Report). Consultant will prepare draft and final preliminary design reports in accordance with the BES Capital Improvement Program Implementation Procedures. The Basis of Design report will consolidate technical memoranda prepared for each task, adding overview, conclusions, and recommendations. The objectives of the preliminary design report are to confirm the project's need, approach, expected results and benefits; delineate the facility size location, cost and schedule; summarize hydraulic analyses; confirm field conditions; and identify issues needing to be resolved. The report will:
 - Identify any "fatal" issues. (If fatal issues are identified, work will be stopped in accordance with the change management process.)
 - Detail rehabilitation alternatives, assuring the selection of a cost-effective solution with consideration for public acceptance, operations and maintenance, cost, schedule and other relevant factors.
 - Summarize public outreach activities.
 - Provide specific recommendations for further project action.
 - Summarize final design criteria.

The technical memoranda prepared at the conclusion of each task will form the basis of the preliminary design report. Consultant will address BES comments and review the responses with BES before finalizing each technical memorandum. A draft preliminary design report will be prepared and submitted to BES for review. The final preliminary design report will be prepared after receiving BES comments compiled by the BES Project Manager and reviewed with Consultant staff to identify the desired responses.

- 2.10. Prepare Preliminary Cost Estimate (per BES TM 4.5).

3. PRELIMINARY DESIGN SERVICES

The objectives of the preliminary design phase are to complete the plans, specifications, and contract documents to the approximate 30 percent completion point; conduct QA/QC and document the action taken in response to QA/QC comments; and update the project work plan. At the start of the preliminary design phase, Consultant will review design criteria, key issues, and design assumptions with the BES Project Manager. Issues that were not resolved during preliminary design will be reviewed with BES and an approach for resolving those issues will be developed and implemented. If

needed the quality plan developed in Task 1.6 will be revised and updated. Implementation of the Public Involvement plan developed in Task 2.3 will continue.

The deliverables from Task 3 include:

- Meeting minutes
- Workshop materials
- QA/QC comment and disposition lists
- Survey notes and files
- Bathymetric survey report and files
- Field conditions technical memorandum
- Utility conflict log
- Utility notification letters
- 30 percent drawings and specifications list
- Preliminary cost estimate
- Public involvement contact reports
- Public involvement materials and mailings for distribution by BES
- Updated construction schedule
- Draft and final Design Report

The scope of work for Task 3 is based on the following assumptions:

- Project includes six access shafts
- BES will secure and schedule the open house locations, neighborhood meetings, and business meetings
- BES will host the public involvement website and email responses
- BES will secure and schedule the open house locations, neighborhood meetings, and business meetings
- BES will host the public involvement website and email responses

The following tasks will be completed as part of Task 3:

- 3.1. Design survey. A surface design survey will be completed to locate access points to the outfall and to provide sufficient vertical and horizontal information to complete design of the project. No entry into the outfall is anticipated for the survey. It is anticipated that manholes will be opened and invert elevations will be measured from the surface. The survey will include topography, existing monuments, existing utility locations based on surface structures and surface markings provided by each utility. Invert elevations will be provided for storm and sanitary sewer manholes. The survey will be based on City of Portland datum and control. Deliverables will include electronic survey files in MicroStation format and signed paper copies. This task includes traffic control needed for work in public right of way
- 3.2. Bathymetric Survey. Bathymetric survey will be performed at the outfall's discharge to the Willamette River to support anticipated access from that location and associated permitting and construction needs.
- 3.3. Observe and record field conditions and other constraints to construction. As part of this effort, the design team will conduct onsite observations covering a work week and all times during the day to identify traffic flows, particularly related to Darigold and Ross Island Sand and Gravel operations, as well as on the major streets in the area. A technical memorandum summarizing the results of this investigation will be prepared.
- 3.4. Prepare Utility Conflict Log

- 3.4.1. Locate utilities, obtain as-builts for utilities, prepare utility conflict log and send out utility notification letter in accordance with BES Utility Coordination Procedures for Capital Improvement Projects. Utility location markings will be obtained before conducting the design survey. Base mapping will be prepared based on the design survey and data provided by utilities showing the location of other utilities in the construction areas by the surveyor. This task includes potholing, utility identification and location, preparation of design sheets showing the location of the existing utilities, civil design for utility relocation for the areas disturbed by the access shafts, and coordination with the utilities.
 - 3.4.2. Send utility notification letters
 - 3.4.3. Prepare Utility Conflict Log.
- 3.5. Develop 30 Percent Plans (assume rehabilitation segments per Request for Proposals with 6 access shafts). This task will develop the construction plan set and specifications to an approximate 30 percent completion point for the rehabilitation segments identified in the RFP. It is based on designing 6 access shafts. It is anticipated that the plan set will consist of a total of 92 sheets:
 - 10 general sheets, one survey control sheet
 - 10 plan/profile sheets
 - 8 traffic control
 - 16 detail sheets showing plans, cross-sections, and details for shaft construction
 - 20 sheets showing localized reconstruction needed to correct hydraulic constraints and remove obstacles that will interfere with installation of a liner
 - 2 in-water work plan and detail sheets
 - 9 survey and easement sheets
 - 4 geotechnical sheets
 - 8 sheets for currently unidentified requirements
 - 5 erosion control drawings

It is anticipated that the specifications will be based on City of Portland Standard Specifications. Specialized rehabilitation specifications will be based on Consultant specifications adopted to City format. It is anticipated that BES will provide the front end documents for the project (Divisions 0 and 1). It is anticipated that the access shafts will be performance specified. For the 30 percent completion point, it is anticipated that a list of specification sections and titles will be completed and that the specifications will be developed in subsequent phases of design. The drawings will follow BES CAD standards and will be prepared in MicroStation. The 30 percent complete set of drawings and the specification list. The 30 percent submittal will be peer-reviewed by Staheli Trenchless Consultants. This task has been organized into the flowing subtasks:

- 3.5.1. 30 percent design – Plans
 - 3.5.2. 30 percent design - Specifications
 - 3.5.3. 30 percent QA/QC
 - 3.5.4. 30 percent design review meeting
- 3.6. Foreseen Additional Design. This task (Task 3.6) provides for the design of four additional access shafts, if needed due to the choice of location and rehabilitation methods. *The need for additional design requirements will be established at the completion of Task 2.6.9. At that time the scope and LOE for Task 3.5 will likely be revised from that assumed during initial scope development. This is a BES managed -additional work item.*
- 3.7. Update Preliminary Cost Estimate (per TM 4.5)

4. FINAL DESIGN SERVICES

The objectives of the design phase are to complete the plans, specifications, and contract documents so that they are suitable for bidding and constructing the project; complete a final design report; conduct QA/QC and document the action taken in response to QA/QC comments; and update the project work plan. At the start of the final design phase, Consultant will review design criteria, key issues, and design assumptions with the BES Project Manager. Issues that were not resolved during preliminary design will be reviewed with BES and an approach for resolving those issues will be developed and implemented. If needed the quality plan developed in Task 1.6 will be revised and updated. Implementation of the Public Involvement plan developed in Task 2.3 will continue.

The deliverables from Task 4 include:

- Meeting minutes
- Workshop materials
- QA/QC comment and disposition lists
- Updated utility conflict log
- Risk register
- Update to utility conflict log
- Public involvement contact reports and copies of contact information and mailings
- Updated geotechnical baseline report
- Contaminated Media Management Plan
- Contaminated media management specification
- Erosion control plan
- Traffic control plans and specifications
- Bypass plan
- Additional permit applications
- 60 percent design package submittal
- 90 percent design package submittal
- 100 percent design package submittal with summary final design report for routing
- CD compilation of typical defects and important areas within outfall to include in bid documentation to assist Contractors in bidding
- Sealed drawings and specifications
- Cost estimate and updates
- Updated construction schedule
- Draft and final Design Report, including summary report for routing

The scope of work for Task 4 is based on the following assumptions:

- Project includes six access shafts. Permanent access at the 6 locations will be provided via a manhole, the space between the shaft and the manhole will be backfilled, and the surface restored to preconstruction conditions.
- BES will secure and schedule the open house locations, neighborhood meetings, and business meetings
- BES will print and mail public involvement materials
- BES will host the public involvement website and email responses

The following tasks will be completed as part of Task 4

- 4.1. Address 30 percent comments. Consultant will prepare and submit a written response to review comments received from Consultant reviewers and BES. Consultant will meet with BES

- to review the comments received on the 30 percent design submittal and explain how those comments will be addressed. This work has been organized into two subtasks:
- 4.1.1. Written response to BES comments
 - 4.1.2. Review Meeting
 - 4.2. Update Risk Register. Consultant will update the risk register. The risk register will include construction risk elements, mitigation measures, and outstanding risks of concern with probability and consequence. The project risk register will be updated as this task proceeds.
 - 4.3. Resolve Utility conflicts and update utility conflict log. Using the data collected in Task 3.4, the Consultant team will finalize the design to address utility conflicts, either by working with the conflicting utility to relocate a utility or by designing around the existing utility for the six shafts anticipated for the project. As the work proceeds, Consultant will update the utility conflict log.
 - 4.4. Perform Public Involvement Assistance during final design. Working with BES public involvement staff, Consultant will continue implementation of the public involvement plan developed in Task 1.6. Consultant has assumed that BES will print and mail project information publications; secure locations for and schedule open houses, neighborhood meetings, and business meetings; and host the website and email server.
40 hours for construction outreach plan, 16 hours for 4 4-hour long neighborhood association meetings, 33 hours of for 11 3-hour site visits with affected businesses, 12 hours for 2 fact sheets, 28 hours for one community open house
 - 4.5. Update Final Geotechnical Report. The preliminary baseline geotechnical report developed in Task 2.2.1 will be updated based on additional information that has become available through the design process. No additional field investigations are anticipated. It is anticipated that the update will consist of an addendum to the original baseline report.
 - 4.6. Develop Contaminated Media Management Plan and Specification. A Contaminated Media Management Plan (CMMP) and specification will be developed. The CMMP will be a tool used to communicate contaminated media management design to the City and DEQ prior to inclusion in the Final Specifications. The CMMP will document the anticipated final placement of low level contaminated material and off-site management of higher level contaminated material. The CMMP shall also identify contingency plans for addressing unanticipated contaminated media that may be encountered during construction activities. The CMMP will be a standalone document incorporating a summary of current and historical land uses, soil conditions, and groundwater conditions. Definitions of what constitutes contaminated soil and groundwater will be included. Areas shown as having elevated concentrations of pollutants will be shown on figures included in the CMMP. Criteria for managing contaminated soil and groundwater will be included. Procedures for managing contaminated groundwater removed during dewatering will be included. The CMMP will address procedures for addressing other contaminants that may be encountered during construction. A specification section will be updated to incorporate the recommendations of the CMMP. The specification will include a description of the criteria used to designate contaminated media and figures illustrating the anticipated locations of in-place contaminated media.
 - 4.7. Develop Erosion Control Plans and Specifications. This task will develop erosion control plans and specifications for the project consistent with requirements of Oregon DEQ and the City of Portland Erosion Control Manual.
 - 4.8. Develop Traffic Control Plans and Specifications. This task will develop traffic control plans and specifications for the project to create requirements for the contractor that minimize impacts to traffic flow and access to businesses adjoining the access shafts. The traffic control plans will be coordinated with the Portland Bureau of Transportation.

- 4.9. Prepare a Bypass Plan. A bypass plan will be prepared for flows entering the outfall from branch connections as well as flow through the areas being rehabilitated. It is anticipated that branch connections will be blocked for short periods of time as the structural rehabilitation is installed. During the time that the branch connections are blocked, flow will need to be bypassed to enter the Outfall below the area of work. There will also be a need to bypass flow around the segment being rehabilitated. Since flows can rise quite rapidly even during low flow periods, the bypass plan will need to address these high flows, either by sequencing the work for periods forecasted to be dry or by selecting rehabilitation methods compatible with sudden rises in flow during construction. The work for this task will include evaluation of flow and precipitation records to determine what work periods are likely between high flows based on historical records. Based on this analysis, a bypass flow specification will be developed and incorporated into the final design.
- 4.10. Evaluate and design localized hydraulic improvements. There are several points in the Outfall where foreign utilities and structures have intruded into the Outfall. In addition to restricting flow in the area of the obstructions, the obstruction will interfere with some of the rehabilitation techniques. Using the information obtained from review of CCTV, laser profiling, and pipe penetrating radar, this task will design localized repairs to improve hydraulic performance as well as ease installation of the rehabilitation technique. We are assuming six localized hydraulic improvements.
- 4.11. Prepare permit applications
 - 4.11.1. Federal In-water permit applications
 - 4.11.2. City permit applications
 - 4.11.3. Easement Exhibit and Description Preparation
- 4.12. Prepare Contract Documents with appropriate review logs. This task will complete preparation of the plans and specifications for bidding. It includes quality control and quantity assurance reviews. This task includes design of rehabilitation for the segments identified in the RFP and 6 access shafts. As the construction value is expected to be less than \$10 million, this task does not include value engineering. The 30, 60, 90, and 100 percent submittals will be peer-reviewed by Staheli Trenchless Consultants.
 - 4.12.1. Prepare 60 percent plan review package to include revised geotechnical report, environmental reports, survey files including manhole detail sketches, manhole checker, pipe design, rehabilitation design, fuel escalation form, calculations, and other documents needed to complete the design.
 - 4.12.2. Prepare 90 percent plan review package
 - 4.12.3. Prepare 100 percent Check Set
 - 4.12.4. Prepare sealed drawings and specifications and CD
- 4.13. Discretionary Additional Design. This task provides for design of rehabilitation of additional outfall segments and additional access shafts if needed to implement the chosen rehabilitation techniques. The design effort in Task 4.12 includes design of the segments identified by BES in the RFP and 6 access shafts and/or additional access shafts. *The need for additional design requirements will be established at the completion of Task 2.6.9. At that time the scope and LOE for Task 4.12 will likely be revised from that assumed during initial scope development.*
- 4.14. Prepare Cost Estimate with BES Cost Estimating Tool. This task will update the construction cost estimate using the BES cost estimating tool at the conclusion of each design submittal. As additional detail is developed as the design progresses, it is anticipated that the precision of the estimate will improve.
 - 4.14.1. 60 percent Cost Estimate
 - 4.14.2. 90 percent Cost Estimate
 - 4.14.3. 100 percent Cost Estimate with Final Plans and Specifications

- 4.15. Update Construction Schedule. The construction schedule will be updated to address the final design as well as comments received from BES
- 4.16. Prepare Draft and Final Design Report. The final design report will include:
- The final project scope and objectives
 - Description of design exceptions
 - Total cost
 - Implementation schedule
 - A comparison to the original scope, budget, and schedule
 - Construction scope of work including quantities, sizes, and components
 - A comparison of the final design to success criteria, project goals and objectives, and benchmarks defined in the Project Plan
 - A summary of key issues
 - Land and easement acquisition
 - Status report on permits including building and planning permits, right-of-way and easement acquisition, utility issues, and erosion control permitting
 - Hydraulic analysis
 - A summary of public involvement activities
 - A M/W/ESB contracting plan
 - Status of utility relocation work
 - Summary of constructability review comments and resolution
 - Preliminary startup plan

Draft and Final Design Reports will be prepared and submitted to BES. A summary final design report will be prepared for routing.

5. BID PHASE DESIGN SERVICES

The deliverables from Task 5 include:

- Responses to requests for information (20)
- Input for incorporation into addenda (up to 3)
- Submittal list
- Notes from prebid conference

The scope of work for Task 5 is based on the following assumptions:

- Consultant review comments are transmitted by BES to Procurement Services and prospective bidders

We have assumed that BES will manage the Bid Phase and that Consultant will assist BES during the Bid Phase by completing the following tasks:

- 5.1. Answer Requests for Information. Consultant has assumed that there will be 20 Requests for Information during the Bid Phase. Consultant will assist BES with preparing the responses and BES will issue the responses.
- 5.2. Prepare a List of Submittals. Consultant will prepare a list of submittals required by the contract documents. We assume that there will be approximately 60 required submittals.
- 5.3. Prepare Addenda. Consultant has assumed that BES will issue three Addenda during the Bid Phase. Consultant will prepare material for inclusion in addenda such as clarifications, revised drawings, and revised specifications, if needed.
- 5.4. Attend prebid conference.

6. DESIGN SERVICES DURING CONSTRUCTION

The deliverables from Task 6 include:

- Meeting minutes
- Workshop materials
- QA/QC comment and disposition lists
- Engineering Considerations During Design Document
- Public involvement contact reports
- Updated submittal list
- Submittal review (60 submittals)
- Substitution request reviews (5 reviews)
- RFI reviews (50 reviews)
- Site visit reports (10 reports)

The scope of work for Task 6 is based on the following assumptions:

- BES maintains submittal log and tracks submittals
- Consultant review comments are transmitted by BES to contractor
- BES will secure and schedule the open house locations, neighborhood meetings, and business meetings
- BES will host the public involvement website and email responses
- BES will print and distribute public involvement materials

BES will manage the Construction Phase. Consultant will provide the following design services to support BES during construction:

- 6.1. Engineering Considerations during Construction (ECDC)
 - 6.1.1. Prepare Engineering Considerations during Construction memorandum. The document will concisely identify relevant design assumptions, details, permitting requirements, and instructions for the BES construction management team.
 - 6.1.2. Conduct a Construction Inspection Workshop. Consultant will conduct a lessons learned workshop at the beginning of the construction phase to identify key construction criteria for the rehabilitation techniques being applied. The workshop will be conducted by Consultant Technology Advisors, the Lead rehabilitation Engineer, and the design Manager.
- 6.2. Public Involvement Support during Construction. Consultant will continue to work with BES to implement the public involvement plan during construction. Consultant has assumed that BES will print and mail project information publications; secure locations for and schedule open houses, neighborhood meetings, and business meetings; and host the website and email server.
 - 20 hours of assistance for canvassing 20 affected local businesses, 16 hours for 4 press releases/talking point documents, 16 hours for 2 fact sheets, 8 hours for 2 postcard mailers, 40 hours for community outreach, 16 hours for 4 4-hour presentations at neighborhood association meetings, 12 hours for email updates, 16 hours for website updates, 16 hours for updating social media, 12 hours for community table events.
- 6.3. Update List of Submittals. Consultant will update the list of submittals required by the contract documents. We assume that there will be approximately 60 required submittals.
- 6.4. Submittal Review. BES will manage the submittal process. Consultant will review the submittals as requested by BES. We have assumed that there will be a total of 60 submittals reviewed by Consultant.
- 6.5. Review Substitution Requests BES will manage the substitution request process. Consultant will review the substitution requests as requested by BES. We have assumed that there will be a total of 10 substitution requests.

- 6.6. Review RFIs. BES will manage the RFI process. Consultant will address RFIs as requested by BES. We have assumed a total of 50 RFIs.
- 6.7. Attend BES Project and Contractor Meetings. Consultant will attend project and contractor meetings during construction to provide responses to design issues. Consultant has assumed a total of 16 4-hour long meetings.
- 6.8. Site Visits. Consultant has assumed that there will be a total of 10 site visits during construction, each requiring 2 staff for 4 hours each.
- 6.9. Discretionary Additional Services during Construction. The base assumption is that construction can be completed during one summer season (summer 2015). However, if two seasons are required, this task provides the additional time needed to support the activities during the second construction season.

7. BES MANAGED FORESEEN ADDITIONAL WORK ITEMS

This task includes contingency funds that BES may authorize for additional work if needed for additional investigations, extended construction period, design modifications, or other activities as deemed necessary by BES. These items include: Workshop 2B – Review Recommendations (Subtask 2.5.3); Workshop 3B – Additional Rehabilitation (Subtask 2.6.4); Additional Workshop for Selection of Rehabilitation Techniques (Subtask 2.6.8); Preliminary Design Services for Additional Access Shafts and Rehabilitation of Additional Pipe Segments (Subtask 3.6); Final Design Services for Additional Access Shafts and Rehabilitation of Additional Pipe Segments (Subtask 4.13) not listed in the RFP; and, Second Construction Season Services (Subtask 6.9).



CERTIFICATE OF LIABILITY INSURANCE

 DATE (MM/DD/YYYY)
05/07/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER MARSH USA INC. 1225 17TH STREET, SUITE 1300 DENVER, CO 80202-5534			CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:	
15114-12345-5EX5P-14/15	029166	BK	INSURER(S) AFFORDING COVERAGE INSURER A: Greenwich Insurance Company INSURER B: National Union Fire Ins Co Pittsburgh PA INSURER C: XL Insurance America, Inc. INSURER D: Zurich American Insurance Co INSURER E: INSURER F:	
INSURED CH2M HILL ENGINEERS, INC 2020 SW 4TH AVENUE, SUITE 300 PORTLAND, OR 97201-4958			NAIC # 22322 19445 24554 16535	

COVERAGES
CERTIFICATE NUMBER:

SEA-002458721-05

REVISION NUMBER: 2

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> \$500,000 SIR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC	X		RGE500025503 APPROVED AS TO FORM CITY ATTORNEY	05/01/2014	05/01/2015	EACH OCCURRENCE \$ 1,500,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,500,000 MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ 1,500,000 GENERAL AGGREGATE \$ 5,000,000 PRODUCTS - COMP/OP AGG \$ 5,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	X		RAD500025403 (AOS) RAD500025603 (MA)	05/01/2014	05/01/2015	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$			BE 31131547	05/01/2014	05/01/2015	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	RWD500025203 (AOS) RWR500025303 (WI)	05/01/2014	05/01/2015	<input checked="" type="checkbox"/> WC STATU-TORY LIMITS E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	PROFESSIONAL LIABILITY*			EOC3829621-12	05/01/2014	05/01/2015	Each Claim & Aggregate \$5,000,000 Each Policy Period

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

THE CITY OF PORTLAND AND ITS BUREAUS/DIVISIONS, OFFICERS, AGENTS AND EMPLOYEES ARE INCLUDED AS AN ADDITIONAL INSURED ON THE GENERAL LIABILITY AND AUTOMOBILE LIABILITY POLICIES AS REQUIRED BY WRITTEN CONTRACT OR AGREEMENT. COVERAGE PROVIDED BY THE ABOVE GENERAL LIABILITY AND AUTO POLICIES SHALL BE PRIMARY AND NON-CONTRIBUTORY AND IS LIMITED TO THE LIABILITY RESULTING FROM THE NAMED INSURED'S OWNERSHIP AND/OR OPERATIONS.

*FOR PROFESSIONAL LIABILITY COVERAGE, THE AGGREGATE LIMIT IS THE TOTAL INSURANCE AVAILABLE FOR CLAIMS PRESENTED WITHIN THE POLICY PERIOD FOR ALL OPERATIONS OF THE INSURED. THE LIMIT WILL BE REDUCED BY PAYMENTS OF INDEMNITY AND EXPENSE.

CERTIFICATE HOLDER
CANCELLATION

CITY OF PORTLAND ATTN: TAMMY CLEYS, P.E. 1120 S.W. 5TH AVENUE PORTLAND, OR 97204	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE of Marsh USA Inc. Sharon A. Hammer

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ENDORSEMENT # 006

This endorsement, effective 12:01 a.m., May 01, 2014 forms a part of
Policy No. RAD500025403 issued to CH2M HILL COMPANIES, LTD.
by Greenwich Insurance Company

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

ADDITIONAL INSURED – PRIMARY WHERE REQUIRED UNDER CONTRACT OR AGREEMENT

This endorsement modifies insurance provided under the following:

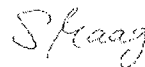
BUSINESS AUTO COVERAGE FORM

Section II A. 1. WHO IS AN INSURED is amended to include:

Any entity, person, or organization you are required or have agreed in a written contract, permit, access agreement and any other written agreement to provide insurance.

This insurance is primary for the entity, person or organization, but only with respect to liability arising out of your work for that insured by or for you. Other insurance afforded to that insured will apply as excess and not contribute as primary to the insurance afforded by this endorsement.

However, the insurance provided shall not exceed the scope of coverage and/or limits of this policy. Notwithstanding the foregoing sentence, in no event shall the insurance provided exceed the scope of coverage and/or limits required by said written contract, permit, access agreement..



(Authorized Representative)

ENDORSEMENT # 041

This endorsement, effective 12:01 a.m., May 01, 2014, forms a part of
 Policy No. RGE500025503 by Greenwich Insurance Company
 issued to CH2M HILL COMPANIES, LTD.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY

AUTOMATIC ADDITIONAL INSURED'S PRIMARY COVERAGE

This endorsement modifies Insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

With respect to coverage provided by this endorsement, the provisions of the Coverage Part apply unless modified by this endorsement.

SCHEDULE

Name Of Additional Insured Person(s) Or Organization	Location(s) of Covered Operations
Any entity, person or organization you are required by any contract, permit, access agreement, executed prior to any loss to provide additional insured status under this Policy.	All Locations

A. Section II — Who is an Insured is amended to include as an additional insured the person(s) or Organization (s) shown in the schedule and any other person(s) or organization(s) you are required to add as an additional insured under the contract, permit or access agreement described in the schedule but only with respect to liability for "bodily injury" or "property damage" or "personal and advertising injury caused, in whole or in part by:

1. "Bodily Injury", "property damage" or "personal and advertising injury" caused by the your operations on the additional insured's premises or
2. "Your work" for the additional insured and included in the "products-completed operations hazard"; or
3. Your acts or omissions; or
4. The acts or omissions of those acting on your behalf.

As respects 2, 3, and 4 the following also applies in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. the insurance afforded to such additional insured(s) only applies to the extent permitted by law; and

2. If coverage provided to the additional insured(s) is required by a contract, permit or access agreement, the insurance afforded to such additional insured(s) will not be broader than that which you are required by the contract, permit or access agreement to provide for such additional insured(s)

B. Only when required by a contract, permit or access agreement this insurance applies to:

1. (a) All work on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or (b) That portion of your work out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as part of the same project.
2. "Bodily Injury" or "Property Damage arising out of any act or omission of the additional insured(s) or any of their employees, other than the general supervision of work performed for the additional insured(s) by you.

However:

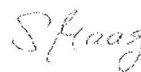
3. The insurance afforded to such additional insured(s) only applies to the extent permitted by law and

4. If coverage provided to the additional insured(s) is required by a contract, permit or access agreement, the insurance afforded to such additional insured(s) will not be broader than that which you are required by the contract, permit or access agreement to provide for such additional insured(s).

C. Any coverage provided hereunder shall be excess over any other valid and collectible insurance available to the additional insured(s) whether primary, excess, contingent or on any other basis unless a contract specifically required that this insurance be primary, or you request that it apply on a primary basis. When this insurance applies on a primary basis for the additional insureds described above, it shall apply only to "bodily injury", "property damage" or "personal and advertising injury" caused by your work for that additional insured by or for you. Other insurance afforded to those additional insureds will apply as excess and not contribute as primary to the insurance afforded by this endorsement.

The limits of, insurance with respect to each person, organization or entity shall not exceed the limits of liability of the named insured. All insuring agreements, exclusions and conditions of this policy apply. In no event, shall the coverage or limits of insurance in this coverage form be increased by such contract, permit or access agreement.

All other terms and conditions remain the same.



Authorized Representative

**CITY OF PORTLAND
AGREEMENT FOR PROFESSIONAL, TECHNICAL, OR EXPERT SERVICES**

CONTRACT NUMBER _____

**TITLE OF WORK PROJECT:
BES E10220: Structural Rehabilitation of Taggart Outfall 30**

This contract is between the City of Portland ("City," or "Bureau") and CH2M Hill Engineers, Inc., hereafter called Consultant. The City's Project Manager for this contract is Tammy Cleys, P.E.

Effective Date and Duration

This contract shall become effective upon execution by all parties. This contract shall expire, unless otherwise terminated or extended, on December 31, 2017.

Consideration

- (a) City agrees to pay Consultant a sum not to exceed \$2,563,250 for accomplishment of the work.
- (b) Interim payments shall be made to Consultant according to the schedule identified in the STATEMENT OF THE WORK AND PAYMENT SCHEDULE.

=====

CONSULTANT DATA AND CERTIFICATION

Name (print full legal name): CH2M Hill Engineers, Inc.

Address: 2020 SW 4th Avenue, Suite 300, Portland, Oregon, 97201-4953

Employer Identification Number (EIN): 32-0100027

[INDEPENDENT CONTRACTORS: DO NOT PROVIDE SOCIAL SECURITY NUMBER (SSN) – LEAVE BLANK IF NO EIN]

City of Portland Business Tax Registration Number: 308278

Citizenship: Nonresident alien ☐ Yes ☒ No

Business Designation (check one): ☐ Individual ☐ Sole Proprietorship ☐ Partnership ☒ Corporation

☐ Limited Liability Co (LLC) ☐ Estate/Trust ☐ Public Service Corp. ☐ Government/Nonprofit

Payment information will be reported to the IRS under the name and taxpayer I.D. number provided above. Information must be provided prior to contract approval.

=====

TERMS AND CONDITIONS

1. Standard of Care

Consultant shall perform all services under this contract using that care, skill, and diligence that would ordinarily be used by similar professionals in this community in similar circumstances.

2. Effect of Expiration

Passage of the contract expiration date shall not extinguish, prejudice, or limit either party's right to enforce this Contract with respect to any default or defect in performance that has not been corrected.

3. Order of Precedence

This contract consists of these Terms and Conditions, the Statement of Work and Payment Schedule, and any exhibits that are attached. Any apparent or alleged conflict between these items will be resolved by using the following order of precedence: a) these Terms and Conditions; b) Statement of Work and Payment Schedule; and c) any exhibits attached to the contract.

4. Early Termination of Contract

- (a) The City may terminate this Contract for convenience at any time for any reason deemed appropriate in its sole discretion. Termination is effective immediately upon notice of termination given by the City.
- (b) Either party may terminate this Contract in the event of a material breach by the other party that is not cured. Before termination is permitted, the party seeking termination shall give the other party written notice of the breach, its intent to terminate, and fifteen (15) calendar days to cure the breach. If the breach is not cured within 15 days, the party seeking termination may terminate immediately by giving written notice that the Contract is terminated.

5. Remedies and Payment on Early Termination

- (a) If the City terminates pursuant to 4(a) above, the City shall pay the Consultant for work performed in accordance with the Contract prior to the termination date. No other costs or loss of anticipated profits shall be paid.
- (b) If the City terminates pursuant to 4(b) above, the City is entitled all remedies available at law or equity. In addition, Consultant shall pay the City all damages, costs, and sums incurred by the City as a result of the breach.
- (c) If the Consultant justifiably terminates the contract pursuant to subsection 4(b), the Consultant's only remedy is payment for work prior to the termination. No other costs or loss of anticipated profits shall be paid.
- (d) If the City's termination under Section 4(b) was wrongful, the termination shall be automatically converted to one for convenience and the Consultant shall be paid as if the Contract was terminated under Section 4(a).
- (e) In the event of early termination the Consultant's work product before the date of termination becomes property of the City.

6. Assignment

Consultant shall not subcontract, assign, or transfer any of the work scheduled under this agreement, without the prior written consent of the City. Notwithstanding City approval of a subconsultant, the Consultant shall remain obligated for full performance hereunder, and the City shall incur no obligation other than its obligations to the Consultant hereunder. The Consultant agrees that if subconsultants are employed in the performance of this Agreement, the Consultant and its subconsultants are subject to the requirements and sanctions of ORS Chapter 656, Workers' Compensation.

7. Compliance with Applicable Law

Consultant shall comply with all applicable federal, state, and local laws and regulations. Consultant agrees it currently is in compliance with all tax laws. Consultant shall comply with Title VI of the Civil Rights Act of 1964 and its corresponding regulations as further described at: <http://www.portlandoregon.gov/bibs/article/446806>. In connection with its activities under this Contract, Consultant shall comply with all applicable Grant Terms and Conditions. This includes all terms and conditions contained in this Contract and, for a contract involving a grant, the Grant Terms and Conditions as further described at: <http://www.portlandoregon.gov/bibs/article/455735>.

8. Indemnification for Property Damage and Personal Injury

Consultant shall indemnify, defend, and hold harmless the City, its officers, agents, and employees, from all claims, losses, damages, and costs (including reasonable attorney fees) for personal injury and property damage arising out of the intentional or negligent acts or omissions of the Consultant, its Subconsultants, suppliers, employees or agents in the performance of its services. Nothing in this paragraph requires the Consultant or its insurer to indemnify the City for claims of personal injury or property damage caused by the negligence of the City. This duty shall survive the expiration or termination of this contract.

9. Insurance

Consultant shall obtain and maintain in full force at Consultant expense, throughout the duration of the Contract and any warranty or extension periods, the required insurance identified below. The City reserves the right to require additional insurance coverage as required by statutory or legal changes to the maximum liability that may be imposed on Oregon cities during the term of the Contract.

- (a) Workers' compensation insurance as required by ORS Chapter 656 and as it may be amended. Unless exempt under ORS Chapter 656, the Consultant and all subconsultants shall maintain coverage for all subject workers.

☒ Required and attached // ☐ Proof of exemption (i.e., completion of Workers' Compensation Insurance Statement)

- (b) General commercial liability (CGL) insurance covering bodily injury, personal injury, property damage, including coverage for independent contractor's protection (required if any work will be subcontracted), premises/operations, contractual liability, products and completed operations, in per occurrence limit of not less than \$1,000,000, and aggregate limit of not less than \$2,000,000.

☒ Required and attached // ☐ Waived by Bureau Director or designee // ☐ Reduced by Bureau Director or designee

- (c) Automobile liability insurance with coverage of not less than \$1,000,000 each accident, and an umbrella or excess liability coverage of \$2,000,000. The insurance shall include coverage for any auto or all owned, scheduled, hired and non-owned auto. This coverage may be combined with the commercial general liability insurance policy.

☒ Required and attached // ☐ Waived by Bureau Director or designee // ☐ Reduced by Bureau Director or design

- (d) Professional Liability and/or Errors & Omissions insurance to cover damages caused by negligent acts, errors or omissions related to the professional services, and performance of duties and responsibilities of the Consultant under this contract in an amount with a combined single limit of not less than \$1,000,000 per occurrence and aggregate of \$3,000,000 for all claims per occurrence. In lieu of an occurrence based policy, Consultant may have claims-made policy in an amount not less than \$1,000,000 per claim and \$3,000,000 annual aggregate, if the Consultant obtains an extended reporting period or tail coverage for not less than three (3) years following the termination or expiration of the Contract.

☒ Required and attached // ☐ Waived by Bureau Director or designee // ☐ Reduced by Bureau Director or designee

Continuous Coverage; Notice of Cancellation: The Consultant agrees to maintain continuous, uninterrupted coverage for the duration of the Contract. There shall be no termination, cancellation, material change, potential exhaustion of aggregate limits or non renewal of coverage without thirty (30) days written notice from Consultant to the City. If the insurance is canceled or terminated prior to completion of the Contract, Consultant shall immediately notify the City and provide a new policy with the same terms. Any failure to comply with this clause shall constitute a material breach of Contract and shall be grounds for immediate termination of this Contract.

Additional Insured: The liability insurance coverages, except Professional Liability, Errors and Omissions, or Workers' Compensation, shall be without prejudice to coverage otherwise existing, and shall name the City of Portland and its bureaus/divisions, officers, agents and employees as Additional Insureds, with respect to the Consultant's activities to be performed, or products or services to be provided. Coverage shall be primary and non-contributory with any other insurance and self-insurance. Notwithstanding the naming of additional insureds, the insurance shall protect each additional insured in the same manner as though a separate policy had been issued to each, but nothing herein shall operate to increase the insurer's liability as set forth elsewhere in the policy beyond the amount or amounts for which the insurer would have been liable if only one person or interest had been named as insured.

Certificate(s) of Insurance: Consultant shall provide proof of insurance through acceptable certificate(s) of insurance, including additional insured endorsement form(s) and all other relevant endorsements, to the City prior to the award of the Contract if required by the procurement documents (e.g., request for proposal), or at execution of Contract and prior to any commencement of work or delivery of goods or services under the Contract. The Certificate(s) will specify all of the parties who are endorsed on the policy as Additional Insureds (or Loss Payees). Insurance coverages required under this Contract shall be obtained from insurance companies acceptable to the City of Portland. The Consultant shall pay for all deductibles and premium. The City reserves the right to require, at any time, complete, certified copies of required insurance policies, including endorsements evidencing the coverage the required.

Subconsultant(s): Consultant shall provide evidence that any subconsultant, if any, performing work or providing goods or service under the Contract has the same types and amounts of coverages as required herein or that the subconsultant is included under Consultant's policy.

10. Ownership of Work Product

All work product produced by the Consultant under this contract is the exclusive property of the City. "Work Product" includes, but is not limited to: research, reports, computer programs, manuals, drawings, recordings, photographs, artwork and any data or information in any form. The Consultant and the City intend that such Work Product shall be deemed "work made for hire" of which the City shall be deemed the author. If for any reason a Work Product is deemed not to be a "work made for hire," the Consultant hereby irrevocably assigns and transfers to the City all right, title and interest in such work product, whether arising from copyright, patent, trademark, trade secret, or any other state or federal intellectual property law or doctrines. Consultant shall obtain such interests and execute all documents necessary to fully vest such rights in the City. Consultant waives all rights relating to work product, including any rights arising under 17 USC 106A, or any other rights of authorship, identification or approval, restriction or limitation on use or subsequent modifications. If the Consultant is an architect, the Work Product is the property of the Consultant-Architect, and by execution of this contract, the Consultant-Architect grants the City an exclusive and irrevocable license to use that Work Product.

Notwithstanding the above, all pre-existing trademarks, services marks, patents, copyrights, trade secrets, and other proprietary rights of Consultant are and will remain the exclusive property of Consultant.

11. EEO Certification

In the event Consultant provides in excess of \$2,500.00 for services to the City in any fiscal year, Consultant shall obtain EEO certification from the City.

12. Equal Benefits

Consultant must comply with the City's Equal Benefits program as prescribed by Chapter 3.100 of the Code of the City of Portland. The required documentation must be filed with Procurement Services, City of Portland, prior to contract execution.

13. Successors in Interest

The provisions of this contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and approved assigns.

14. Severability

The parties agree that if any term or provision of this contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the particular term or provision held to be invalid.

15. Waiver

The failure of the City to enforce any provision of this contract shall not constitute a waiver by the City of that or any other provision.

16. Errors

The Consultant shall promptly perform such additional services as may be necessary to correct errors in the services required by this contract without undue delays and without additional cost.

17. Governing Law/Venue

The provisions of this contract shall be interpreted, construed and enforced in accordance with, and governed by, the laws of the State of Oregon without reference to its conflict of laws provisions that might otherwise require the application of the law of any other jurisdiction. Any action or suits involving any question arising under this contract must be brought in the appropriate court in Multnomah County Oregon.

18. Amendments

All changes to this contract, including changes to the scope of work and contract amount, must be made by written amendment and approved by the Chief Procurement Officer to be valid. Any amendment that increases the original contract amount by more than 25% must be approved by the City Council to be valid.

19. Business Tax Registration

The Consultant shall obtain a City of Portland business tax registration number as required by PCC 7.02 prior to beginning work under this Contract.

20. Prohibited Conduct

The Consultant shall not hire any City employee who evaluated the proposals or authorized the award of this Contract for two years after the date the contract was authorized without the express written permission of the City and provided the hiring is permitted by state law.

21. Payment to Vendors and Subconsultants

The Consultant shall timely pay all subconsultants and suppliers providing services or goods for this Contract.

22. Access to Records

The Consultant shall maintain all records relating to this Contract for three (3) years after final payment. The City may examine, audit and copy the Consultant's books, documents, papers, and records relating to this contract at any time during this period upon reasonable notice. Copies of these records shall be made available upon request. Payment for the reasonable cost of requested copies shall be made by the City.

23. Audits

- (a) The City may conduct financial and performance audits of the billings and services specified in this agreement at any time in the course of the agreement and during the three (3) year period established by paragraph 22. Audits will be conducted in accordance with generally accepted auditing standards as promulgated in Government Auditing Standards by the Comptroller General of the United States Government Accountability Office.
- (b) If an audit discloses that payments to the Consultant exceed the amount to which the Consultant was entitled, the Consultant shall repay the amount of the excess to the City.

24. Electronic Signatures

The City and Consultant may conduct this transaction, including any contract amendments, by electronic means, including the use of electronic signatures.

25. Merger Clause

This Contract encompasses the entire agreement of the parties, and supersedes all previous understandings and agreements between the parties, whether verbal or written.

26. Dispute Resolution/Work regardless of disputes

The parties shall participate in mediation to resolve disputes before conducting litigation. The mediation shall occur at a reasonable time after the conclusion of the Contract with a mediator jointly selected by the parties. Notwithstanding any dispute under this Contract, the Consultant shall continue to perform its work pending resolution of a dispute, and the City shall make payments as required by the Contract for undisputed portions of the work. In the event of litigation no attorney fees are recoverable. No different dispute resolution paragraph(s) in this contract or any attachment hereto shall supersede or take precedence over this provision.

27. Progress Reports: ☒ Applicable ☐ Not Applicable

If applicable, the Consultant shall provide monthly progress reports to the Project Manager as described in the Statement of the Work and Payment Schedule.

28. Consultant's Personnel: ☒ Applicable ☐ Not Applicable

If applicable, the Consultant shall assign the personnel listed in the Statement of the Work and Payment Schedule for the work required by the Contract and shall not change personnel without the prior written consent of the City, which shall not be unreasonably withheld.

29. Subconsultants

The Consultant shall use the subconsultants identified in its proposals. The Consultant shall not change subconsultant assignments without the prior written consent of the Chief Procurement Officer. The City will enforce all social equity contracting and Minority, Women and Emerging Small Business (M/W/ESB) subcontracting commitments submitted by the Consultant in its proposals. Failure to use the identified M/W/ESB subconsultants without prior written consent is a material breach of contract. For contracts valued \$50,000 or more, the Consultant shall submit a Monthly Subconsultant Payment and Utilization Report (MUR), made part of this contract by reference, reporting ALL subconsultants employed in the performance of this agreement. An electronic copy of the MUR may be obtained at: <http://www.portlandoregon.gov/bibs/45475>.

30. Third Party Beneficiaries

There are no third party beneficiaries to this contract. Enforcement of this contract is reserved to the parties.

31. Conflict of Interest

Consultant hereby certifies that, if applicable, its contract proposal is made in good faith without fraud, collusion or connection of any kind with any other proposer of the same request for proposals or other City procurement solicitation(s), that the Consultant as a proposer has competed solely on its own behalf without connection or obligation to any undisclosed person or firm. Consultant certifies that it is not a City official/employee or a business with which a City official/employee is associated, and that to the best of its knowledge, Consultant, its employee(s), its officer(s) or its director(s) is not a City official/employee or a relative of any City official/employee who: i) has responsibility in making decisions or ability to influence decision-making on the contract or project to which this contract pertains; ii) has or will participate in evaluation or management of the contract; or iii) has or will have financial benefits in the contract. Consultant understands that should it elect to employ any former City official/employee during the term of the contract then that former City official/Consultant employee must comply with applicable government ethics and conflicts of interest provisions in ORS Chapter 244, including but not limited to ORS 244.040(5) and ORS 244.047, and the City's Charter, Codes and administrative rules, including lobbying prohibitions under Portland City Code Section 2.12.080.

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**STATEMENT OF THE WORK
AND PAYMENT SCHEDULE**

SCOPE OF WORK

The Scope of Work is set forth in Exhibit A attached hereto and made a part of this contract.

CONSULTANT PERSONNEL

The Consultant shall assign the following personnel to do the work in the capacities designated:

NAME	ROLE ON PROJECT
Mark R Johnson, PE	Project Manager
Rick Attanasio, PE	Design Lead
Mark Wade, PE	Senior Technology Advisor
Joe Broberg, PE, PMP	Quality Manager
Brittany Hughes, PE	Project Controls Lead
Dan Buonadonna	Lead Rehabilitation Engineer
Kristen Hull	Public Involvement Lead

SUBCONSULTANTS

The Consultant shall assign the following subconsultants to perform work in the capacities designated:

NAME	ROLE ON PROJECT	AMOUNT (Tasks 1 – 6)	AMOUNT (with Task 7)
Stahaeli Trenchless Consultants	Design Review	\$38,800	\$38,800
SewerVue In-Pipe GPR	Pipe Inspection Services	\$95,000	\$95,000
KC Development	Survey	\$34,749	\$34,749
Rhino One Geotechnical	Foundation Engineering	\$220,066	\$251,066
COAT Flagging	Traffic Control	\$10,400	\$10,400
Solmar Hydro, Inc	Bathymetric Surveying	\$14,250	\$14,250
KLK-Consulting, Inc	Permitting	\$48,000	\$48,000
Northwest Geotechnical Consultants	Environmental Assessment	\$51,775	\$51,775
Convergent Pacific	CADD Services & Civil Eng.	\$243,670	\$348,670
	Total Subcontracting:	\$756,710	\$892,710

The subconsultant amounts shown above include \$661,710 in the base budget (Tasks 1 – 6) for subcontracting to M/W/ESB certified firms, representing M/W/ESB participation of 30%. With Additional Work Items added (Task 7), the amount subcontracted to M/W/ESB certified firms is \$797,710 representing M/W/ESB participation of 31%.

The City will enforce all social equity contracting and Minority, Women and Emerging Small Business (M/W/ESB) subcontracting commitments submitted by the Consultant in its Proposal. For contracts valued \$50,000 or more, the Consultant shall submit a Monthly Subconsultant Payment and Utilization Report (MUR), made part of this contract by reference, reporting ALL subconsultants employed in the performance of this agreement. An electronic copy of the MUR may be obtained at: <http://www.portlandoregon.gov/bibs/45475>.

COMPENSATION

The maximum that the Consultant can be paid on this contract is \$2,563,250 (hereafter the “not to exceed” amount.). The “not to exceed” amount includes all payments to be made pursuant to this contract, including reimbursable expenses, if any. Nothing in this contract requires the City to pay for work that does not meet the Standard of Care or other requirements of the Contract. The actual amount to be paid Consultant may be less than that amount.

The task breakdown of the “not to exceed” amount is shown in the table below. Work cannot proceed on a Task and/or charges made against a Task until the Consultant has received written notification from the City’s Project Manager that the Task is authorized to proceed. The Consultant may not reallocate compensation between tasks without the written approval of the City’s Project Manager.

Task No.	Description	Task Amount not to Exceed
1	Project Management	\$174,585
2	Predesign	\$731,206
3	Preliminary Design	\$293,366
4	Final Design	\$720,775
5	Bidding Phase	\$28,906
6	Construction Phase	\$264,875
	<i>Subtotal without Additional Work Items (Tasks 1 - 6):</i>	<i>\$2,213,713</i>
7	Foreseen Additional Work Items	
	2.5.3 – Workshop 2B	\$10,242
	2.6.4 – Workshop 3B	\$10,242
	2.6.8 – Workshop 4B	\$12,732
	3.6 – Preliminary Design for Up to Four Additional Shafts	\$79,285
	4.13 –Additional Final Design	\$199,990
	6.9 –Second Construction Season	\$37,046
	<i>Subtotal Additional Work Items (Task 7):</i>	<i>\$349,537</i>
	Total “Not to Exceed” Amount:	\$2,563,250

The necessity for additional work items identified in Task 7 to meet project objectives will be determined through completion of Tasks 1 through 4. No work or charges may proceed on Task 7 work items without written authorization of the City’s Project Manager.

The Consultant is entitled to receive progress payments for its work pursuant to the Contract as provided in more detail below. The City will pay Consultant based on these invoices for acceptable work performed and approved until the “not to exceed” amount is reached. Thereafter, Consultant must complete work based on the Contract without additional compensation unless there is a change to the scope of work.

Any estimate of the hours necessary to perform the work is not binding on the City. The Consultant remains responsible if the estimate proves to be incorrect. Exceeding the number of estimated hours of work does not impose any liability on the City for additional payment.

If work is completed before the “not to exceed” amount is reached, the Consultant’s compensation will be based on the Consultant’s bills previously submitted for acceptable work performed and approved.

PAYMENT TERMS: Net 30 Days

Hourly Rates

186643

Contractor's hourly billing rates shall be based on a multiplier not to exceed 3.1 times the direct labor rate. The billing rates shall not exceed those set forth below:

NAME	PROJECT ROLE	MAXIMUM BILLING RATE
Mark R Johnson, PE	Project Manager	\$278/hr
Rick Attanasio, PE	Design Lead	\$238/hr
Mark Wade, PE	Senior Technology Advisor	\$247/hr
Joe Broberg, PE, PMP	Quality Manager	\$206/hr
Brittany Hughes, PE	Project Controls Lead	\$122/hr
Dan Buonadonna	Lead Rehabilitation Engineer	\$148/hr
Kristen Hull	Public Involvement Lead	\$208/hr

The hourly billing rates shall include the following non-reimbursable expenses: fringe benefits, payroll bonuses, autos and other defined perquisites, telecommunications, facsimile services, overhead expenses including but not limited to local and long distance telephone, parking, delivery/courier, general business and professional liability insurance, advertising costs, postage, internal copying, lease of office equipment, mileage and other local travel costs (travel within 100-mile radius of Consultant's office), information technology, all other direct costs not identified as reimbursable, other indirect costs and profit.

Standard Reimbursable Costs

The following costs will be reimbursed without mark-up:

- Out of Town Travel: Travel (transportation, lodging, and per diem) of Contractor and/or experts where specified in the contract scope or required by BES. Travel shall be directly attributed to specific project tasks and to a location outside of a 100-mile radius of the Contractor's project office. Travel will be preapproved by the City Project Manager, and travel costs will be reimbursed in accordance with the City's Travel Expense Guidelines.
- Photocopying / Reproduction Costs: Reproduction of required drawings, reports, specifications, public involvement material, and workshop material as reflected in the Scope of Work in Exhibit A.

Subconsultant Costs

Compensation for subconsultants shall be limited to the same restrictions imposed on the Consultant. The maximum markup on subconsultant services shall not exceed 5%.

Adjustment of Labor Rates Due to Inflation

Annual adjustment of hourly rates will be considered upon written request from the Consultant. Approval of a request for rate increases is solely within the City's discretion and under no circumstances is the City obligated to approve such a request. Any adjustment of hourly rates must be made by written amendment to the contract.

Rate increases are subject to the following limitations:

- No increases will be granted before the one-year anniversary of the contract;
- No more than one increase shall be granted per contract year;
- Rate increases may not exceed the then-current average inflation rate for the Portland Metropolitan Area (as determined from the US Department of Labor statistics);
- Rate increases shall not be retroactive.

Other than the impact of inflation as described above, hourly rates may not be increased.

Progress Payments

On or before the 15th of each month, the Consultant shall submit to the City's Project Manager an invoice for work performed by the Consultant during the preceding month. The invoice shall contain the City's Contract Number and set out all items for payment including, but not limited to: the name of the individual, labor category, direct labor rate, billing rate, hours worked during the period, and tasks performed. The Consultant shall also attach photocopies of claimed reimbursable expenses, if applicable. The Consultant shall stamp and approve all subconsultant invoices and note on the subconsultant invoice what they are approving as "billable" under the contract. The billing from the prime should clearly roll up labor and reimbursable costs for the prime and subconsultants – matching the subconsultant invoices. Prior to initial billing, the Consultant shall develop a billing format for approval by the City.

The City shall pay all amounts to which no dispute exists within 30 days of receipt of the invoice. Payment of any bill, however, does not preclude the City from later determining that an error in payment was made and from withholding the disputed sum from the next progress payment until the dispute is resolved.

The Consultant shall make full payment to its subconsultants within 10 business days following receipt of any payment made by the City to Consultant.

ACH Payments

It is the City's policy to pay its Consultant invoices via electronic funds transfers through the automated clearing house (ACH) network. To initiate payment of invoices, Consultants shall execute the City's standard ACH Vendor Payment Authorization Agreement which is available on the City's website at:
<http://www.portlandoregon.gov/bfs/article/409834?>

Upon verification of the data provided, the Payment Authorization Agreement will authorize the City to deposit payment for services rendered directly into Consultant accounts with financial institutions. All payments shall be in United States currency.

WORKERS' COMPENSATION INSURANCE STATEMENT

186643

IF YOUR FIRM HAS CURRENT WORKERS' COMPENSATION INSURANCE, CONTRACTOR MUST SIGN HERE:

I, undersigned, am authorized to act on behalf of entity designated below, and I hereby certify that this entity has current Workers' Compensation Insurance.

Contractor Signature: see attached cert. Date: _____ Entity: _____

IF YOUR FIRM DOES NOT HAVE CURRENT WORKERS' COMPENSATION INSURANCE, CONTRACTOR MUST COMPLETE THE FOLLOWING INDEPENDENT CONTRACTOR CERTIFICATION STATEMENT:

As an independent contractor, I certify that I meet the following standards:

1. The individual or business entity providing labor or services is registered under ORS Chapter 701, if the individual or business entity provides labor or services for which such registration is required;
2. Federal and state income tax returns in the name of the business or a business Schedule C or form Schedule F as part of the personal income tax return were filed for the previous year if the individual or business entity performed labor or services as an independent contractor in the previous year; and
3. The individual or business entity represents to the public that the labor or services are to be provided by an independently established business. Except when an individual or business entity files a Schedule F as part of the personal income tax returns and the individual or business entity performs farm labor or services that are reportable on Schedule C, an individual or business entity is considered to be engaged in an independently established business when four or more of the following circumstances exist.

Contractor: check four or more of the following:

- _____ A. The labor or services are primarily carried out at a location that is separate from the residence of an individual who performs the labor or services, or are primarily carried out in a specific portion of the residence, which portion is set aside as the location of the business;
- _____ B. Commercial advertising or business cards as is customary in operating similar businesses are purchased for the business, or the individual or business entity has a trade association membership;
- _____ C. Telephone listing and service are used for the business that is separate from the personal residence listing and service used by an individual who performs the labor or services;
- _____ D. Labor or services are performed only pursuant to written contracts;
- _____ E. Labor or services are performed for two or more different persons within a period of one year; or
- _____ F. The individual or business entity assumes financial responsibility for defective workmanship or for service not provided as evidenced by the ownership of performance bonds, warranties, errors and omission insurance or liability insurance relating to the labor or services to be provided.

Contractor Signature

Date

FOR CITY USE ONLY

PROJECT MANAGER-COMplete ONLY IF CONTRACTOR DOES NOT HAVE WORKER'S COMPENSATION INSURANCE

ORS 670.600 Independent contractor standards. As used in various provisions of ORS Chapters 316, 656, 657, and 701, an individual or business entity that performs labor or services for remuneration shall be considered to perform the labor or services as an "independent contractor" if the standards of this section are met. The contracted work meets the following standards:

1. The individual or business entity providing the labor or services is free from direction and control over the means and manner of providing the labor or services, subject only to the right of the person for whom the labor or services are provided to specify the desired results;
2. The individual or business entity providing labor or services is responsible for obtaining all assumed business registrations or professional occupation licenses required by state law or local government ordinances for the individual or business entity to conduct the business;
3. The individual or business entity providing labor or services furnishes the tools or equipment necessary for performance of the contracted labor or services;
4. The individual or business entity providing labor or services has the authority to hire and fire employees to perform the labor or services;
5. Payment for the labor or services is made upon completion of the performance of specific portions of the project or is made on the basis of an annual or periodic retainer.

City Project Manager Signature

Date

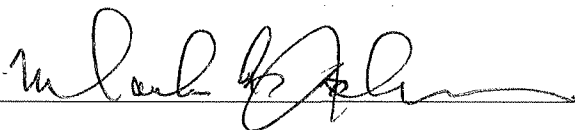
CONSULTANT SIGNATURE:

This contract 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 Agreement.

The parties agree the City and Consultant may conduct this transaction, including any contract amendments, by electronic means, including the use of electronic signatures.

I, the undersigned, agree to perform work outlined in this contract in accordance to the STANDARD CONTRACT PROVISIONS, the terms and conditions, made part of this contract by reference, and the STATEMENT OF THE WORK made part of this contract by reference; hereby certify under penalty of perjury that I/my business am not/is not in violation of any Oregon tax laws; hereby certify that my business is certified as an Equal Employment Opportunity Affirmative Action Employer and is in compliance with the Equal Benefits Program as prescribed by Chapter 3.100 of Code of the City of Portland; and hereby certify I am an independent contractor as defined in ORS 670.600.

CH2M HILL ENGINEERS, INC.

BY: 

Date: 30 April 2014

Name: Mark R. Johnson

Title: Vice President

186643

CONTRACT NUMBER: _____

CONTRACT TITLE: BES E10220: Structural Rehabilitation of Taggart Outfall 30

CITY OF PORTLAND SIGNATURES:

By: n/a Date: _____
Bureau Director

By: n/a Date: _____
Chief Procurement Officer

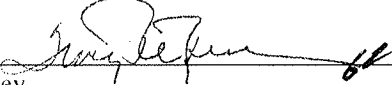
By: _____ Date: _____
Elected Official

Approved:

By: _____ Date: _____
Office of City Auditor

Approved as to Form:

APPROVED AS TO FORM

By:  Date: 5/13/14
Office of City Attorney
CITY ATTORNEY