

<b>Supplemental Agreement</b> <b>Number</b> <u>1</u>		<b>Organization and Address</b> Gray & Osborne, Inc. 1130 Rainier Avenue S. #300, Seattle, WA 98144	
<b>Original Agreement Number</b> 9103		<b>Phone:</b> 206-284-0860	
<b>Project Number</b> 20021801		<b>Execution Date</b>	<b>Completion Date</b> 12/31/2021
<b>Project Title</b> SE Redmond Tank Painting and Seismic Upgrade		<b>New Maximum Amount Payable</b> <b>\$</b> 906,452	
<b>Description of Work</b> The City of Redmond has exercised optional services of the Gray & Osborne, Inc. contract to complete final design and provide construction support services. The supplement 1 final design shall include plans, specifications, and estimates (PS&E - 60%, 90%, and Final) for the SE Redmond Tank Painting and Seismic Upgrade Project in preparation for public bid. Once project bid awarded by Redmond City Council, Gray & Osborne will provide construction support services in overseeing the construction. The scope of work for the planned upgrades tasks to the reservoir tank has been articulated in Gray & Osborne Predesign Report. Besides the paint coatings and seismic upgrade a variety of tank safety features, accessories, and appurtenances are included as identified in supplement 1 Exhibit A Scope of Work.			

The Local Agency of City of Redmond  
 desires to supplement the agreement entered into with Gray & Osborne, Inc.  
 and executed on \_\_\_\_\_ and identified as Agreement No. 9103

All provisions in the basic agreement remain in effect except as expressly modified by this supplement.

The changes to the agreement are described as follows:

**I**

Section 1, SCOPE OF WORK, is hereby changed to read:

See Attached Supplement 1 Exhibit A

See Attached Supplement 1 Exhibits D and E

**II**

Section IV, TIME FOR BEGINNING AND COMPLETION, is amended to change the date for completion of the work to read: No change: December 31, 2021 shall remain the contract completion date for supplement 1.

**III**

Section V, PAYMENT, shall be amended as follows:

Final Design Phase: \$726,452

as set forth in the attached Exhibits, and by this reference made a part of this supplement.

If you concur with this supplement and agree to the changes as stated above, please sign in the appropriate spaces below and return to this office for final action.

By: Michael B. Johnson, P.E., President

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



Consultant Signature

Approving Authority Signature

**SUPPLEMENT 1 EXHIBIT A  
SCOPE OF WORK  
CITY OF REDMOND**

**SE REDMOND TANK PAINTING AND SEISMIC UPGRADE PROJECT  
FINAL DESIGN AND CONSTRUCTION SUPPORT SERVICES**

**PROJECT OVERVIEW**

The City of Redmond owns and operates a water storage tank in SE Redmond. The tank is located at 18609 NE 65th Street, near Redmond Fire Station 16 and Genie Industries. The water tank has a capacity of four and half million gallons (4.5 MG). The steel tank was constructed in 1996, and is scheduled for exterior and interior paint recoating. The water tank, with no impact to water service, will need to be taken off line and drained to re-coat the interior surfaces. With the tank drained, this lends an opportunity for engineers to evaluate the seismic structural design from 1996.

A contract for preliminary engineering was executed on May 16, 2019 and is scheduled to be completed on October 23, 2019. This previous phase of work included a comprehensive evaluation of the reservoir, a predesign report, and 30% plans and specifications. The pre-design report defines the scope of reservoir improvements that have been selected by the City. Following is a summary of the selected improvements:

**Improvements to Safety Features and Accessories:**

- Modify the top of the exterior ladder for easier access
- Add a continuous guardrail around the perimeter of the roof
- Replace the Saf-T-Climb on the interior ladder and provide galvanic isolation
- Replace the roof vent
- Address deficiencies in the tank drain system
- Add gutters and downspouts to the reservoir
- Provide designated mountings and conduit chases for cellular conduit and equipment
- Install a raised inlet for improved mixing
- Install a new level indicator
- Add a chlorine analyzer
- Add an interior platform
- Add a davit and hoist to the roof for man retrieval from the hatch
- Add a seismic controller

**Recoating of the Reservoir:**

- Perform abrasive blast of interior and exterior and recoat
- Seal weld all joints on interior of reservoir prior to recoating
- Paint piping in the valve vault

**Seismic Upgrade:**

- Install concrete ring on floor of reservoir interior along full perimeter of the shell
- Install flexible couplings on piping connected to the reservoir
- Strengthen shell of reservoir for hoop stress forces

This engineering agreement will include 60%, 90%, and final design documents and construction support services for the project scope described above.

## **SCOPE OF WORK**

Gray & Osborne has prepared the following scope of work tasks for engineering design, bidding assistance, and construction support.

### **Task 1 – Project Management**

#### ***A. Kickoff Meeting***

G&O will prepare an agenda and lead a project kick-off meeting with City and team staff. G&O will develop meeting notes and distribute following the meeting.

#### ***B. Schedule and Budget Management***

G&O will track the budget and schedule relative to the actual percent complete (earned value tracking) and report this to the City monthly for design activities. Monthly project summaries will be included with monthly billing invoices and will quantify the past month's billings. Anticipated upcoming project activities and milestones will also be documented. The project schedule will be updated by G&O along with coordinating and managing the sub-consultants.

#### ***C. Design Progress/Work Meetings***

The G&O team will attend up to five (5) in-person progress meetings during the design phase. It is assumed each in-person meeting will be 2 hours in duration. G&O shall provide agendas for all meetings held. Meeting agendas will be distributed before each meeting. Meeting summaries and action items will be provided after each meeting. The following table lists anticipated meetings during the design phase:

Number of Meetings	Meeting Name
1	60 Percent Design Milestone Review Meeting
1	90 Percent Design Milestone Review Meeting
1	Building Permit Application Submittal Meeting with City
2	Project Status and Design Coordination (Conference Calls)

#### ***D. Subconsultant Coordination***

The G&O team engages in regular communication with the Subconsultant team throughout the project regarding schedule and expected deliverables. All Subconsultant work will be coordinated and managed through G&O's assistant project manager, overseen by G&O's project manager.

#### **E. *Manage QA/QC Review***

Schedule and manage QA/QC reviews of the design documents and cost estimates for each milestone deliverable. Assign staff to perform QA/QC reviews. Maintain documentation of QA/QC comments and their resolution.

#### ***City Responsibilities***

- Review meeting minutes for accuracy, provide comments for revision as necessary
- Provide comments on review submittals
- Process monthly invoices
- Provide input and concurrence for project decisions and development
- Provide currently available background information on the existing tank site, related to system operation and piping

#### ***Deliverables by G&O***

- Monthly invoices and project summaries
- Meeting Agendas and Minutes

### **Task 2 – Survey Work**

Under this task, topographic and boundary surveying will be performed to support the SE Redmond Tank Seismic Upgrade and Recoating project. Gray & Osborne will be responsible for having a private utility locating company mark the locations of existing utilities in the field prior to on-site survey work. It is assumed that one G&O design team member will meet the surveyor on-site to see that the required information is gathered during the field work. It is assumed the City will mark the existing water mains.

Anticipated work includes the following:

- Private utility locating.
- Perform field traverse and establish survey control utilizing North Zone of the State Coordinate System based on NAD 83/91 and a vertical datum in accordance with the NAVD 88 benchmarks.
- Survey visible and apparent utilities.
- Survey visible and apparent improvements.
- Survey trees, 6-inch in diameter at breast height (dbh) and greater.
- Survey fences and debris piles.
- Survey existing storm and sanitary systems including size and invert elevation.
- Obtain grade elevations on a 40-foot (maximum) grid across site for contouring at 1-foot intervals as well as top and toe of slopes or grade line changes.
- Set benchmarks along design corridor.
- Compile AutoCAD map with information obtained from field survey.

### *City Responsibilities*

- Provide access to tank site
- Provide locations of waterlines on the project site

### *Deliverables by G&O*

- Boundary and Topographic Survey in AutoCAD and PDF Format

## **Task 3 – Design and Final Construction Documents**

Complete civil, structural, and electrical engineering design of the SE Redmond Tank Seismic Upgrade and Recoating Project. This task includes completing the engineering analysis and calculations necessary to complete the design. This task also includes preparation of detailed plans, specifications, and cost estimates for public bid.

### **A. - Prepare 60% Plans and Specifications**

The project team will prepare 60% plans, technical specifications, and a cost estimate. Comments from the 30 percent submittal will be incorporated into this design submittal. Plans will include preliminary civil sheets including site plans, site piping plans, grading plans, storm water, and preliminary tank modification cross sections, elevations, and details. CSI format specifications will be provided and G&O and the City shall work together towards preparing City standard contract provisions. Structural design of tank accessories will be designed utilizing a performance specification. Foundation and tank appurtenance design will be by G&O. G&O will complete QA/QC review of the 60 percent deliverables prior to submittal to the City. 60 percent plans, specifications, and cost estimates will be submitted to the City for review and comment. Gray & Osborne will meet with City staff to complete a facilitated review of the plans.

### **B. – Prepare 90% Plans and Specifications**

Prepare 90 percent plans, specifications, and revise the construction cost estimates. Comments from the 60 percent submittal and permitting agencies will be incorporated into the 90 percent submittal. Specifications will be prepared in CSI format with applicable City standard contract provisions and contract forms. G&O will complete QA/QC review of the 90 percent deliverables prior to submittal to the City. 90 percent plans, specifications, and cost estimates will be submitted to the City for review and comment. Gray & Osborne will meet with City staff to review any comments.

### **C. – Prepare Final Stamped Plans and Specifications**

Prepare bid ready final plans, specifications, and final construction cost estimate for the project. Plans and specifications will be suitable for public works bid. Specifications will be prepared in CSI format with applicable City standard contract provisions and contract forms. G&O will complete QA/QC review of the final deliverables prior to submittal to the City. Final plans, specifications, and cost estimates will be submitted to the City for distribution to contractors.

#### **D. – Permitting Assistance**

A construction permit may be required with City of Redmond. Applications and supporting materials will be prepared by Gray & Osborne. Gray & Osborne will produce up to (3) graphics to support the City's public outreach effort. The graphic design of elements to be painted on the exterior of the reservoir will need developed early in the project schedule to allow time for it to go through the City's Design Review Board.

##### *Deliverables by G&O*

- Electronic scalable set of plans (11"x17" PDF format) –60%, 90% and Final Design
- Contract documents including technical specifications (PDF) – 60%, 90% and Final Design

##### *Assumptions*

- Plan set will include cover sheet, symbols, notes, details, erosion control, existing site plan, demolition plan, proposed site plan, grading, site drainage and water plans, profiles, seismic upgrades, improvements to accessories and reservoir piping.
- The City will provide comments to Gray & Osborne regarding 60% and 90% documents within two weeks of receiving the submittal.
- City standard contract front end will be used.
- Technical specifications will follow CSI standard format with special provisions to City standards.
- City will pay for any permit application fees.
- City will lead public outreach effort to the neighborhood.

#### **Task 4 – Bidding Assistance**

G&O will attend an on-site meeting with potential bidders to answer questions and identify potential bid addendum items. City will lead the bidding process. G&O shall assist the City with the bid process for the project. Respond to bidder inquiries over phone and emails. Prepare addenda as necessary.

#### **Task 5 – Construction Support**

Provide construction support services during the Construction phase of the SE Redmond Tank Seismic Upgrades and Recoating Project. This task will include coordinating and managing the schedule and budget for the project team, including subconsultants. The City will manage budgeting with the contractor(s) and pay estimates. The City will coordinate with the contractor and regulatory agencies with G&O providing backup support on an on-call basis and attending some progress meetings on call. We understand that the City would like support from an on-site engineer-in-training through the duration of the on-site construction. 10 months of on-site support have been assumed.

Gray & Osborne will assist the City with the construction phase of the project by providing the following services:

**A. *Review Submittals***

Review key equipment, material, shop drawings, and plan submittals from the contractor for conformance with the Plans and Specifications when City staff need assistance. Return submittal review comments to the City.

**B. *Review and Respond to Requests for Information and Change Orders***

Review and respond to requests for information and clarifications from the contractor. Prepare any clarification drawings or design modifications necessary to complete the project. Prepare and distribute responses. Assist the City in preparing change orders requiring CAD drawing revisions and specifications modification review and assistance. The City will negotiate and approval of all changes.

**C. *Review Progress Pay Estimates***

Review monthly progress pay estimates detailing the amount of work completed by the contractor. Verify unit quantities and progress to date on lump sum items.

**D. *Attend Construction Meetings***

Attend the preconstruction meeting and construction meetings to coordinate work activities with the City and the contractor. Provide construction guidance over the phone to the City PM when needed. Conduct site visits as directed by the City. 43 meetings have been assumed.

**E. *Review Materials Testing and Special Inspection Results***

City shall coordinate materials testing and special inspection required during construction with assistance from G&O as backup consultants. Review results of materials testing and special inspection for conformance with the plans and specifications. Materials testing and special inspection for the project will be paid for separately by the City and will include:

- Soil bearing verification
- Soils compaction
- Asphalt compaction
- Reinforced concrete inspection and testing
- Certified welding inspection (CWI)
- Radiographic testing (welding)



***F. Structural Observation***

Provide periodic observation of seismic upgrades construction by a licensed structural engineer.

***G. Tank Coating Inspection***

Provide inspection of the coating surface preparation and application by a NACE Certified Level 3 Inspector. Periodic inspection of the tank steel blasting and prime shop coat application is included, and full time inspection is assumed for the field application including abrasive blasting and application of the field prime, stripe, intermediate, and finish coats. Included is dry film thickness testing per SSPC PA-2 requirements and holiday testing through low-voltage testing or visual utilizing optical pigments. 90 working days of coating inspection have been assumed.

**Task 6 – Prepare Record Drawings**

Prepare construction record drawings and submit to City in accordance with the City's standard requirements for record drawings. Required submittals to the City include Phase I Engineering Review, Phase II GIS Review, and Phase III Final Submittal in accordance with the City's record drawings standard. City comments on the record drawings shall be addressed and resubmitted. The Final Submittal includes one full set of 22"x34" Mylars, one full size set of 22"x34" prints, and three half size bond set of 11"x17" prints. Record drawings shall be based upon best available information including but not limited to contractor and field inspector redlines, requests for information, shop drawings, and submittals.

**ASSUMPTIONS**

- Construction duration is estimated to be 215 Working Days

**Project Management Reserve Fund**

A project management reserve fund of \$60,000 has been established to allow the City to authorize additional work tasks to address unanticipated engineering issues. The City must provide prior written authorization before using any project management reserve funds.

**Deliverable:** City authorization of funds, justification documents.

**ASSUMPTIONS**

The following assumptions have been made in developing this scope of work. Preliminary engineering and alternatives analyses will be completed during preliminary design that will further define the improvements to be constructed.

1. The City will provide available record drawings and previous evaluations and inspection reports for the tank.



2. The City will be responsible for public outreach efforts to neighbors around the reservoir.
3. The City does not anticipate receiving Federal Funding for the SE Redmond Tank Painting and Seismic Upgrade Project. As such Gray & Osborne will not have access to the WSDOT Diversity Compliance Program and is exempt from all reporting requirements within the [wsdot.diversitycompliance.com](http://wsdot.diversitycompliance.com) program.

## **BUDGET**

Based on the Scope of Work described above, the total estimated cost for engineering services, including project management reserve, is \$726,452 as shown in the attached Exhibit "D".

## **DELIVERABLES**

Deliverables will be provided in the following format:

Electronic files in PDF format will be supplied for each deliverable.

Final deliverable documents will be in hard copy

## **PROJECT SCHEDULE**

The anticipated project schedule is as follows:

Notice to Proceed	November 8, 2019
Complete 60% Design	January 10, 2020
Complete 90% Design	March 13, 2020
Complete Final Design	May 1, 2020
Construction	July 31, 2020 – May 28, 2021

## Supplement 1 Exhibit D

### Consultant Fee Determination

Project Name: SE REDMOND TANK PAINTING & SEISMIC UPG  
 Project Number: 20021801  
 Consultant: GRAY & OSBORNE

#### NEGOTIATED HOURLY RATES

Classification	Hours	DSC	Overhead 188%	Fee (Profit) 30%	Total Hourly Rate	Total
Principal	123	\$ 54.00	\$101.54	\$16.15	\$172	\$21,156
Project Manager	496	\$ 53.00	\$99.66	\$15.85	\$169	\$83,824
Coatings Engineer	286	\$ 47.00	\$88.38	\$14.05	\$149	\$42,614
Civil Engineer	306	\$ 40.00	\$75.22	\$11.96	\$127	\$38,862
Structural Engineer	470	\$ 47.00	\$88.38	\$14.05	\$149	\$70,030
Electrical Engineer	180	\$ 51.00	\$95.90	\$15.25	\$162	\$29,160
Engineer-in-Training	1,904	\$ 34.00	\$63.93	\$10.17	\$108	\$205,632
AutoCAD Technician	712	\$ 30.00	\$56.41	\$8.97	\$95	\$67,640
Professional Land Surveyor	6	\$ 45.25	\$85.09	\$13.53	\$144	\$864
Field Survey Crew	32	\$ 30.00	\$56.41	\$8.97	\$95	\$3,040
Coating Inspector	720	\$ 40.00	\$75.22	\$11.96	\$127	\$91,440
<b>Total Hours</b>		5,235			<b>Subtotal:</b>	\$654,262
<b>REIMBURSABLES</b>						
Mileage						\$5,190
Reproduction (copies, plots, etc.)						
Miscellaneous						\$2,000
<b>Subtotal:</b>						\$7,190
<b>SUBCONSULTANT COSTS (See Exhibit E)</b>						
Shannon and Wilson						\$5,000
<b>Subtotal:</b>						\$5,000

**Total:** \$666,452

**Contingency:** 60,000

**GRAND TOTAL:** \$726,452

## Supplement 1 Exhibit E

### Subcontracted Work

Project Name: SE REDMOND TANK PAINTING & SEISMIC UPGRADE  
Project Number: 20021801  
Consultant: GRAY & OSBORNE

The City permits subcontracts for the following portions of work of the Agreement:

Subconsultant	Work Description	Amount
Shannon and Wilson	Geotechnical	\$5,000
Total:		\$5,000