City of Oak Harbor
City Council Agenda Bill

Bill No. 8.a
Date: February 2, 2016
Subject: Clean Water Facility - Carollo Engineers - Consultant Agreement Amendment No. 13 for SCADA Services

FROM: Cathy Rosen, Public Works Director and Joe Stowell, City Engineer

INITIALED AS APPROVED FOR SUBMITTAL TO THE COUNCIL BY:

- Bob Severns, Mayor
- Doug Merriman, City Administrator/Finance Director
- Nikki Esparza, City Attorney, as to form

RECOMMENDED ACTION

It is recommended that the City Council Authorize the Mayor to sign Contract Amendment No. 13 with Carollo Engineers in the amount of $1,828,155, increasing the total contract amount from $9,605,341 to $11,433,496.

BACKGROUND / SUMMARY INFORMATION

Construction of the new Clean Water Facility involves a wide variety of mechanical and electrical systems to treat the sewage. The new plant has over 60 distinct systems which require monitoring of over 2,500 operating points and controlling approximately 12,000 logic loops. Controlling these systems requires real time monitoring and control to avoid failure. Modern plants are controlled by a computer network called a Supervisory Control and Data Acquisition system (SCADA).

Implementing a SCADA system requires computer hardware, commercial software, and facility specific software development. Generally a system integrator is hired to handle the individual software development. This system integrator must understand the mechanical/electrical systems, document all the operations information provided by the contractor, implement the control logic to actually run the equipment, coordinate the software development with the construction activities, test the software prior to startup, train City Staff in its operation, confirm system success during the startup process, and provide follow through after construction completion.

The City has elected to use Carollo Engineers for system integration services rather than obtaining an outside contractor. This decision was based upon:

- Carollo's detailed knowledge of the treatment system requirements.
- Carollo's expertise in providing SCADA systems.
- Carollo's ability to adapt the SCADA development as the design evolves and through the submittal process.

- Carollo's ability to begin SCADA implementation prior to construction and to adapt to the GC/CM process
- Carollo's ability to provide operator training

The attached Carollo Engineers Contract Amendment No. 13 reflects the proposed scope of work in detail. This estimate includes both the labor cost to implement the system ($1,445,767) along with hardware and software cost associated with the system ($382,388). The additional scope of services has increased the time and materials, not to exceed, contract by $1,828,155, increasing the total contract amount from $9,605,341 to $11,433,496. The project will require further Carollo contract amendments for services during construction as new GMP's are brought forward.

FISCAL IMPACT

Funds Required: $1,828,155

Appropriation Source: Wastewater Fund / General Fund

PREVIOUS COUNCIL / BOARD / CITIZEN INPUT

CITY COUNCIL WORKSHOP

This amendment was discussed at the January 20, 2016 City Council Workshop.

CITY COUNCIL PREVIOUS ACTIONS

March 23, 2010 – City Council authorized staff to begin contract negotiations with Carollo Engineers for the wastewater treatment plant facility.

August 4, 2010 – City Council authorized the Mayor to sign an agreement with Carollo Engineers for engineering design services with a not to exceed limit of $1,089,561 for the Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan.

October 16, 2012 – City Council authorized the Mayor to sign Contract Amendment No. 5 with Carollo Engineers for additional site investigation related to a new wastewater treatment plant.

January 15, 2013 – City Council authorized staff to negotiate engineering services with Carollo Engineers for preliminary and final plans and specifications for a new wastewater treatment plant.

March 19, 2013 – City Council authorized the Mayor to sign consultant agreement Amendment No. 6 with Carollo Engineers in the amount of $2,081,168 for preliminary design related to the new wastewater treatment plant.

December 2, 2014 – City Council authorized the Mayor to sign consultant agreement Amendment No. 10 with Carollo Engineers in the amount of $4,586,959 for final design of the new wastewater treatment plant.

May 5, 2015 – City Council authorized the Mayor to sign Contract Amendment No. 11 with Carollo Engineers in the amount of $201,876, increasing the total contract amount from $7,907,388 to $8,109,264.

October 20, 2015 – City Council authorized the Mayor to sign Contract Amendment No. 12 with Carollo Engineers in the amount of $1,496,077, increasing the total contract amount from $8,109,264 to $9,605,341.

ATTACHMENTS

1. Attachment A - Consultant Agreement Amendment No. 13
2. Attachment B - Consultant Original PSA and Previous Amendments
3. Attachment C - Carollo Contract Summary

Consultant Agreement Amendment Number 13	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4500	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amendments 1-5) 8549A.10 (Amendment 6 - 12) 8549A.22 (Amendment 13)	Execution Date 09/16/10	Completion Date (Prior) July 2016
Project Title: Engineering, Facilities Plan and Preliminary Design	New Maximum Amount Payable $11,433,496	
Description of Work: This Amendment authorizes services to complete SCADA Programming and System Integration for the Oak Harbor Clean Water Facility.		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers, Inc.
and executed on 09/16/10 and identified as Preliminary Engineering and Facilities Plan.

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:

AGREEMENT is hereby amended to add the following:
Please see the attached Engineering Services Insert (Exhibit A). The requirements in this insert are hereby incorporated into the original agreement.

SCOPE OF WORK is hereby amended to add the following:
The existing Scope of Services will remain open and will be completed for the authorized budget. Please see the attached Scope of Services (Exhibit B) for additional phases of work.

PROJECT COMPLETION DATE AMENDED TO: December 2018

PAYMENT shall be amended as follows:
The maximum total contract value is increased from $9,605,341 to $11,433,496. This maximum upper limit includes a Management Reserve as indicated in prior amendments. Exhibit D-3 summarizes the level of effort associated with Amendment 13 services.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian R. Matson, Senior Vice President

Consultant Signature

By: Robert Severns, Mayor

Approving Authority Signature

Date

By: Karl Hadler, Vice President

Consultant Signature

carollo
Engineers...Working Wonders With Water®

WATER
OUR FOCUS
OUR BUSINESS
OUR PASSION

January 19, 2016

Brett Arvidson
City Engineer
City of Oak Harbor
865 SE Barrington Drive
Oak Harbor, WA 98277

Subject: SCADA Integration and Programming Services Proposal for the Oak Harbor Clean Water Facility

Dear Brett:

Thank you for this opportunity to provide a draft scope of services for SCADA integration at the Oak Harbor Clean Water Facility. Our team of engineers, programmers, and operators has a single goal — to provide the most effective, innovative control solutions customized to meet your needs.

We appreciate the opportunity to continue serving the City and we look forward to discussing our programming services with you.

Respectfully Yours,

CAROLLO ENGINEERS

Jeffrey A. Martin
Vice President
Chief of Programming Services

Monte Richard
Associate Vice President
Principal EI&C Engineer

1218 Third Avenue, Suite 1600 • Seattle, Washington 98101
P. 206.684.6532 F. 206.903.0419
carollo.com

Scope of Work

INTRODUCTION

CONSULTANT will provide programming and SCADA programming services associated for the Oak Harbor Clean Water Facility. These services will include project design assistance, software coordination, supervisory control and data acquisition (SCADA) hardware and software integration, programmable logic controller (PLC) programming, SCADA Historian configuration, trending creation, report configuration, factory and field testing, startup, training, and warranty period services.

TASK 1 - PROJECT MANAGEMENT COORDINATION AND PLAN

1.01 Scheduling, Progress Reports, Invoicing and Project Management Plan

The CONSULTANT will submit a Project Management Plan (PMP) including the following elements:

- Scope
- Budget
- Team Structure
- Team member contact information
- Workshop/Meeting Plan
- Schedule - tasks, meetings, milestones, delivery dates, regular monthly meetings and milestones
- Expectations of CITY

The CONSULTANT will submit monthly progress reports with each invoice to substantiate the progress of work to date, including potential out-of-scope items. This information will be utilized to determine if any changes are required in the management of the project.

CONSULTANT will oversee project efforts, monitor progress and budget expended, and ascertain proper execution of the project in accordance with the project scope, schedule, and budget.

It is assumed that the CONSULTANT will spend 4 hours per month preparing and reviewing the monthly Project Summary Reports.

1.02 Kickoff and Goal Setting Meeting

The CONSULTANT will conduct one, four-hour Project Kickoff and Goal Setting Meeting at the CITY's facility. The meeting will include up to two representatives from the CONSULTANT. The purpose of the Project Kickoff Meeting will be to review the overall project goals, critical success factors, scope of work, schedule, lines of communication, and individual expectations.

1.03 Construction Progress Meetings

The CONSULTANT will attend weekly progress meetings throughout construction via conference call. A construction project duration of 24 months is assumed from notice to proceed through final completion and beginning of the warranty period.

TASK 2 - DESIGN PHASE PROGRAMMING AND COORDINATION

CONSULTANT's programming team will assist the design team with early programming coordination and planning between all technical disciplines.

2.01 Development and Review of the Process Control Network Design

The CONSULTANT will assist in the development and review of the process and control network architecture, network routing diagrams, SCADA block diagrams, I/O list, and network panel layouts. Specific programming details will be incorporated as required to meet the CITY's developed software and programming standards. Specifically, items like tag naming, tag database verification, and software architecture will be verified with the CITY's software standards.

2.02 Facility Site Visits

The CONSULTANT will facilitate two site visits to wastewater facilities within the area who utilize a SCADA system for automated control. Site visit will include a presentation of the sites SCADA system followed by a lessons learned discussion with the facility staff to assess the merits and shortcomings of the facilities SCADA system.

2.03 Develop PLC and SCADA Software Standards

The CONSULTANT will develop PLC and SCADA Software Standards. These standards will be utilized throughout construction of the Clean Water Facility and will be written so that they can serve as a CITY standard for future projects. The effort of developing the Software Standards will be coordinated closely with CITY staff.

2.04 - 2.05 Software Standards Workshops

In order to facilitate the coordination of the PLC and SCADA Software Standards with the CITY, the CONSULTANT will conduct two Software Standards Workshops. The details of the workshops are listed in the following table:

WORKSHOPS

Subtask No.	Meeting Title	Duration	Consultant's Team	Other Attendees
2.04	Preliminary Software Standards Workshop	4 hours	Jeff Janowiak Monte Richard	CITY SCADA Staff
2.05	Final Software Standards Workshop	4 hours	Jeff Janowiak Monte Richard	CITY SCADA Staff

TASK 3 – PROGRAMMING SERVICES DURING CONSTRUCTION

The CONSULTANT will provide programming services during the construction phase. The services will include PLC and SCADA configuration services, various coordination meetings during construction, factory testing, field testing, start-up services, commissioning, and O&M training.

3.01 Hardware and Software Submittals

The CONSULTANT will furnish SCADA hardware and software submittals for items furnished by the CONSULTANT as detailed in Bill of Material Furnished by CONSULTANT.

3.02 PLC and SCADA Development

The CONSULTANT will provide PLC programming and SCADA software configuration for the Clean Water Facility. The CONSULTANT will provide flow charts and annotated function blocks to assist with future adjustments/troubleshooting of the program.

The CONSULTANT will develop the tag database and perform verification with all vendor applications. The CONSULTANT will provide PLC logic coordination with all vendor supplied PLCs.

Refer to assumptions section for I/O counts used for determining the total PLC and SCADA programming effort.

3.03 Historian Configuration and Custom Trend Screen Development

The CONSULTANT will provide Historian configuration and create a total of ten (10) trend screens customized by the CONSULTANT and CITY during the Software Coordination Meetings.

3.04 Regulatory Compliance and Custom Operational Report Configuration

The CONSULTANT will configure a total of two (2) custom regulatory compliance and five (5) custom operational reports. The specifics of the reports will be customized by the CONSULTANT and CITY during the Software Coordination Meetings.

3.05 Software Coordination Meetings

The CONSULTANT will conduct construction phase coordination meetings. The anticipated meetings are listed below:

- One (1) SCADA system configuration meeting for SCADA and PLC network communications coordination with CITY
- Two (2) Vendor programming coordination meetings with Vendors and CITY
- Four (4) software coordination meetings with CITY
- Construction period coordination with CITY, Contractor, and key subcontractors including electrical, ICSC, Vendors.

3.06 Attend Offsite Factory Acceptance Test (FAT)

The CONSULTANT will attend and assist the Instrumentation and Control System Contractor (ICSC) in conducting the witnessed control panel factory acceptance test (FAT) located at the ICSC facility. The CONSULTANT will prepare applicable FAT testing forms no less than one (1) week in advance of the date of the testing.

3.07 Attend Vendor Systems Factory Acceptance Test

The CONSULTANT will attend the witnessed factory acceptance tests for Vendor provided systems to confirm software interfaces and general conformance to the project's programming standards. It is assumed there will be a total of three (3) separate vendor factory acceptance tests, each lasting three (3) days.

3.08 Conduct Software Acceptance Test (SAT)

The CONSULTANT will conduct a Software Acceptance Test (SAT) located in the CONSULTANT's Roseville Cyber Lab. The CONSULTANT will prepare SAT testing plans and forms prior to conducting the SAT. The SAT shall include the configuration of communications and testing of the connection between SCADA and Vendor PLC's. The CONSULTANT will test SCADA interface and screen functionality with all Vendor PLCs during the SAT.

3.09 Conduct Complete End-to-End Testing (CEET)

The CONSULTANT will provide Complete End to End Testing (CEET). After the electrical contractor has fully completed and submitted all loop drawings for review and approval and the ICSC have completed the control system installation. The CEET will occur only after the Contractor has submitted certified test reports that all field wiring has been tested and verified against the loop drawings. The CONSULTANT shall go to the field and load the PLC program for testing and the PLC will be connected to the network at this time. During the CEET, signals are tested through the PLC program, the network, and all the way to the operator's SCADA graphic screens.

The Complete End-to-End Test (CEET) will be performed by the CONSULTANT and Contractor working together, with assistance from the CITY or the inspection staff, as needed. The CONSULTANT will provide staff to verify input signals at, and create output signals from, the SCADA system. The Contractor will be responsible for creating field signals and verifying proper operation of final control elements. It is assumed that full time dedicated Contractor staff assistance will be provided during the CEET. It has been assumed that the CEET will last six (6) weeks

3.10 Conduct Strategy Field Testing (SFT)

The CONSULTANT will provide Strategy Field Testing (SFT). After CEET and the contractor's testing of the manual operation of equipment, the Strategy Field Testing (SFT) will be performed by the CONSULTANT with assistance from the Contractor and assistance from the CITY or the inspection staff, as needed.

The purpose of the SFT is to verify the proper operation of all PLC control logic and its interaction with field equipment and devices. The CONSULTANT will exercise programs, conduct tests, and record results. Contractor staff will be responsible for equipment operation and verification of correct field operation results. Programmer will tune any feedback loops. It has been assumed that the SFT will last four (4) weeks.

3.11 Operational Readiness Testing (ORT)

The CONSULTANT will provide Operational Readiness Testing (ORT) after completion of the CEET and SFT. The ORT will be performed by the CONSULTANT.

The purpose of the ORT is to conduct a final test after all other testing activities have been performed, and all SCADA components have been installed to confirm the system is ready for live deployment. The ORT will test for database backup, database recovery, correct software installation and configuration, failover operation, access control, and security viability. It has been assumed that the ORT will last two (2) weeks.

3.12 MCC Smart Overload and VFD Configuration

The CONSULTANT will provide configuration of all smart overload and VFD starters. The CONSULTANT will configure the network connection as well as program each starter for local and remote operations as indicated in the control strategies. Physical wiring of the starters along with wiring to/from the associated circuit components will be conducted by the Contractor.

3.13 Operation and Maintenance Manuals

The CONSULTANT will provide Operation and Maintenance Manuals for the following items:

- CEET, SFT, and ORT test results
- SCADA system hardware and software
- PLC system software
- Final PLC programs, including final flow charts, annotated function blocks.
- Final control sequencing describing startup, operation, shutdown, and safety procedures

Electronic copies of the individual Operation and Maintenance sections listed above will be delivered to the Contractor for incorporation into the overall project O&M manual.

3.14 Close-Out Services

The CONSULTANT will provide close-out services in order to finalize outstanding issues on the CITY's programming punch list. It has been assumed that the close-out services will last two (2) weeks.

TASK 4 - OPERATIONS AND MAINTENANCE TRAINING SERVICES

4.01 Training Preparation

The CONSULTANT will prepare training materials and handouts prior to conducting the on-site training. Training material will be delivered to the CITY no less than one (1) week in advance of the date of the training.

4.02 - 4.11 Training Courses

CONSULTANT will conduct the training courses detailed in the following table:

OPERATOR TRAINING SERVICES

Subtask No. / Course Title	Minimum Course Length (hours per session)	Personnel (Estimated No. of Students)	Minimum No. of Sessions
4.02 System Overview	8	8	1
4.03 Operator Training - Basic	24	8	2
4.04 Operator Training - Advanced	16	5	2
4.05 CIS (Computer) Equipment Maintenance	8	4	1
4.06 Historian System Training	16	5	1
4.07 Reports Training	8	5	2
4.08 PLC Software	32	6	1
4.09 HMI Hardware and Software	16	5	1
4.10 Network Equipment	16	4	1
4.11 Follow-up Training	8	5	5

TASK 5 - Network Hardware and Software Configuration

5.01 SCADA Network Hardware and Software Configuration

The CONSULTANT will configure the network hardware and software provided by the CONSULTANT listed in the Bill of Material Provided by CONSULTANT. CONSULTANT will configure the network area racks as well as the network server racks. The CONSULTANT will perform setup and configuration of the SCADA servers, Historian server, authentication server, Network Attached Storage, Local Operator Interfaces, thin client nodes, and SCADA workstations.

TASK 6 - WARRANTY PERIOD SERVICES

6.01 Warranty Period Services

The CONSULTANT will provide warranty period services during the 1 year warranty period following final completion of the construction contract. Warranty services will include on-call, dial-in adjustments in addition to on-site visits following final completion of the construction contract.

Additional Items Not Included:

1. PLC Hardware and associated training.
2. Construction and associated testing of PLC cabinets.
3. Hardware and Software not specifically called out in the Bill of Materials Furnished by CONSULTANT.
4. Work efforts for other items not specifically listed in this proposal.
5. Programming of Vendor provided PLCs.

Assumptions:

1. PLC and SCADA programming and configuration effort was based on approximately 2500 hard and soft I/O. The approximate I/O is broken up as shown in the following table:

HARDWIRED I/O	162
VCP I/O	681
SOFT I/O	941
VCP MBR I/O	494
VCP UV I/O	66
CENTRIFUGES NO. 1 AND NO. 2	118
VCP Dryer I/O	TBD

2. The Contractor shall perform complete testing of all Ethernet cabling (Fiber and/or Copper) per the specifications. Testing must certify all paths to CAT 6 specifications and provide a formal written report to CONSULTANT.
3. CONSULTANT will use standard Rockwell PLC programming function blocks and add-on instructions as much as possible to develop the PLC code for this project.

PROGRAMMING SERVICES

Compensation for the Programming Services scope of work is presented in the following table.

CITY OF OAK HARBOR CLEAN WATER FACILITY
PROGRAMMING SERVICES

TASK NUMBER	TASK DESCRIPTION	Professional Hours	Principal Engineer $ 228	EIC Lead Professional $ 205	Senior Programmer III $ 198	Senior Programmer II $ 167	Senior Programmer I $ 140	Document Processing $ 102	Labor Cost	Travel, Subsistence, and Other Reimbursables	TASK FEE
	TASK 1 - PROJECT MANAGEMENT COORDINATION AND PLAN										
1.01	Scheduling, Progress Reports, Invoicing, Project Management Plan	**156**	16	116	24				$ 32,180	$ -	$ 32,180
1.02	Kick-off and Goal Setting Meeting	**32**		16	16				$ 6,448	$ 1,835	$ 8,283
1.03	Construction Progress Meetings	**168**		96	48		24		$ 32,544	$ -	$ 32,544
	TASK 2 - DESIGN PHASE PROGRAMMING AND COORDINATION										
2.01	Development and Review of the Process Control Network Design	**24**			24				$ 4,752	$ -	$ 4,752
2.02	Facility Site Visits	**24**	8	16					$ 5,104	$ 1,705	$ 6,809
2.03	Develop PLC and SCADA Software Standards	**84**		4	40		40		$ 14,340	$ -	$ 14,340
2.04	Preliminary Software Standards Workshop	**16**		8	8				$ 3,224	$ 1,835	$ 5,059
2.05	Final Software Standards Workshop	**16**		8	8				$ 3,224	$ 1,835	$ 5,059
	TASK 3 - PROGRAMMING SERVICES DURING CONSTRUCTION										
3.01	Hardware and Software Submittals	**92**		4	32	24	24	8	$ 15,340	$ -	$ 15,340
3.02	PLC and SCADA Development	**3,424**			2200		1224		$ 606,960	$ -	$ 606,960
3.03	Historian Configuration and Custom Trend Screen Development	**180**					180		$ 25,200	$ -	$ 25,200
3.04	Custom Operational Report Configuration	**112**					112		$ 15,680	$ -	$ 15,680
3.05	Software Coordination Meetings	**256**		24	116		116		$ 44,128	$ 8,270	$ 52,398
3.06	Attend Offsite Factory Acceptance Test (FAT)	**66**			58		8		$ 12,604	$ 3,080	$ 15,684
3.07	Attend Vendor Systems Factory Acceptance Tests	**200**			120		80		$ 34,960	$ 4,220	$ 39,180
3.08	Software Acceptance Testing (SAT)	**344**			176		168		$ 58,368	$ -	$ 58,368
3.09	Complete End-to-End Testing (CEET)	**360**			180		180		$ 60,840	$ 7,510	$ 68,350
3.10	Strategy Field Testing (SFT)	**300**			160		140		$ 51,280	$ 7,510	$ 58,790
3.11	Operational Readiness Testing (ORT)	**120**			80		40		$ 21,440	$ 7,510	$ 28,950
3.12	MCC Smart Overload and VFD Configuration	**120**			40		80		$ 19,120	$ -	$ 19,120
3.13	Operation and Maintenance Manuals	**80**		8	32		32	8	$ 13,272	$ -	$ 13,272
3.14	Close-Out Services	**120**			80		40		$ 21,440	$ 3,755	$ 25,195
	TASK 4 - OPERATIONS AND MAINTENANCE TRAINING SERVICES										
4.01	Training Preparation	**188**			96	16	68	8	$ 32,016	$ 8,810	$ 40,826
4.02	System Overview	**10**			10				$ 1,980	$ -	$ 1,980
4.03	Operator Training Basic	**60**			60				$ 11,880	$ -	$ 11,880
4.04	Operator Training Advanced	**40**			40				$ 7,920	$ -	$ 7,920
4.05	Computer Equipment Maintenance	**10**					10		$ 1,400	$ -	$ 1,400
4.06	Historian System Training	**20**			20				$ 3,960	$ -	$ 3,960
4.07	Reports Training	**20**				20			$ 3,340	$ -	$ 3,340
4.08	PLC Software	**40**			40				$ 7,920	$ -	$ 7,920
4.09	HMI Hardware and Software	**20**					20		$ 2,800	$ -	$ 2,800
4.10	Network Equipment	**20**				20			$ 3,340	$ -	$ 3,340
4.11	Follow Up Training	**48**			24		24		$ 8,112	$ -	$ 8,112
	TASK 5 - NETWORK HARDWARE AND SOFTWARE CONFIGURATION										
5.01	Network Hardware and Software Configuration	**208**				208			$ 34,736	$ -	$ 34,736
	TASK 6 - WARRANTY PERIOD SERVICES										
6.01	Warranty Period Services	**248**		48	120		80		$ 44,800	$ 3,083	$ 47,883
	ALL TASKS	**7226**	**24**	**348**	**3852**	**288**	**2690**	**24**	**$ 1,266,652**	**$ 60,958**	**$ 1,327,610**
	LABOR AND EXPENSES SUBTOTAL										**$ 1,327,610**
	CONTINGENCY AND ESCALATION										**$ 118,157**
	LABOR AND EXPENSES TOTAL										**$ 1,445,767**

BILL OF MATERIAL FURNISHED BY CONSULTANT

The following table is a bill of material showing equipment that will be provided by the CONSULTANT.

CITY OF OAK HARBOR CLEAN WATER FACILITY
MATERIAL PROVIDED BY CONSULTANT

BOM Number	Description	Materials	Markup on Materials	Total Cost
1	Server Rack, UPS with Bypass, Closet Connector Housing, FPP, Wire Management System	$ 10,568	$ 2,114	$ 12,682
2	Firewall, Ethernet Switch, NAS	$ 9,459	$ 1,892	$ 11,351
3	SCADA Software (2) FT Server, (7) clients, TS, WIN 911	$ 55,681	$ 11,136	$ 66,817
4	PLC Software (RA RS Logix Professional Edition)	$ 8,160	$ 1,632	$ 9,792
5	Historian Software (5,000 tags)	$ 32,500	$ 6,500	$ 39,000
6	SCADA Servers w/OS Software (2)	$ 16,902	$ 3,380	$ 20,282
7	Historian Server w/OS Software (1)	$ 8,451	$ 1,690	$ 10,141
8	Domain Server	$ 4,600	$ 920	$ 5,520
9	Workstations w/OS Software (2)	$ 4,360	$ 872	$ 5,232
10	Engineering Workstation w/OS Software (1)	$ 2,180	$ 436	$ 2,616
11	Control Room Thin Client and Monitor (3)	$ 20,000	$ 4,000	$ 24,000
12	Panel Mount Thin Clients (3) - OIT-HW, OIT-ABRW & OIT-SH	$ 15,341	$ 3,068	$ 18,409
13	Remote Thin clients throughout the plant (3)	$ 20,400	$ 4,080	$ 24,480
14	Local Network Panels (3) - NP-HW, NP-ST & NP-SH	$ 25,915	$ 5,183	$ 31,098
15	Hardened Industrial Laptop Workstations (2)	$ 4,200	$ 840	$ 5,040
16	ACP thin Manager Software (10 clients)	$ 16,780	$ 3,356	$ 20,136
17	Network Printer (Laser printer)	$ 4,158	$ 832	$ 4,990
18	Color Printer	$ 1,545	$ 309	$ 1,854
19	Miscellaneous, Software, Patch Cables, Connectors, Labels, etc.	$ 7,500	$ 1,500	$ 9,000
	MATERIAL TOTAL			**$ 322,440**
	MATERIAL TAXES @ 8.9%			**$ 28,697**
	MATERIALS SUBTOTAL			**$ 351,137**
	CONTINGENCY AND ESCALATION			**$ 31,251**
	MATERIAL TOTAL			**$ 382,388**

TOTAL COMPENSATION

Total compensation for the Programming Services in addition to the Material Provided by the CONSULTANT is presented in the following table.

CITY OF OAK HARBOR CLEAN WATER FACILITY
COMBINED PROGRAMMING SERVICES AND MATERIAL PROVIDED BY CONSULTANT

LABOR AND EXPENSES TOTAL (PROGRAMMING SERVICES)	**$ 1,445,767**
MATERIAL TOTAL (MATERIAL FURNISHED BY CONSULTANT)	**$ 382,388**
PROJECT TOTAL	**$ 1,828,155**

References

Casa Grande Water Reclamation Facility Phase 3 Expansion SCADA

City of Casa Grande, Arizona

Design: Yes, **Programming:** Yes, **ESDC:** Yes

Contract Held with Owner or Contractor: Owner

Contact/Reference Information:
Mr. Kevin Louis
Public Works Director
City of Casa Grande
3181 North Lear Avenue
Casa Grande, AZ 85222
520-421-8600
klouis@casagrandeaz.gov

Completion Time – Design:
Original: 25 months, **Actual:** 25 months (9/06 – 10/08)

Contract Value: $2.7M
Programming: $1.2M
ESDC: $3.7M

Construction Cost:
Bid Price: $48.1M, **Actual:** $50.4M

Change Orders (number/amount):
11 / $2.3M ($2.0M owner-directed)

Claims Resulting in Litigation/Settlement Amount: None

HIGHLIGHTS

- **PLC models:** Allen-Bradley ControlLogix and CompactLogix
- **PLC count:** 26 CPUs
- **PLC input/output (I/O) count:** 4,600+
- **Communication networks and protocols used:** Ethernet, ControlNet, Ethernet-IP, ControlNet (CIP)
- **SCADA system hardware and software:** Dell server-class HW & SW + Wonderware's InTouch SCADA-HMI SW
- **Enterprise historian hardware and software:** Dell server-class HW & SW + Wonderware's Enterprise Historian + Microsoft's SQL RDBMS SW

This large scale plant upgrade included the addition of 17 new (for a total of 26) PLCs as well as a completely new Wonderware system, including an enterprise-class Historian.

The City of Casa Grande, Arizona, Water Reclamation Facility Phase 3 Expansion, from 6 to 12 mgd, included the addition of four new clarifiers, an additional anoxic/aerobic basin, new solids-handling equipment, new odor control, new sodium-hypochlorite generation, and related supporting facilities. This large-scale plant upgrade included the addition of 17 new PLCs (for a total of 26) as well as a completely new Wonderware system, including an enterprise-class Historian.

An existing video surveillance system was expanded by adding new cameras, connected via fiber-optic technology, and adding digital video-recording equipment to allow plant operations to greatly improve security around the large facility.

The lead PLC programming effort put forth by Carollo helped to avoid many of the traditional pitfalls encountered when multiple programmers from different vendors provide logic for the same project. The extensive experience of our senior programming staff quickly earned the respect of the various individuals involved and greatly increased the cooperation among the vendors to accommodate a common programming standard. Carollo provided many of the standard program modules for integration into the overall plant control system.

Bollman Water Treatment Plant DCS Replacement

Contra Costa Water District, Walnut Creek, California

Design: Yes, **Programming:** Yes, **ESDC:** Yes

Contract Held with Owner or Contractor: Owner

Contact/Reference Information:
Mr. Jacob Lesov
Instrumentation Engineer
Contra Costa Water District
2411 Bisso Lane,
Concord, CA 94524
925-688-8193
jlesov@ccwater.com

Completion Time – Design:
Original: 16 months, **Actual:** 16 months (3/07 – 6/08 including programming)

Contract Value: $6.4M

Construction Cost:
Bid Price: N/A (only DCS replacement)
Actual: $1.7M

Change Orders (number/amount):
4 / $150,000

Claims Resulting in Litigation/Settlement Amount: None

HIGHLIGHTS

- **PLC models:** Modicon Quantum Hot-Standby
- **PLC count:** 4
- **PLC input/output (I/O) count:** 2,000+
- **Communication networks and protocols used:** Ethernet, Remote I/O, Modbus TCP, Remote I/O
- **SCADA system hardware and software:** Dell Servers & Workstations/ Wonderware InTouch
- **Enterprise historian hardware and software:** Dell Servers/ Wonderware Historian

Carollo Engineers was the prime contractor for a $1.7 million turnkey (hardware and software) replacement of the distributed control system at the 75-mgd Bollman Water Treatment Plant for the Contra Costa Water District (CCWD) in Concord, California. The project included replacement of the plant's obsolete, proprietary Bailey Infi-90 DCS with a modern, open-standards-based distributed PC/PLC system.

Carollo Engineers provided hardware, software, programming, and complete systems integration services.

The new system uses four Modicon Quantum Unity hot-standby CPU pairs connected to I/O modules in eight area control cabinets. The PLC control network is configured in a redundant Ethernet/fiber ring. The remote I/O communications are also redundant.

The operator interface is provided by 12 thin-client terminals connected to redundant SCADA terminal servers running Wonderware InTouch for Terminal Services version 9.5.

Carollo provided hardware, software, programming, and complete systems integration services. Carollo was the prime contractor and directed the work of subcontractors for electrical installation, fiber-optic cable testing, panel fabrication, and design assistance.

The Bollman Plant is the main source of water for several communities and allowable shutdown times were very short, considering the magnitude of the project. Carollo worked closely with CCWD staff to develop a comprehensive cutover plan including fallback options to ensure continuous water deliveries. Carollo completed the project on time, within budget, and with minimal disruptions to staff and operations.

Contra Costa Middle River Intake Project

Contra Costa Water District, Contra Costa County, California

Design: Yes, **Programming:** Yes, **ESDC:** Yes

Contract Held with Owner or Contractor: Owner

Contact/Reference Information:
Mr. Scott Weddle
Senior Engineer
Contra Costa Water District
2411 Bisso Lane
Concord, CA 94524-2099
925-688-8318
sweddle@ccwater.com

Contractor Information:
ProVen Management
Mr. Bill Gilmartin
President
712 Sansome Street
San Francisco, CA 94111
415-990-4448
Bill@ProvenManagement.com

Completion Time – Design:
Original: 15 months, **Actual:** 15 Months (09/06 – 11/07)

Contract Value: $4.6M

Construction Cost:
Bid Price: $32M, **Final Amount:** $33.56M

Change Orders (number/amount):
162 / $1.56M (Field services for environmental assessment)

Claims Resulting in Litigation/Settlement Amount: None

HIGHLIGHTS

- **PLC models:** Modicon M340
- **PLC count:** 2
- **PLC input/output (I/O) count:** 261
- **Communication networks and protocols used:** Modbus TCP, Modbus RTU, WAN (Radio)
- **SCADA system hardware and software:** Televent/Televent OASys DNA 7.5
- **Enterprise historian hardware and software:** Dell Server/Televent

Provided detailed control system design for the intake pump station including 5-3,000 hp pump, the PLC and SCADA control system, programming services, and engineering services during construction.

The CCWD Middle River Intake Project protects CCWD's 550,000 customers from seasonal fluctuations and long-term degradation of water quality in the Delta by establishing an alternative intake at Victoria Canal in the central Delta. In addition to improving delivered water quality, the Middle River Intake Project enhances operational flexibility, improves health and aesthetic benefits to customers, provides fisheries protection via the change in timing/location of diversions, and protects delivered water quality during emergencies. The pump station includes five 3,000-hp vertical turbine pumps to convey water to CCWD's Los Vaqueros Reservoir or the Contra Costa Canal, automatic screen raking, a hydraulic surge suppression system, and a 69-kV substation.

The project will allow CCWD to consistently meet or exceed state and federal drinking water regulations and protect public health well into the future. It will also protect delivered-water quality during emergencies.

Key instrumentation and control elements:

- Redundant Modicon Quantum PLC system with segregated I/O for each pump.
- Data acquired from power metering systems, variable frequency drives (VFDs), motor starters, and intake screen cleaning system using Modbus TCP Ethernet and Modbus RTU communications.
- Water quality and process control instruments.
- Communications with SCADA at CCWD's centralized control center over redundant radio networks.
- PLC and SCADA programming by Carollo Engineers.

Key electrical elements:

- 69-kV substation with SF6 circuit breaker and 15-MVA transformer to step transmission voltage down to 4.16 kV to power the pump motors.
- 4.16-kV switchgear and motor controls.
- Reduced-voltage solid-state motor starters for three 3,000-hp pump motors.
- VFDs for two 3,000-hp pump motors.
- Motor protection incorporating thermal overload modeling, current differential protection, and over-temperature protection that monitors six resistance-temperature detectors in the motor windings and two in the bearings.

John F. Kubala Water Treatment Plant Expansions I and II

City of Arlington, Texas

Design: Yes, **Programming:** Yes, **ESDC:** Yes

Contract Held with Owner or Contractor: Owner

Contact/Reference Information:
Mr. David Smith
Water Treatment Manager/Maintenance
John Kubala Water Treatment Plant
7001 U.S. Highway 287
Arlington, TX 76017
817-478-5702
David.Smith@arlingtontx.gov

Completion Time – Design:
Original and Actual: 16 months/
16 months (1/07 – 4/08)

Contract Value: $5.0M

Construction Cost:
Bid Price: $28.8M, **Actual:** Ongoing

Change Orders (number/amount):
4 / $2.6M

Claims Resulting in Litigation/Settlement Amount: None

HIGHLIGHTS

- **PLC models:** Modicon Premium, Allen-Bradley PLC5, and Allen-Bradley SLC500
- **PLC count:** 28
- **PLC input/output (I/O) count:** 6,000+
- **Communication networks and protocols used:** ModBus TCP, DH+, Ethernet
- **SCADA system hardware and software:** Panel View and Dell Workstations/GE Proficy iFIX
- **Enterprise historian hardware and software:** Dell Server/ GE Proficy Historian

Carollo Engineers was retained to perform the City of Arlington's John F. Kubala Water Treatment Plant Expansion I, which included the addition of six filters, two sedimentation basins, expanded recycle basin, and two finished-water high-service pumps (5 kV, 800 hp on VFDs, and 1,750 hp on RVSS), and a 5-MG clearwell.

Control system design and programming for 32.5-mgd WTF hydraulic expansion using Allen-Bradley and Modicon PLCs, iFIX SCADA and Historian software.

The Expansion II project is the most recent in a series of major projects that Carollo Engineers has performed for the City of Arlington. The project involved hydraulic expansion from 65 mgd to 97.5 mgd through the addition of two sedimentation basins, eight granular media filters, chemical feed systems, a 1,000-hp high-service pump in the existing pump station, and ozone generation and contacting facilities.

The programming efforts included all high-service pumps (existing and new), which totalled 5,950 hp, with the largest pump being 1,750 hp.

Carollo performed the design and programming of the existing SCADA system expansion, which included redundant Allen-Bradley PLCs for the ozone facilities (programming by Ozonia), Modicon Premium PLCs for the rest of the plant, an Ethernet data highway and SCADA LAN, and an iFIX SCADA HMI system. The work included upgrading the iFIX software from version 3.5 to 5.0, a new Historian, and expanding the operator display system to include all of the new facilities. Carollo Engineers was also responsible for programming the new and expanded Modicon Premium PLCs, while two specialty subcontractors programmed the filter controls and ozone systems. The project included adding an enterprise Historian to the system, which collects data from all of the City's water facilities into a central data repository for trending and analysis.

Pleasant Grove Wastewater Treatment Plant Miscellaneous Upgrades

City of Roseville, California

Design: Yes, **Programming:** Yes, **ESDC:** Yes

Contract Held with Owner or Contractor: Owner

Contact/Reference Information:
Mr. Ken Glotzbach
Wastewater Utility Manager
City of Roseville
2005 Hilltop Circle
Roseville, CA 95747
916-774-5770
kglotzbach@roseville.ca.us

Completion Time – Design:
Original: 36 months, **Actual:** 36 months (8/08 – 7/10)

Contract Value: $2.9M

Construction Cost:
Bid Price: $18.9M, **Actual:** $19.8M

Change Orders (number/amount):
6 / $971,831

Claims Resulting in Litigation/Settlement Amount: None

HIGHLIGHTS

- **PLC models:** Modicon Quantum
- **PLC count:** 12
- **PLC input/output (I/O) count:** 3,500
- **Communication networks and protocols used:** EthernetIP over Fiber, Modbus Plus, Serial Modbus over Licensed Radio, Modbus TCP, Modbus Plus, Modbus RTU
- **SCADA system hardware and software:** Transdyn Controls DYNAC SCADA Software, Wonderware
- **Enterprise historian hardware and software:** Oracle Enterprise Edition

Carollo Engineers designed a system that would meet Roseville's need for "unattended operations" at the Pleasant Grove facility.

Carollo Engineers designed the Pleasant Grove Wastewater Treatment Plant, a new 12-mgd treatment facility, for the City of Roseville. Carollo Engineers served as primary consultant for the design of SCADA and instrumentation systems at the Pleasant Grove plant and the replacement of an existing command center at the City's Dry Creek WWTP.

Carollo Engineers designed a system that would meet the City's need for "unattended operations" at the Pleasant Grove plant. The new plant is staffed on weekdays, but remains unstaffed on evenings and weekends. Control systems allow for communication between the Pleasant Grove plant and the Dry Creek plant. The Carollo Engineers team optimized process, SCADA, and communications system designs to allow for complete operation and monitoring of the Pleasant Grove plant from the Dry Creek plant.

The new SCADA system includes two command centers with a network of computers and control panels with Modicon Quantum PLCs, interconnected by a fiber-optic data highway, plus over 3,500 input/output points of control. The Pleasant Grove plant includes an influent pump station, aerated grit basins, oxidation ditches, secondary clarifiers, a return activated sludge/waste activated sludge (RAS/WAS) pump station, continuous backwash filters, a chlorine contact basin, and a solids-handling building. Automated valving, automated gates, and instrumentation are key project features that contribute to the plant's ease of operation.

PROGRAMMING VALIDATION, START-UP, AND COMMISSIONING PLAN

PRE-CONSTRUCTION ACTIVITIES

Review and Document Existing Systems
Hardware and Software
PLC-SCADA-NETWORKS

Review and Document Existing Systems: Review the existing SCADA and control systems for Owner's other facilities and use the information collected to program the system expansion in a compatible manner, using similar programming standards. Visit the Owner's other facilities and become familiar with the system hardware and programming standards used, collect and review documentation on the existing system, including PLC code, SCADA software configuration files, block and wiring diagrams, and other O&M information available.

Detailed Design Submittals
For Equipment and Software
- Historian
- Report System
- Alarm System
- Control System Block Diagram
- Control System Network Diagram

Detailed Design Submittals: Prepare a detailed SCADA system design, based on the Contract Documents. Finalize computer system connections, history system expansion, report requirements, etc. Prepare a design submittal including updated block diagram, software list, or other information required to define the final details of the complete control system.

Develop and Document Programming Standards
- Screen Layout and Graphic Color Conventions
- Control Action Standards
- Software Architecture
- General Control Functions
- PLC Programming Standards

Programming Standards: Develop and document standard for use on the project to provide a consistent "look and feel" for operators and to make maintenance easier. The PLC programming and HMI and SCADA software configuration will follow these documented programming standards which shall include: Screen layout and graphic color conventions, Control action standards, Software architecture, General control functions, PLC programming standards. Screen layout and color standards define the way information is presented to operators on the SCADA screens. Control action standards define the way control actions are accomplished by the operator. Software architecture defines where in the system (PLC vs. servers vs. operator stations) various software functions are performed. General Control Functions describe typical control logic that will apply to all motors, valves, analog signals, etc. Meet with Owner to discuss options and preferences for graphic display standards, color conventions, and other programming standards and prepare a proposed graphic display and programming standards document for Owner acceptance.

Control Strategies
- Confirm
- Refine
- Expand

Control Strategies: The Contract Documents include specifications, P&IDs and Control Strategies that describe the monitoring and control functions of the SCADA computer system and the operation of PLC logic. More detailed control strategies will be needed to confirm and refine the requirements for implementation of SCADA logic and functions prior to performing the programming.

CONSTRUCTION ACTIVITIES

Coordination with Vendor Control Systems

Coordination with Vendor Control Systems: PLCs provided by vendors of packaged systems shall be integrated into the SCADA system. This requires coordination of programming work with the vendors. Vendors are responsible for all logic in their respective PLCs. They shall define the PLC registers in their PLCs that will allow remote starting and stopping of their systems, monitoring of data for display, alarming, event logging, trending, etc., and any other functions as required by the specification. Programmer shall coordinate its work with these equipment suppliers to provide proper control functionality between their equipment and the SCADA system.

Initial Set-Up of PLC/SCADA
Hardware and Software at Programmer's Office

Configuration and Programming
Field Bus Networks | PLCs | SCADA Networks | Local Operator Interfaces | Historian | Alarms

FAT: Before shipment to the project site, the complete PCIS system including all operator stations, servers, network equipment, printers, PCMs, PLCs, RTUs, LCPs, CCS, peripherals, communications equipment, and other SCADA equipment, shall be assembled, connected, and all software loaded for a full functional FAT of the integrated system. Perform tests to show that the integrated system hardware and software is fully operational. For systems that contain RTU's or remote communications with other devices, the complete communications system must be factory tested, including actual interfacing with telephone company equipment and/or the actual radios used for radio based telemetry systems. Correct any deficiencies observed. Use hardware simulators connected to the I/O points within the SCADA System. All I/O shall be simulated and proper control and system operation shall be validated.

FAT
Factory Acceptance Testing
- Integrated System All Hardware and Software Testing Simulator
  - Hardwired Devices
  - Hardware Simulator
  - Field Bus Devices

PreFat - Assurance that PCIS is ready for full FAT
Panel Inspections for completeness and workmanship
I/O Test verify I/O is properly wired to field terminals
System Configuration Test for all
- Operator Stations
- Servers
- Development Stations
- Peripherals

Control Logic Test of strategies with simulation of I/O

Preliminary Factory Acceptance Test: Purpose of the Pre-FAT is to provide assurance that the control system is ready for the full FAT in terms of both stability and functionality.

Panel Inspections: Inspect each control panel for completeness, workmanship, fit and finish, and compliance with the Contract Documents and the approved shop drawings.

I/O Test: Verify that I/O is properly wired to field terminals and is properly mapped into the PLC and the rest of the SCADA system, including all operator interface devices.

System Configuration Test: Demonstrate and test the setup and configuration of all operator stations, servers, development stations, peripherals, utility software, virus protection, backup, optical drive burning, network monitoring, proper operation of all peripheral hardware, general SCADA functions, proper operation of log-on and other access security functions, historical data storage, trend, display, backup, report functions, automatic fail over of redundant equipment, alarm display and acknowledgement functions.

Control Logic Test: Verify that all software functions and logic work as specified, along with any hardwired logic or functions in the tested control panels.

FIELD TESTING AND PRE-COMMISSIONING

Field Device Calibration | LAN Cable Post Testing | Industrial Network Testing | Field Bus Testing

PAL: The panels are shipped to the field and installed. After all instruments are installed and calibrated, and all field wires tested and terminated, conduct PAL. The purpose of the PAL test is to test the field wiring and instrumentation. The test is from the field devices, through any intermediate devices or control panels, to the PLC panel and into PLC registers. Each signal is tested from field device to PLC, and from PLC to final control element for PLC outputs. Programmer's PLC code is not used in this test.

PAL
PLC Panel and Loop Testing

NAT
Network Equipment Acceptance Test

NAT: After all fiber and other network cables are installed, conduct the NAT to demonstrate that all Contractor-provided cabling and hardware work as specified.

CEET
Complete End-to-End Test

CEET: Programmer shall load the PLC program for testing. PLCs are connected to the network at this time. The CEET is similar to the PAL, except now signals are tested through the PLC program, the network, and all the way to the operator's SCADA graphic screens. Shall be performed by the Contractor and Programmer working together, with assistance from the OWNER or the inspection staff, as needed. The test shall verify input signals and create output signals from, the SCADA HMI Station.

MST
Manual Equipment Start-Up Test

MST: Test mechanical equipment and instruments with equipment operating under Local (Manual) control. These tests are performed without reliance on PLC program logic, unless the PLC logic is provided with packaged systems. Contractor shall also perform startup and commissioning tests of all mechanical equipment.

SFT
Strategy Field Testing

SFT: Performed by the Programmer and Contractor. Some OWNER assistance is generally required. Construction inspection staff witness the tests. The purpose is to verify the proper operation of all PLC control logic and its interaction with field equipment and devices. Feedback control loops are also tuned at this time.

COMMISSIONING

O&M Manuals

O&M Manuals: Consisting of final Loop Descriptions and complete, annotated program listings for all control system programming and configuration.

Operator Training

Operator Training: Training by the Programmer on the operation of the system and the use of the operator displays for each of the software package developed by the Programmer, utilizing the equipment and software applications that are to be supplied for the project.

Maintenance Training

Maintenance Training: Training by the Programmer on new and modified PLC and SCADA software programs and configurations.

Record Documentation

Record Documentation: Record documentation for programming work including PLC program listings, SCADA Software Configuration, Design drawings.

POST COMMISSIONING

Follow-up Services

Follow-Up Services: Provide follow-up system support after the control system has been placed in operation.

Corrective Services

Corrective Services: For a period of one year after the start of beneficial use Programmer shall correct any errors or omissions in programming and other Programmer services, and repair or replace equipment provided that fails or is found to be defective during this period.

Maintenance Services

Maintenance Services: Provide maintenance services or modifications on hardware and software as directed by the Owner under a separate maintenance contract.

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CITY OF OAK HARBOR
CONSULTANT AGREEMENT
WITH Carollo Engineers, Inc.

PROJECT TITLE: Preliminary Engineering and Facilities Plan

PROJECT COMPLETION DATE: December 2012

MAXIMUM AMOUNT PAYABLE: $1,089,561

TABLE OF CONTENTS

CONSULTANT CONTRACT

GENERAL REQUIREMENTS

EXHIBITS

CONSULTANT CONTRACT
HEADING

I. INSTRUCTIONS

This contract must be completed in full, including all applicable exhibits. If an exhibit is not applicable, it should be marked "VOID".

Any changes or additions to this contract must be made in writing and set forth below. (The parties may attach appendices and exhibits to this contract but they **must** be listed in Section IV below.) Any exceptions or changes to the General Requirements must be listed in Section XI of the contract.

II. CONSULTANT INFORMATION

Name: Carollo Engineers, Inc.

Address: 1218 Third Avenue, Suite 1600; Seattle, WA 98101-3032

Telephone/Fax No.: 206-684-6532

Federal ID No.: 86-0899222

Do you require a 1099 for the IRS? Yes

III. PROJECT INFORMATION

Protect Title: Preliminary Engineering and Facilities Plan

Project Description: This phase of the work includes the development of preliminary engineering and a Facilities Plan for the wastewater treatment facilities.

Project Completion Date: December 2012
Maximum Amount Payable: $1,089,561
Progress Payments: Monthly

IV. ADDITIONAL DOCUMENTS ADDED TO THIS CONTRACT

Exhibit B: Scope of Services
Exhibit D-3: Level of Effort (Hours) Summary

AGREEMENT

V. INTRODUCTION

THIS AGREEMENT, made and entered into this 10th day of September, 2010, between the City of Oak Harbor, Washington, hereinafter called the "CITY", and the below identified organization hereinafter called the "CONSULTANT" consists of this agreement, the exhibits and the General Requirements attached hereto.

WITNESSETH THAT:

WHEREAS, the CITY desires to accomplish the above-referenced project, and

WHEREAS, the CITY does not have sufficient staff to meet the required commitment and, therefore, deems it advisable and desirable to engage the assistance of a CONSULTANT to provide the necessary services for the PROJECT; and

WHEREAS, the CONSULTANT represents that he/she is in compliance with the Washington State statutes relating to professional registration, if applicable, and has signified a willingness to furnish consulting services to the CITY;

NOW, THEREFORE, in consideration of the terms, conditions, covenants and performance contained herein, or attached and incorporated and made a part hereof, the parties hereto agree as follows:

VI. GENERAL DESCRIPTION OF WORK

The work under this AGREEMENT shall consist of the work and services described in Section III of this AGREEMENT and as herein defined and necessary to accomplish the completed work for this PROJECT. The CONSULTANT shall furnish all services, labor and related equipment necessary to conduct and complete the work as designated elsewhere in this AGREEMENT.

VII. SCOPE OF WORK

The Scope of Work and project level of effort for this project is detailed in Exhibit "B" attached hereto, and by this reference made a part of this AGREEMENT.

VIII. PAYMENT

The CONSULTANT shall be paid by the CITY for completed work and services rendered under this AGREEMENT on the basis of a negotiated hourly rate plus costs as provided in Exhibit "C" attached hereto, and by this reference made part of this AGREEMENT. Such payment shall be full compensation for work performed or services rendered and for all labor, materials, supplies, equipment, and incidentals necessary to complete the work specified in Exhibit "B" attached hereto and by this reference made part of this AGREEMENT; except for out of pocket costs as identified in Exhibit "C".

IX. CERTIFICATION OF THE CONSULTANT AND THE CITY

Attached hereto as Exhibit "A-1" is the Certification of the Consultant and Certification of City Official. Exhibit "A-2" is the Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions.

X. COMPLETE AGREEMENT

This document and referenced attachments contain all covenants, stipulations and provisions agreed upon by the parties. No agent or representative of either party has authority to make, and the parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein. No changes, amendments, or modifications of the terms hereof shall be valid unless reduced to writing and signed by the parties as an amendment to this AGREEMENT.

XI. GENERAL REQUIREMENTS

The General Requirements for Consulting Contract, on file in the City Clerk's Office at Oak Harbor City Hall, a copy of which is attached hereto, shall apply to this AGREEMENT except as modified in this Section XI (General Requirements). The CONSULTANT has assured that the attached copy of the General Requirements conforms to the set filed in the City Clerk's Office.

General provisions are modified to provide that "CONSULTANT shall provide period reports as required and not necessarily on a monthly basis."

XII. EXECUTION AND ACCEPTANCE

This AGREEMENT may be simultaneously executed in several counterparts, each of which shall be deemed to be an original having identical legal effect. The CONSULTANT does hereby ratify and adopt all statements, representations, warranties, covenants, and agreements contained in the proposal, and the supporting materials submitted by the CONSULTANT, and does hereby accept the AGREEMENT and agrees to all of the terms and conditions thereof.

IN WITNESS WHEREOF, the parties hereto have executed this AGREEMENT as of the day and year first above written.

By _____
Consultant: Brian Matson

BY _____
Consultant: KEN WILKINS

By _____
Agency: MAYOR
Principal

Consultant Contract - 3
(Hourly Rate(s) Plus Costs)
6/17/2008 11:42 AM

I, _____, Consultant, certify under penalty of perjury under the laws of the State of Washington that this copy of the General Requirements for Consultant Contract conform to the set filed in the Clerk's Office.

Dated:_____

_____

By_____

GENERAL REQUIREMENTS

1. MISCELLANEOUS PROVISIONS

All aspects of coordination of the work of this AGREEMENT, with outside agencies, groups or individuals shall receive advance approval by the CITY. Necessary contacts and meetings with agencies, groups or individuals shall be coordinated through the CITY.

The CONSULTANT shall attend coordination, progress and presentation meetings with the CITY or such officials, groups or individuals as may be requested by the CITY. The CITY will provide the CONSULTANT sufficient notice prior to meetings requiring CONSULTANT's participation. The minimum number of hours or days notice required shall be agreed to between the CITY and the CONSULTANT and shown in Exhibit "B" attached hereto and made part of this AGREEMENT. The CONSULTANT shall prepare a monthly progress report as needed by the CITY (but in no case shall it be more than once a month), in a form approved by the CITY, that will outline in written and graphical form the various phases and the order of performance of the work in sufficient detail so that the progress of the work can easily be evaluated.

All reports and other data, furnished to the CONSULTANT by the CITY shall be returned. All designs, drawings, specifications, documents, and other work products prepared by the CONSULTANT prior to completion or termination of this AGREEMENT are instruments of service for this PROJECT and are property of the CITY. Reuse by the CITY or by others acting through or on behalf of the CITY of any such instruments of service, not occurring as part of this PROJECT, shall be without liability or legal exposure to the CONSULTANT.

2. TIME FOR BEGINNING AND COMPLETION

The CONSULTANT shall not begin any work under the terms of this AGREEMENT until authorized in writing by the CITY. All work under this AGREEMENT shall be completed by the date shown in Section III of this AGREEMENT under "Project Completion Date".

The established completion time shall not be extended because of any delays attributable to the CONSULTANT, but may be extended by the CITY, in the event of a delay attributable to the CITY, or because of unavoidable delays caused by an act of God, governmental actions or other conditions beyond the control of the CONSULTANT. A prior supplemental agreement issued by the CITY is required to extend the established completion date.

3. SUBCONTRACTING

The CITY permits subcontracts for only those items of work designated for subcontracts in Exhibit "G-1" or "G-2" to this AGREEMENT.

The work of the subconsultant shall not exceed its maximum amount payable unless prior written approval has been issued by the CITY.

All reimbursable direct labor, overhead, direct non-salary costs and fixed fee costs for the subconsultant shall be substantiated in the same manner as outlined in Section VIII. All subcontracts exceeding Ten Thousand Dollars ($10,000.00) in cost shall contain all applicable provisions of this AGREEMENT.

The CONSULTANT shall not subcontract for the performance of any work under this AGREEMENT without prior written permission of the CITY. No permission for subcontracting shall create, between the CITY and subcontractor, any contract or any other relationship.

4. EMPLOYMENT

The CONSULTANT warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warrant, the CITY shall have the right to annul this AGREEMENT without liability, or in its discretion, to deduct from the AGREEMENT price or consideration or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

Any and all employees of the CONSULTANT or other persons while engaged in the performance of any work or services required of the CONSULTANT under this AGREEMENT, shall be considered employees of the CONSULTANT only and not of the CITY, and any and all claims that may or might arise under any Workers' Compensation Act on behalf of said employees or other persons while so engaged, and any and all claims made by a third party as a consequence of any act or omission on the part of the CONSULTANT's employees or other persons while so engaged on any of the work or services provided to be rendered herein, shall be the sole obligation and responsibility of the CONSULTANT.

The CONSULTANT shall not engage, on a full or part time basis, or other basis, during the period of the contract, any professional or technical personnel who are, or have been, at any time during the period of the contract, in the employ of the CITY, except regularly retired employees, without written consent of the public employer of such person.

5. NONDISCRIMINATION

The CONSULTANT agrees not to discriminate against any client, employee or applicant for employment or for services because of race, creed, color, national origin, marital status, sexual orientation, sex, age, honorably discharged veteran or military status, or the presence of any sensory, mental or physical disability or the use of a trained dog guide or service animal by a person with a disability; unless based upon a bona fide occupational qualification; with regard to, but not limited to, the following: employment upgrading, demotion or transfer, recruitment or any recruitment advertising, a layoff or termination, rate of pay or other forms of compensation, selection for training, or rendition of services. The CONSULTANT understands and agrees that if it violates this provision, this AGREEMENT may be terminated by the CITY and further that

the CONSULTANT shall be barred from performing any services for the CITY now or in the future unless a showing is made satisfactory to the CITY that discriminatory practices have terminated and that recurrence of such action is unlikely.

During the performance of this AGREEMENT, CONSULTANT, for itself, its assignees and successors in interest agrees as follows:

A. **COMPLIANCE WITH REGULATIONS**: The CONSULTANT shall comply with the applicable federal law relative to nondiscrimination, Title 49, Code of Federal Regulations, which are herein incorporated by reference and made a part of this AGREEMENT. The CONSULTANT shall comply with the Americans with Disabilities Act of 1992, as amended.

B. **INFORMATION AND REPORTS**: The CONSULTANT shall provide all information and reports required by the CITY and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the CITY to be pertinent to ascertain compliance with such state or federal law. Where any information required of the CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the CITY, and shall set forth what efforts it has made to obtain the information.

C. **SANCTIONS FOR NONCOMPLIANCE**: In the event of the CONSULTANT's noncompliance with the nondiscrimination provisions of this AGREEMENT, the CITY shall impose such sanctions as it may determine to be appropriate, including, but not limited to:

(1) Withholding of payments to the CONSULTANT under the AGREEMENT until the CONSULTANT complies, and/or

(2) Cancellation, termination or suspension of the AGREEMENT, in whole or in part.

D. **INCORPORATION OF PROVISIONS**: The CONSULTANT shall include the provisions of paragraphs (A) through (E) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The CONSULTANT shall take such action with respect to any subconsultant or procurement as the CITY may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that, in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a subconsultant or supplier as a result of such direction, the CONSULTANT may request the CITY to enter into such litigation to protect the interests of the CITY.

E. **UNFAIR EMPLOYMENT PRACTICES**: The CONSULTANT shall comply with RCW 49.60.180 and Executive Order number E.O. 77-13 of the Governor of the State of Washington which prohibits unfair employment practices.

6. TERMINATION OF AGREEMENT

The right is reserved by the CITY to terminate this AGREEMENT at any time upon ten (10) days' written notice to the CONSULTANT.

In the event this AGREEMENT is terminated by the CITY other than for default on the part of the CONSULTANT, a final payment shall be made to the CONSULTANT as shown in Exhibit "F".

No payment shall be made for any work completed after ten (10) days following receipt by the CONSULTANT of the Notice to Terminate. If the accumulated payment made to the CONSULTANT prior to Notice to Terminate exceeds the total amount that would be due, computed as set forth herein above, then no final payment shall be due and the CONSULTANT shall immediately reimburse the CITY for any excess paid.

If the services of the CONSULTANT are terminated by the CITY for default on the part of the CONSULTANT, the above formula for payment shall not apply. In such an event, the amount to be paid shall be determined by the CITY with consideration given to the actual costs incurred by the CONSULTANT in performing the work to the date of termination, the amount of work originally required which was satisfactorily completed to date of termination, whether that work is in a form or a type which is usable to the CITY at the time of termination; the cost to the CITY of employing another firm to complete the work required and the time which may be required to do so, and other factors which affect the value to the CITY of the work performed at the time of termination. Under no circumstances shall payment made under this subsection exceed the amount which would have been made using the formula set forth in the previous paragraph.

If it is determined for any reasons that the CONSULTANT was not in default or that the CONSULTANT's failure to perform is without it or its employee's fault or negligence, the termination shall be deemed to be a termination for the convenience of the CITY in accordance with the provision of this AGREEMENT.

In the event of death of any member, partner or officer of the CONSULTANT or any of its supervisory personnel assigned to the project, or, dissolution of the partnership, termination of the corporation, or disaffiliation of the principally involved employee, the surviving members of the CONSULTANT hereby agree to complete the work under the terms of this AGREEMENT, if requested to do so by the CITY. This subsection shall not be a bar to renegotiation of the AGREEMENT between the surviving members of the CONSULTANT and the CITY, if the CITY so chooses.

In the event of the death of any of the parties listed in the previous paragraph, should the surviving members of the CONSULTANT, with the CITY's concurrence, desire to terminate this AGREEMENT, payment shall be made as set forth in the second paragraph of this section.

Payment for any part of the work by the CITY shall not constitute a waiver by the CITY of any remedies of any type it may have against the CONSULTANT, or for failure of the

CONSULTANT to perform work required of it by the CITY. Forbearance of any rights under the AGREEMENT will not constitute waiver of entitlement to exercise those rights with respect to any future act or omission by the CONSULTANT.

7. CHANGES OF WORK

The CONSULTANT shall make changes and revisions in the complete work of this AGREEMENT as necessary to correct errors appearing therein, when required to do so by the CITY, without additional compensation thereof. Should the CITY find it desirable for its own purposes to have previously satisfactorily completed work or parts thereof changed or revised, the CONSULTANT shall make such revisions as directed by the CITY. This work shall be considered as Extra Work and will be paid for as herein provided under General Requirements, Section 13.

8. DISPUTES

Any dispute concerning questions of fact in connection with the work not disposed of by AGREEMENT between the CONSULTANT and the CITY shall be referred for determination to the City Administrator or his/her designee, whose decision in the matter shall be final and binding on the parties of this AGREEMENT, provided, however, that if an action is brought challenging the Public Works Superintendent or City Engineer's decision, that decision shall be subject to de novo judicial review.

9. VENUE, APPLICABLE LAW AND PERSONAL JURISDICTION

In the event that either party deems it necessary to institute legal action or proceedings to enforce any right or obligation under this AGREEMENT, the parties hereto agree that any such action shall be initiated in the Superior Court of the State of Washington, situated in Island County. The parties hereto agree that all questions shall be resolved by application of Washington law and that the parties to such action shall have the right of appeal from such decisions of the Superior Court in accordance with the laws of the State of Washington. The CONSULTANT hereby consents to the personal jurisdiction of the Superior Court of the State of Washington, situated in Island County.

10. LEGAL RELATIONS AND INSURANCE

A. The CONSULTANT shall comply with all Federal, State, and local laws and ordinances applicable to the work to be done under this AGREEMENT. This AGREEMENT shall be interpreted and construed in accordance with the laws of Washington.

B. The CONSULTANT's relation to the CITY shall be at all times as an independent contractor and not as an employee.

C. Unless otherwise specified in the AGREEMENT, the CITY shall be responsible for administration of construction contracts, if any, on the project. Subject to the processing of an acceptable, supplemental agreement, the CONSULTANT shall provide on-call

assistance to the CITY during contract administration. By providing such assistance, the CONSULTANT shall assume no responsibility for: proper construction techniques, job site safety, or any construction contractor's failure to perform its work in accordance with the contract documents.

D. The CITY will pay no payments under Section VIII "Payments" until the CONSULTANT has fully complied with this section. This remedy is not exclusive; and the CITY may take such other action as is available to them under other provisions of this AGREEMENT, or otherwise in law.

11. INDEMNIFICATION REQUIREMENTS

Indemnification/Hold Harmless. CONSULTANT shall defend, indemnify and hold the CITY, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the acts, errors or omissions of the CONSULTANT in performance of this AGREEMENT, except for injuries and damages caused by the sole negligence of the CITY.

Notwithstanding the provisions of the preceding paragraph, it is understood and mutually agreed by the CONSULTANT and the CITY that neither party will attempt to enforce strict liability for any act, error or omission against either party and that the work covered under this AGREEMENT will be completed by the CONSULTANT with the standard of care of the Engineering profession in the State of Washington.

Should a court of competent jurisdiction determine that this AGREEMENT is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the CONSULTANT and the CITY, its officers, officials, employees, and volunteers, the CONSULTANT's liability hereunder shall be only to the extent of the CONSULTANT's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the CONSULTANT's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this AGREEMENT.

12. INSURANCE.

The CONSULTANT shall procure and maintain for the duration of this AGREEMENT, insurance claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the CONSULTANT, its agents, representatives or employees.

A. **No Limitation.** CONSULTANT's maintenance of insurance as required by the AGREEMENT shall not be construed to limit the liability of the CONSULTANT to the coverage provided by such insurance, or otherwise limit the CITY's recourse to any remedy available at law or in equity.

B. **Minimum Scope of Insurance**. CONSULTANT shall obtain insurance of the types described below:

1. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.

2. Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent contractors and personal injury and advertising injury. The CITY shall be named as an insured under the CONSULTANT's Commercial General Liability insurance policy with respect to the work performed for the CITY.

3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

4. Professional Liability insurance appropriate to the CONSULTANT's profession.

C. **Minimum Amounts of Insurance**. CONSULTANT shall maintain the following insurance limits:

1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of One Million Dollars ($1,000,000.00) per accident.

2. Commercial General Liability insurance shall be written with limits no less than One Million Dollars ($1,000,000.00) each occurrence, Two Million Dollars ($2,000,000.00) general aggregate.

3. Professional Liability insurance shall be written with limits not less than One Million Dollars ($1,000,000.00) per claim and One Million Dollars ($1,000,000.00) policy aggregate limit.

D. **Other Insurance Provisions**. The insurance policies are to contain, or be endorsed to contain, the following provisions for Automobile Liability, Professional Liability and Commercial General Liability insurance:

1. The CONSULTANT's insurance coverage shall be primary insurance with respect to the CITY. Any insurance, self-insurance, or insurance pool coverage maintained by the CITY shall be in excess of the CONSULTANT's insurance and shall not contribute with it.

2. The CONSULTANT's insurance shall be endorsed to state that coverage shall not be cancelled by either party, except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the CITY.

E. **Acceptability of Insurers.** Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

F. **Verification of Coverage.** CONSULTANT shall furnish the CITY with original certificates and a copy of the amendatory endorsements including, but not necessarily limited to, the additional insured endorsement evidencing the insurance requirements of the CONSULTANT before commencement of the work.

13. EXTRA WORK

A. The CITY may at any time, by written order, make changes within the general scope of the AGREEMENT in the services to be performed.

B. If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under this AGREEMENT, whether or not changed by the order, or otherwise affects any other terms and conditions of the AGREEMENT, the CITY shall make an equitable adjustment in the (1) maximum amount payable; (2) delivery or completion schedule, or both; and (3) other affected terms and shall modify the AGREEMENT accordingly. If the change causes an increase in the maximum amount payable, it shall not become a part of this AGREEMENT unless and until a written amendment to the AGREEMENT is executed by both the CITY and the CONSULTANT.

C. The CONSULTANT must submit its "request for equitable adjustment" (hereafter referred to as "claim") under this clause within thirty (30) days from the date of receipt of the written order. However, if the CITY decides that the facts justify it, the CITY may receive and act upon a claim submitted before final payment of the AGREEMENT.

D. Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the CONSULTANT from proceeding with the AGREEMENT as changed.

E. Notwithstanding the terms and conditions of paragraphs (A) and (B) above, the maximum amount payable for this AGREEMENT shall not be increased or considered to be increased except by specific written supplement to this AGREEMENT.

14. ENDORSEMENT OF PLANS

The CONSULTANT shall place his endorsement on all plans, estimates or any other engineering data furnished by him.

15. EQUAL OPPORTUNITY

A. Compliance with 41 CFR 60-1.4 -- Equal Opportunity Clause. The CITY incorporates 41 CFR 60-1.4 -- Equal Opportunity Clause by reference.

B. Compliance with 41 CFR 60-250.5 -- Equal Opportunity Clause (Special Disabled Veterans).

1. The CONSULTANT will not discriminate against any employee or applicant for employment because he or she is a special disabled veteran, veteran of the Vietnam era, recently separated veteran, or other protected veteran in regard to any position for which the employee or applicant for employment is qualified. The CONSULTANT agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals without discrimination based on their status as a special disabled veteran, veteran of the Vietnam era, recently separated veteran, or other protected veteran in all employment practices, including the following:

   i. Recruitment, advertising, and job application procedures;

   ii. Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

   iii. Rates of pay or any other form of compensation and changes in compensation;

   iv. Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

   v. Leaves of absence, sick leave, or any other leave;

   vi. Fringe benefits available by virtue of employment, whether or not administered by the CONSULTANT;

   vii. Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

   viii. Activities sponsored by the CONSULTANT including social or recreational programs; and

   ix. Any other term, condition, or privilege of employment.

2. The CONSULTANT agrees to immediately list all employment openings which exist at the time of the execution of this AGREEMENT and those which occur during the performance of this AGREEMENT, including those not generated by this AGREEMENT and including those occurring at an establishment of the CONSULTANT other than the one wherein the AGREEMENT is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local employment service office of the state employment security agency wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

3. Listing of employment openings with the local employment service office pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicants or from any particular group of job applicants, and nothing herein is intended to relieve the CONSULTANT from any requirements in Executive orders or regulations regarding nondiscrimination in employment.

4. Whenever the CONSULTANT becomes contractually bound to the listing provisions in paragraphs 2 and 3 of this clause, it shall advise the state employment security agency in each state where it has establishments of the name and location of each hiring location in the state: Provided, That this requirement shall not apply to state and local governmental CONSULTANTS. As long as the CONSULTANT is contractually bound to these provisions and has so advised the state agency, there is no need to advise the state agency of subsequent AGREEMENTS. The CONSULTANT may advise the state agency when it is no longer bound by this AGREEMENT clause.

5. The provisions of paragraphs 2 and 3 of this clause do not apply to the listing of employment openings which occur and are filled outside of the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.

6. As used in this clause:

   i. All employment openings include all positions except executive and top management, those positions that will be filled from within the CONSULTANT's organization, and positions lasting three (3) days or less. This term includes full-time employment, temporary employment of more than (3) three days' duration, and part-time employment.

ii. Executive and top management means any employee:

(a) whose primary duty consists of the management of the enterprise in which he or she is employed or of a customarily recognized department or subdivision thereof; and

(b) who customarily and regularly directs the work of two (2) or more other employees therein; and

(c) who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight; and

(d) who customarily and regularly exercises discretionary powers; and

(e) who does not devote more than twenty percent (20%), or, in the case of an employee of a retail or service establishment who does not devote as much as forty percent (40%), of his or her hours of work in the work week to activities which are not directly and closely related to the performance of the work described in (a) through (d) of this paragraph 6.ii.; Provided, that (e) of this paragraph 6.ii. shall not apply in the case of an employee who is in sole charge of an independent establishment or a physically separated branch establishment, or who owns at least a twenty percent (20%) interest in the enterprise in which he or she is employed.

iii. Positions that will be filled from within the CONSULTANT's organization means employment openings for which no consideration will be given to persons outside the CONSULTANT's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings which the contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of his or her own organization.

7. The CONSULTANT agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

8. In the event of the CONSULTANT's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

9. The CONSULTANT agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the CONSULTANT's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, recently separated veterans, or other protected veterans. The CONSULTANT must ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the CONSULTANT may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).

10. The CONSULTANT will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the CONSULTANT is bound by the terms of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, and is committed to take affirmative action to employ and advance in employment qualified special disabled veterans, veterans of the Vietnam era, recently separated veterans, and other protected veterans.

11. The CONSULTANT will include the provisions of this clause in every subcontract or purchase order of Twenty-five Thousand Dollars ($25,000.00) or more, unless exempted by the rules, regulations, or orders of the Secretary issued pursuant to the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, so that such provisions will be binding upon each subcontractor or vendor. The CONSULTANT will take such action with respect to any subcontract or purchase order as the Deputy Assistant Secretary for Federal Contract Compliance may direct to enforce such provisions, including action for noncompliance.

C. <u>Compliance with 41 CFR 60-741.5 -- Equal Opportunity Clause (Workers with Disabilities)</u>.

1. The CONSULTANT will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The CONSULTANT agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with disabilities without discrimination based on their physical or mental disability in all employment practices, including the following:

   i. Recruitment, advertising, and job application procedures;

ii. Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

iii. Rates of pay or any other form of compensation and changes in compensation;

iv. Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

v. Leaves of absence, sick leave, or any other leave;

vi. Fringe benefits available by virtue of employment, whether or not administered by the CONSULTANT;

vii. Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

viii. Activities sponsored by the CONSULTANT including social or recreational programs; and

ix. Any other term, condition, or privilege of employment.

2. The CONSULTANT agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

3. In the event of the CONSULTANT's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

4. The CONSULTANT agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the CONSULTANT's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants with disabilities. The CONSULTANT must ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).

5. The CONSULTNAT will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of section 503 of the Rehabilitation Act of 1973, as amended, and is committed to take affirmative

action to employ and advance in employment individuals with physical or mental disabilities.

6. The CONSULTANT will include the provisions of this clause in every subcontract or purchase order in excess of Ten Thousand Dollars ($10,000.00), unless exempted by rules, regulations, or orders of the Secretary issued pursuant to section 503 of the act, as amended, so that such provisions will be binding upon each subcontractor or vendor. The CONSULTANT will take such action with respect to any subcontract or purchase order as the Deputy Assistant Secretary for Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

EXHIBIT A-1
CERTIFICATION OF CONSULTANT

Project No. _____

I hereby certify that I am Brian Matson a duly authorized representative of the firm of Carollo Engineers, Inc. whose address is 1218 Third Ave, Suite 1600; Seattle, WA 98101 and that neither I nor the above firm I here represent has:

(a) employed or retained for a commission, percentage, brokerage, contingent fee or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONSULTANT) to solicit or secure this contract.

(b) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract.

(c) paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above CONSULTANT) any fee, contribution, donation or consideration of any kind for, or in connection with procuring or carrying out the contract; except as here expressly stated (if any).

I further certify that the firm I here represent is authorized to do business in the State of Washington and that the firm is in full compliance with the requirements of the Board of Professional Registration.

I acknowledge that this certificate is subject to applicable State and Federal laws, both criminal and civil.

9/14/10
Date

Signature

CERTIFICATION OF CITY OFFICIAL

I hereby certify that I am the responsible City official for the City of Oak Harbor, Washington, for this AGREEMENT and that the above consulting firm or its representative has not been required directly or indirectly as an express or implied condition in connection with obtaining or carrying out this contract to:

(a) employ or retain, or agree to employ or retain, any firm or person; or

(b) pay or agree to pay to any firm, person or organization, any fee, contribution, donation or consideration of any kind, except as here expressly stated (if any).

I acknowledge that this certificate is subject to applicable State and Federal laws, both criminal and civil.

Date

Signature

EXHIBIT A-2
CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS-PRIMARY COVERED TRANSACTIONS

1. The CONSULTANT, through the prospective primary participant, certifies to the best of its knowledge and belief, that it and its principals:

   a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any State or Federal department or city;

   b. have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission or fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

   c. are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in paragraph 1.b. of this certification; and

   d. have not within a three-year period preceding this application/proposal had one or more public transactions (federal, state or local) terminated for cause or default.

2. Where the CONSULTANT, through the prospective primary participant, is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Consultant (Firm): Carollo Engineers, Inc.

9/14/10
Date

President or Authorized Official or
Consultant Signature

EXHIBIT B
SCOPE OF WORK (ADD ON)

Project No. _____

See attached documents furnished by the Consultant

EXHIBIT B - SCOPE OF SERVICES

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

BACKGROUND

The City of Oak Harbor (City) currently operates two wastewater facilities: a Rotating Biological Contactor (RBC) plant located near Windjammer Park; and a lagoon plant located on Naval Air Station (NAS) Whidbey Island. The two current facilities serve a population of approximately 23,000 of which approximately 4,000 are housed at the NAS. It is anticipated that future demands will approach the permit limits in approximately 2017 as described in greater detail in the City's Comprehensive Sewer Plan. The City anticipates the need to have a new treatment facility in operation by 2017. The City intends to construct new wastewater treatment facilities to meet initial demands (3 million gallons per day [mgd]), with expansion capacity to meet long-term demand projections (6 mgd). Recognizing that the City of Oak Harbor is connected to the pristine waters of Puget Sound, specifically Oak Harbor and Crescent Harbor Bay, the City's goal is to obtain the highest level of water quality practical while recognizing the limitations of the rate payers of the City of fund improvements. A primary goal of the City is the continued protection of the water quality of the waters in and around Oak Harbor to meet the goals outlined in the Puget Sound Action Plan developed by Puget Sound Partnership for the cleanup and protection of Puget Sound.

This phase of the work includes development of preliminary engineering and a Facilities Plan. Subsequent phases, though not specifically authorized by this contract, may include the following:

- Final Design and Permitting
- Preparation of Construction Documents
- Bid Period Services
- Construction Support Services
- Preparation of Operation and Maintenance Manuals
- Start-up, Training, and Facility Commissioning

Project Objectives

The objectives of the Project are to:

1. Prepare Technical Memoranda (TM) evaluating wastewater treatment process, siting, and discharge options;
2. Identify a proposed alternative for wastewater facilities;
3. Prepare preliminary design information and an approved Facilities Plan in compliance with WAC 173-240-060 and 40 CFR 35.917-1;
4. Prepare the required supporting Environmental Documents; and
5. Provide support for public, agency, and stakeholder involvement.

Project Team

Carollo Engineers, Inc. (Carollo) will serve as the Prime Consultant for the Project, and will be responsible for overall Project management and delivery. In completing the work defined by this Scope of Services, Carollo is authorized to use the following Subconsultants:

Subconsultant	Role
BHC Consultants	Conveyance System Alternatives Analysis Satellite MBR Alternatives Analysis Feasibility of Connecting Non-Sewered Residents Regional Biosolids Alternative Feasibility
ESA Adolfson	Environmental Support and Documentation
Triangle Associates	Public Process Support
EnviroIssues	Public Meeting Facilitation
Michael Willis Architects	Architectural Services
GeoEngineers	Geotechnical Services
Katy Isaksen & Associates	Financial Analysis for Proposed Alternative
Bruce Dees & Associates	Landscape Architectural Services
Cosmopolitan Engineering Group	Outfall Analysis and Alternatives
Certified Land Services	Property Acquisition Support Services
Fakkema & Kingma	Surveying
Paragon Research Associates	Cultural Resources Assessment Services

Related Documents

The following documents provide background information for this project:

- Wastewater Treatment Plant Site Evaluation, City of Oak Harbor, October 2007.
- City of Oak Harbor Comprehensive Sewer Plan, TetraTech/KCM, December 2008.

SCOPE OF SERVICES

Carollo (Consultant) will provide engineering and other services for the City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan Project (Project), as defined by this Scope of Services. Work products submitted electronically will be produced using software as defined below:

- Word Processing — Microsoft Word
- Spreadsheets — Microsoft Excel
- Scheduling — Microsoft Project
- Drawings — Bentley MicroStation and Portable Document Format (PDF)

This Scope of Services is divided into the following tasks:

Task 100 Project Management
Task 200 Preliminary Alternatives Development and Screening
Task 300 Final Alternatives Development and Screening
Task 400 Outfall Evaluation
Task 500 Reuse Opportunities
Task 600 Facilities Plan
Task 700 Environmental Review and Documentation

Task 800 Public Process Support
Task 900 Management Reserve

PROJECT SCHEDULE

A preliminary schedule for the Project is attached (Attachment 1). The Schedule defines anticipated durations for major tasks, Project milestones, and major deliverable dates, assuming Notice to Proceed (NTP) in August 2010. Throughout this Scope of Services, anticipated delivery dates for major deliverables are established based on this preliminary schedule. The Consultant and City recognize that the preliminary schedule and corresponding delivery dates are subject to change, should NTP be issued after August 2010 and/or for other reasons. Schedule changes may be approved by the City without an amendment to this Scope of Services, provided both Consultant and City staff approve of the change. An amendment modifying the Project schedule and dates for major deliverables will be issued if required by either the City or Consultant.

TASK 100 – PROJECT MANAGEMENT

The objective of this task is to manage and coordinate engineering and related services required for project completion. Except as noted under assumptions, Consultant will provide the following services for Task 100:

Subtask 110 – Project Management Plan

Complete a draft Project Management Plan (PMP) including scope, work plan and products, work breakdown structure, budget, schedule, organization and staffing, communication protocol, and project standards within ten (10) days of Notice to Proceed (NTP). Finalize the PMP following the Startup Workshop and receipt of City comments. Monitor the PMP throughout the project and provide one update of the PMP upon request by the City.

Subtask 111 – Quality Management
Develop and follow a Quality Management Plan (QMP) for the project to be included in the PMP. Review technical memos, documents, drawings, reports, etc. and address review comments addressed prior to submission in accordance with the QMP. For major work products (TM and Facilities Plan) develop a Record of Comment (ROC) to document City comments and Consultant responses.

Subtask 110 Assumptions:

1. A Draft PMP will be reviewed at the Project Startup Meeting.
2. A Final PMP will be issued to incorporate City comments collected following the Project Startup Meeting.
3. The PMP will be updated once during the project.

Subtask 120 – Project Monitoring and Reporting

Manage the project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete this Scope of Services. Prepare monthly project status reports that compare work accomplished with schedule activities and compare expenditures with task budgets, and submit reports to the City's Project Manager with monthly invoices. Document expenditures on a task basis, and

show hours by project personnel and other direct expenses related to work. Include a project S-curve developed using Earned Valve Management (EVM) detailing anticipated progress, percent complete, and percent billed for each month.

Subtask 120 Assumptions:

1. Total project duration is 22 months.

Subtask 130 – Project Management Meetings

Schedule and conduct Project Management Meetings throughout the project as directed by the City's Project Manager. Meetings will be used to discuss project status, action items, and potential areas of concern. Publish meeting minutes with action items that require a response by team members, City staff, or other agencies identified at the meeting. A draft of the minutes will be submitted to the City within three (3) working days after the meeting. The final version will be submitted within five (5) working days after comments on the draft have been received from the City.

Subtask 130 Assumptions:

1. Up to eight (8) Project Management Meetings will be held.
2. Project Management Meetings will be held via teleconference.
3. Agendas, meeting minutes, and Action Items will be distributed electronically by the Consultant to City's Project Manager.

Subtask 140 – Project Team Website

Develop and maintain a collaborative Web Site accessible through the Internet by all project team members. The Web Site will be maintained from NTP through final approval of the Facilities Plan. Essential project information will be logged, recorded, and made available through this Web Site during the project, including:

- Project team and contact information.
- Calendar of events.
- Document library including agendas, presentation materials, meeting minutes, submittals, and deliverables.
- Updated Action List providing assignments and status.
- Decision Log.

Subtask 140 Assumptions:

1. Project Team Website will only be accessible to members of the project team (i.e. City and Consultant staff). Consultant will develop and maintain a project website for external use under Task 800 – Public Process Support.

Task 100 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) PMP	110	September 2010
(22) Monthly Invoices and Progress Reports	120	Monthly
(8) Project Management Meeting Agendas	130	As Needed
(8) Project Management Meeting Action Items Log	130	As Needed
(1) Project Team Website	140	September 2010

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to develop a matrix of preliminary alternatives (treatment process options and candidate sites) and identify a short list of final alternatives to be evaluated and refined in subsequent phases of work. Except as noted under assumptions, Consultant will provide the following services for Task 200:

Subtask 210 – Basis of Design Documentation

Subtask 211 – Engineering Basis of Design

Review and comment on previous projections developed by the City, and confirm population, flow, and waste load data for the Oak Harbor service area. Establish flow peaking factors (maximum month, maximum day, and peak hour) based on City-provided data. Using these projections and available plant loading data, establish loading estimates and peaking factors for flow, organics (BOD), total suspended solids (TSS), phosphorus and nitrogen loading to the plant.

Evaluate the City's exiting National Pollutant Discharge Elimination System (NPDES) permit, potential future water quality requirements, and establish water quality objectives for conventional effluent parameters, nutrients, fecal coliform bacteria, temperature, and pH. Document basis of design (flows, loads, and effluent requirements) in TM1 – Basis of Design.

Subtask 212 – Decision Making Methodology

Treatment process options and candidate sites will be evaluated in a manner that is consistent with City policy objectives, and to meet basic technical, performance, and environmental requirements. Two (2) process options and up to four (4) candidate sites will be placed into a matrix of preliminary alternatives. Up to eight (8) preliminary alternatives will be screened using Triple Bottom Line Plus Technical (TBL+) methodology, considering financial, social, environmental, and technical criteria and objectives developed by the City and project team. A short list of four (4) final alternatives will be refined for subsequent TBL+ evaluation. Coordinate with City staff to develop a list of basic policy, technical, performance, and environmental requirements that will be used to create the matrix of preliminary alternatives (Wastewater Treatment Plant [WWTP] process options and sites). Develop a list of TBL+ criteria and objectives to be used for preliminary and final alternatives evaluation. Document the basis for decision making in TM2 – Decision Making Methodology.

Subtask 210 Assumptions:

1. Population, flow, and loading data for the Oak Harbor service area will be based on the December 2008 Comprehensive Sewer Plan.

2. Meetings with regulatory stakeholders and City input will be used to establish potential future NPDES permit requirements. Negotiation of permit limits is not included in this Scope of Services.
3. A matrix of preliminary alternatives will be developed based on City policy and basic technical, performance, and environmental requirements.
4. Preliminary and final alternatives will be evaluated using the TBL+ approach.

Subtask 220 – Preliminary Alternatives Development

Subtask 221 – Centralized Treatment Process Evaluation
Develop and evaluate treatment process options to treat all flow from the City and NAS. Identify Washington Department of Ecology (Ecology) requirements for reliability and redundancy, and prepare conceptual design and cost information for processes being considered. Screen potential treatment process options using basic technical and performance requirements established by the project team, and identify up to two (2) process options to be included in the matrix of preliminary alternatives. For these options, develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs). Document the evaluation and recommended options in TM3 – Treatment Process Evaluation. The following facilities will be evaluated:

- Preliminary/Primary Treatment. Headworks (preliminary treatment) options, including influent pumping, screening grit removal, flow measurement, and influent sampling. Primary treatment options, including clarification and sludge pumping facilities.
- Secondary Treatment. Secondary (biological) treatment process options, including up to four (4) processes capable of meeting identified performance requirements. It is anticipated that more detailed technical and cost information will be developed for up to two (2) process options: activated sludge (AS) and membrane bioreactors (MBR).
- Disinfection. Disinfection options, including chlorination/dechlorination (using bulk or on-site generation of hypochlorite) and ultraviolet (UV) disinfection.
- Solids Handling. Solids handling options, including a range of processes to achieve a Class B biosolids product on-site, as well as continued use of existing solids handling facilities on an interim or permanent basis. The feasibility of providing biosolids stabilization and/or disposal on a regional basis will be evaluated by the Consultant under a separate task.
- Odor Control. Identify potential odor impacts, foul air treatment requirements to meet these impacts, and establish the basis for odor control facilities. Prepare conceptual design information for odor control system components based on the treatment process options being considered.
- Non-Process Facilities. Evaluate space needs for plant administration, operation, maintenance, and laboratory facilities to support future treatment facilities through Architectural Programming. Develop a programming questionnaire to determine rough but conservative space needs for new non-process facilities. Interview City staff and prepare a brief Programming Narrative outlining preliminary space needs, laboratory requirements, maintenance functions and desired adjacencies to other plant space, and coordinate with process needs, landscaping, and zoning requirements. Integrate non-process facilities into diagrams, including structural footprints, roadways, and

landscaping areas for up to two (2) alternative layouts. In addition to the plant non-process facilities, plan the space and accessibility needs for the potential to add education centers, tour group meeting areas, and interior and exterior public spaces to welcome and educate the public.

Subtask 222 – Satellite MBR Facility Evaluation
Develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs) for a satellite MBR facility treating up to 0.5 mgd of flow per Ecology requirements. Document the recommended option in TM3 – Treatment Process Evaluation.

Subtask 223 – Candidate Site Inventory
Develop a list of potential sites to locate a centralized WWTP and satellite MBR. Coordinate with City staff to identify potential sites for the recommended treatment options, considering factors such as: size (land area); location; ownership and real-estate considerations; conveyance system impacts; environmental impacts; land use restrictions; and adjacency to existing outfalls.

Screen potential sites based on City policy and using basic technical and environmental requirements, and establish a candidate site inventory to be included in the matrix of preliminary alternatives. Document the site development and screening process in TM4 – Preliminary Alternatives.

Subtask 220 Assumptions:

1. None.

Subtask 230 – Preliminary Alternatives Screening

Pair recommended process options with candidate sites to develop a matrix of preliminary alternatives. Refine conceptual site layouts based on candidate site requirements and evaluate collection/conveyance system impacts. Integrate the results of Subtask 410 – Preliminary Outfall Assessment and confirm outfall options. Update cost information to reflect preliminary alternative layouts and system-wide impacts.

Develop an initial assessment of potential social impacts, including noise, odor potential, visual aesthetics, construction impacts, and long-term operation impacts. Develop a TBL+ analysis for up to eight (8) preliminary alternatives. Screen preliminary alternatives to a short list of four (4) final alternatives, and document results in TM4 – Preliminary Alternatives.

Subtask 231 – Environmental Review
Conduct a one day field investigation and perform an initial environmental assessment of candidate sites. Identify sensitive areas, fish and wildlife impacts, wetlands, streams and shoreline impacts, site soils and sediments, effluent water quality impacts, potential permitting requirements, and other pertinent information that will use used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives. Meet with City to finalize environmental documentation approach.

Subtask 232 – Preliminary Geotechnical Assessment
Conduct a one day field reconnaissance and perform an initial geotechnical assessment of the candidate sites. Base the assessment on available information, including geologic and other

publicly available maps that document geotechnical conditions and geohazard considerations in the project vicinity.

Provide a TM summarizing the pertinent geotechnical issues that would impact site selection, design, and construction at the candidate sites, including: anticipated soil types and groundwater conditions; identified geohazards (seismic/ liquefaction, slope stability, etc.); potential mitigation strategies; general foundation types including ground improvement techniques or other appropriate considerations; and preliminary construction considerations including shoring and dewatering based on the assumed site conditions. Information will be used to rate preliminary alternatives on their ability to meet the established TBL+ criteria and objectives.

Subtask 233 – Cultural Resources Review

Conduct background research to identify known cultural resources in the project vicinity using state records, historic maps, and other available information. Conduct a one day visit to identify potentially sensitive areas, regulatory requirements, and other pertinent information that will be used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives.

Subtask 234 – Zoning/Land Use Review

Conduct a one day field visit and perform an initial zoning/land use assessment of candidate sites based on available information. Identify ownership, confirm code requirements and land use restrictions, establish a preliminary estimate of property values, and prepare other pertinent information that will be used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives.

Subtask 230 Assumptions:

1. Subtask 232 assumes that the City of Oak Harbor will provide available geotechnical information/reports from site and vicinity. Up to four potential sites will be evaluated (based on right-of-entry considerations). No geotechnical explorations will be conducted during this phase.
2. Subtask 233 assumes that up to four potential sites will be evaluated (based on right-of-entry considerations). No subsurface explorations will be conducted during this phase.
3. Subtask 234 assumes City Code and zoning research will be conducted on a maximum of two (2) sites.

Subtask 240 – Evaluation of the Feasibility of Connecting Non-Sewered Residents

The City is interested in investigating the extension of sewer service beyond those parcels that are currently on sewers. Some of these parcels are within and some outside the current City limits. However, all parcels to be considered are within the Urban Growth Boundary (UGB) limits.

Those parcels outside the City limits fall into three categories: highly and fully developed, underdeveloped and non-conforming parcels. Attachment 2 identifies the eleven distinct areas that are within the UGB but outside the City limits.

Specific tasks associated with this work will include the following:

1. Investigate feasibility of extending sewer service to those parcel within the City limits.

2. Investigate the feasibility of extending sewer service to the eleven areas outside the City limits.
3. Provide a schematic service alternative for these two groupings of parcels.
4. Provide a planning level cost estimate for the proposed service scheme.
5. For the proposed plan to extend sewer service to unsewered areas, develop a financial analysis for three (3) potential funding scenarios; to be selected by the City.
6. Provide public involvement associated with this task. This will specifically include an estimated three public meetings.
7. Prepare a policy statement regarding the extension of sewer service to these two groupings of parcels.
8. Present proposed service scheme, estimated costs, rate impacts, and proposed policy to Staff and City Council.
9. Present findings in a project memorandum.

Subtask 240 Assumptions:

1. None.

Subtask 250 – Staff Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T1 - Project Startup	Review/Finalize Project Management Plan Confirm Basis of Design Establish Decision Making Framework Prepare for Council Meeting No. 1 Prepare for Navy/Stakeholder Workshop No. 1
T2 - Preliminary Alternatives Development	Evaluate Potential Treatment Process Options Select Processes Options for Consideration (2) Confirm Satellite MBR Requirements Establish Non-process Requirements Establish Basis for Site Footprint Develop List of Potential Sites Apply Site Screening to Select Candidate Sites Establish Matrix of Preliminary Alternatives
T3 - Preliminary Alternatives Screening	Evaluate Matrix of Preliminary Alternatives (8) Screen Alternatives to Short List (4)

Subtask 250 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 200 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM1 – Basis of Design	210	September 2010
(1) TM2 – Decision Making Methodology	210	January 2011
(1) TM3 – Treatment Process Evaluation	220	March 2011
(1) Architectural Programming Questionnaire and Narrative	220	March 2011
(1) Preliminary Geotechnical Assessment TM	230	March 2011
(1) TM4 – Preliminary Alternatives	230	April 2011
(1) Unsewered Area Feasibility Memorandum	240	March 2011
(3) Workshop Materials, Agenda, Minutes	250	Per Workshop Schedule

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to further refine and evaluate the short list of final alternatives to select a proposed alternative for preliminary design. The proposed alternative will define the recommended liquid and solids stream treatment processes, location for centralized and satellite facilities (if applicable), conveyance and collection system improvements, outfall location and necessary improvements, and potential uses for reclaimed water. Except as noted under assumptions, Consultant will provide the following services for Task 300:

Subtask 310 – Final Alternatives Development and Screening

Further refine the final short listed alternatives, adding technical detail to site layouts based on site mapping and additional geotechnical evaluation. Confirm hydraulics and collection/conveyance system requirements. Integrate the results of Subtask 420 – Final Outfall Analysis, and Subtask 510 – Preliminary Effluent Reuse Assessment. Update cost information and TBL+ evaluations of financial, social, environmental, and technical criteria and objectives. Prepare a final screening of alternatives to select a proposed alternative for preliminary design. Document results of final screening in TM7 – Final Alternatives.

Subtask 311 – Site Mapping

Provide background mapping and existing and readily available geographical information system (GIS) and survey data. Mapping will be developed as a basis for site planning at up to four (4) candidate sites. The mapping will show readily available information for property lines, existing structures, significant utilities, site topography, and other significant features.

Subtask 312 – Architectural Development

Conduct a one day field review and provide analysis of sites being considered for the new treatment plant in regards to contextual placement within the surrounding site conditions. Prepare conceptual site plan footprints for recommended facilities, coordinating with process engineers, landscape architects and with zoning requirements that may influence plant layouts on specific available site options. Provide graphic representation of appropriate site organization and utilization plans for the four (4) final alternatives. Prepare 3D renderings illustrating up to two (2) facility views for one site. Develop landscaping options and prepare up two (2) renderings showing site landscaping. Prepare order of magnitude estimated probable costs of non-process facilities and develop associated landscaping and architectural theme costs.

Subtask 310 Assumptions:

1. The budget for Subtask 311 assumes existing and readily available GIS and survey data are used, and does not include field visits or detailed surveys of sites or collection system/conveyance piping alignments.

Subtask 320 – Regional Biosolids Alternative Feasibility

The purpose of this subtask is to evaluate the feasibility of implementing a solids handling, stabilization, and biosolids disposal alternative on a regional basis, with participation from the following entities:

- City of Oak Harbor
- Navy Seaplane base
- NAS Ault Field
- Penn Cove Water/Sewer District
- City of Coupeville
- Island Septage

Except as noted under assumptions, Consultant will complete the following services for Subtask 320:

Gather and analyze historic solids production, hauling, and disposal records, including quantities and costs, from the regional entities. Estimate future solids production and handling requirements using growth projections provided by the entities.

Evaluate the capacity of the City of Oak Harbor's existing lagoons, and compare that capacity with the current and future solids loadings from the regional entities to determine the feasibility of using the existing lagoons for regional biosolids stabilization and storage. Estimate the capital cost of lagoon modifications and the operational and maintenance (O&M) costs for such a regional facility.

Estimate the size of a new and separate solids handling and stabilization facility to accept solids from the regional entities. Evaluate disposal alternatives for stabilized biosolids, including: composting; thermal drying; and trucking to an offsite location. Estimate the capital cost and annual O&M costs for such a regional facility.

Document the analysis and conclusions into a project memorandum that estimates the life-cycle costs and revenue potential to the City of Oak Harbor as the owner/operator of a regional solids facility.

Subtask 320 Assumptions

1. Consultant will estimate current and future solids loadings for the City of Oak Harbor, and assist the City in obtaining solids loadings for regional entities. Consultant will not perform independent analysis to determine current and future solids loadings from the regional entities.
2. City owned property near the intersection of Highway 20 and Sleeper Road will be considered as the regional biosolids handling site.

Subtask 330 – Technical Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T4 – Final Alternatives Screening	Discuss Potential Reuse Opportunities Evaluate Final Short Listed Alternatives (4) Identify Proposed Alternative (1)

Subtask 330 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 300 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM7 – Final Alternatives	310	October 2011
(1) Site Mapping Using Available Data	310	April 2011
(4) Updated site utilization plans	310	April 2011
(2) 3D site/facility renderings	310	April 2011
(2) Site landscaping renderings	310	April 2011
(1) Regional Biosolids Management Feasibility Memorandum	320	July 2011
(2) Workshop Materials, Agenda, Minutes	330	Per Workshop Schedule

TASK 400 – OUTFALL EVALUATION

The objective of this task is to develop the criteria for saltwater outfall alternatives based on the preliminary and final alternatives being evaluated. Work performed under Task 400 will satisfy the following requirements of an Engineering Report under WAC 173-240-060:

- Degree of treatment required to meet applicable receiving water quality criteria.
- Document compliance with water quality standard outside authorized mixing zones.
- Detailed outfall and mixing zone analysis.

Except as noted under assumptions, Consultant will provide the following services for Task 400:

Subtask 410 – Discharge Alternatives and Performance Assessment

Due to their condition, the City has determined that neither the existing RBC outfall/diffuser nor the existing lagoon outfall/diffuser will meet future needs. This subtask will develop alternative diffuser sites and configurations, and then evaluate their effluent mixing and water quality impacts. This task will establish discharge alternatives (site location and diffuser configuration) for:

1. Outfall for RBC plant site in Oak Harbor (new or rehabilitated existing).
2. Outfall for an alternative site discharging to Oak Harbor or Crescent Harbor.

Subtask 411 – Outfall Inspections

Conduct visual inspections of the existing outfalls as required in Special Condition S11 of the NPDES permit. Both outfalls will be visually inspected and videotaped by experienced outfall design engineers. Rhodamine WT dye will be injected into the effluents to aid in locating and photographing the outfall and diffusers, and will also be used to detect leaks. The inspection will include the nearshore section of the RBC outfall that is being evaluated for a temporary repair. The results of the inspections will be presented in a written report and DVD video.

Subtask 412 – Outfall and Diffuser Alternatives

Establish alternative diffuser sites in both Oak Harbor and Crescent Harbor. For practical purposes related to aquatic land use authorizations, preference will be given to siting diffusers at the existing locations. Additional diffuser locations will be considered if there are cost or performance advantages. Up to three diffuser alternatives (length, number and spacing of diffuser ports) will be established at each site. Due to the history of sedimentation around the RBC diffuser, elastomeric duckbill check valves will be considered.

Develop three outfall alignment and profile options (RBC outfall replacement to Oak Harbor, alternate site to Oak Harbor, alternate site to Crescent Harbor). Existing aerial base mapping and NOAA bathymetry will be used for the base map. Establish head loss ranges for diffuser alternatives. Establish pipeline diameter necessary for peak effluent flows and available discharge head. Perform a preliminary assessment of the utility of the two existing outfalls, based on existing drawings and dive inspection reports/videos. For the RBC outfall, evaluate potential slip lining alternative. Based on hydraulic analysis determine the need for effluent pumping for each alternative.

Subtask 413 – Shellfish Harvesting Areas and Aquatic Land Lease Assessment

Assess shellfish closure zone restrictions and potential geoduck damage payments for existing outfalls based on existing shellfish closure zones that have been established for the City's outfalls by the Washington Department of Health (DOH), and payments that have been pursued

by the Department of Natural Resources (DNR) in other areas where outfalls interfere with commercial fishing harvests. Assess potential changes in the closure zones and resource payments as a function of treatment plant flow and treatment technology (e.g. activated sludge versus MBR effluent). Summarize benefits, negative impacts, and potential resource costs of various diffuser siting and treatment technology options. Coordinate analysis and conclusions with DOH shellfish program manager.

Subtask 414 – Mixing Zone Analysis and Water Quality Assessment

Prepare mixing zone studies for up to two (2) combinations of outfall location and design flows, to meet anticipated requirements for development of a future NPDES permit. The analysis will include:

- Determination of acute and chronic mixing zone dilution factors using the existing Ecology/EPA mixing zone models and receiving water data.
- Assessment of the "reasonable potential" to exceed water quality criteria beyond the mixing zone boundaries, which is a statistical test adopted by Ecology to assess the need for effluent limits in the NPDES permit.
- Determination of the potential effluent limitations for toxicants (e.g. ammonia, chlorine, metals) in future NPDES permits.
- Determine compliance with ambient temperature criteria at the mixing zone boundaries.
- Assessment of the potential to impact aquatic sediments using Ecology screening criteria for potential impacts and review of existing sediment data near outfalls.
- Assess potential future Whidbey Basin marine TMDL limitations for nutrient discharge.

Subtask 410 Assumptions:

1. Preliminary effluent flow rates (maximum month, maximum day, and peak instantaneous) and gravity head availability will be used to establish hydraulic capacity of existing outfalls.
2. An objective for Subtask 410 will be to provide outfall information and conclusions to support the wastewater facilities screening conducted in Task 200.

Subtask 420 – Final Outfall Analysis

Subtask 421 – Confirm Mixing, Water Quality, and Shellfish Models

Finalize the mixing zone modeling, water quality assessments, and shellfish closure zone evaluations (updated from the previous subtask) based on the final flow and treatment facility alternatives developed under Task 200.

Subtask 422 – Recommended Outfall Improvements

Develop preliminary recommendations for the upgrade or replacement of the existing outfalls. Data developed in the evaluation will include variations and combinations of design features for up to two (2) outfall options, including:

- Alignment and profile for each outfall option.
- Diffuser criteria for each outfall option (number and size of ports, spacing, and orientation).

- Hydraulic capacity for each outfall option (gravity and pumped as appropriate).
- Recommendations for repair or rehabilitation for existing outfalls (as appropriate).
- Shoreline construction requirements as appropriate for new or repair work.
- Pipeline materials, cathodic protection, anchoring, and construction methods.
- Recommendations for maintenance and prevention of siltation.
- Permitting overview.
- Opinions of probable construction cost.

Summarize the mixing zone analysis and recommended outfall improvements, and document results and recommendations in TM5 – Outfall Evaluation and Recommendations.

Subtask 420 Assumptions:

1. Subtask 420 will be conducted in parallel with the final wastewater treatment alternatives development and screening under Task 300.

Task 400 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
Outfall inspection report and DVD for both existing outfalls	410	November 2010
(1) Preliminary Draft TM5 – Outfall Evaluation and Recommendations	410	November 2010
(1) TM5 – Outfall Evaluation and Recommendations	420	February 2011

TASK 500 – REUSE OPPORTUNITIES

The objective of this task is to evaluate the feasibility of beneficially reusing treated effluent produced by the proposed alternative. Except as noted under assumptions, Consultant will provide the following services under Task 500:

Subtask 510 – Preliminary Effluent Reuse Assessment

Develop and evaluate potential alternatives for reuse of treated effluent, including groundwater recharge, seasonal irrigation supply (urban and agricultural), in-plant use, and wetlands habitat augmentation/creation. Based on current regulations, identify treatment and facilities requirements, estimate land requirements and permitting restrictions, and prepare capital, operating, and life cycle cost estimates for up to two (2) potential reuse scenarios. Document results in TM6 – Reuse Opportunities.

Subtask 510 Assumptions:

1. The City of Oak Harbor will provide hydrogeologic reports, aquifer testing results, construction details and water quality analyses results for their groundwater sources.
2. No field exploration or field reconnaissance will be completed for this task.

Subtask 520 – Reuse Alternatives Development

The authorization and scope of this subtask will be developed pending the results of Subtask 510, and the outcome of the final alternatives screening process. If authorized by the City's Project Manager, Budget for this Subtask will be reallocated from Task 900.

Task 500 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM6 – Reuse Opportunities	510	June 2011

TASK 600 – FACILITIES PLAN

The objective of this task is to amend the City's existing Comprehensive Sewer Plan and complete a Facilities Plan that includes all applicable sections outlined by WAC 173-240-060 and 40CFR 35.917-1. The Facilities Plan will be consistent with federal, state, and local regulations and policies, such as the Endangered Species Act (ESA), the Growth Management Act, the City of Oak Harbor Comprehensive Plan, and the amended City of Oak Harbor Comprehensive Sewer Plan. The Facilities Plan will be sufficiently complete so that plans and specifications can be developed without substantial changes. Except as noted under assumptions, Consultant will provide the following services under Task 600:

Subtask 610 – Comprehensive Sewer Plan Amendment

Review and amend the December 2008 Comprehensive Sewer Plan for Ecology approval. Prepare an amendment with new data and recommendations to provide consistency with the Facilities Plan. Deliver Draft Amendment to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Amendment will be provided. Following City review of the Draft Amendment, incorporate comments into an Agency Draft Amendment to be submitted to Ecology for review.

Subtask 610 Assumptions:

1. The December 2008 Comprehensive Sewer Plan has been approved by Ecology. Consultant will prepare a brief amendment reflecting the proposed alternative developed in the Facilities Plan, including: selected liquid/solids treatment process(s); facilities site(s); collection/conveyance improvements; outfall/reuse of treated effluent; project implementation plan; and updated financial plan.
2. The Comprehensive Sewer Plan Amendment will be reviewed with Ecology as a component of the Agency Draft Facilities Plan.
3. Environmental Documentation prepared for the Facilities Plan will satisfy requirements for amending the Comprehensive Sewer Plan.

Subtask 620 – Develop Draft Facilities Plan

Compile the findings and recommendations documented in the previously defined Scope of Services into a Draft Facilities Plan. The expected outline of the Facilities Plan is included as Attachment 3.

Subtask 621 – Final Proposed Alternative Development
Develop the final proposed alternative in sufficient detail to satisfy facilities planning requirements, including:

- Refine the recommended liquid and solid stream treatment alternative to establish preliminary facility layouts and footprints.
- Develop design data, sizing criteria, liquid and solids stream schematics, and an overall WWTP hydraulic profile that reflects the recommended upgrades.
- Prepare plant electrical facility needs including back-up power generation and plant-wide power distribution.
- Provide a preliminary I/O list for recommended improvements and recommendations for a system-wide SCADA system (treatment facility and collections system).
- Provide a summary of collection, conveyance, and outfall improvements.

Subtask 622 – Architectural Renderings
Providing select architectural drawings of the proposed alternative to establish building envelopes, edge conditions, and the architectural treatments. Refine/update the 3D model generated in Subtask 312 to establish building mass, roof lines, and edge conditions, and provide up to two (2) rendered views of the new facilities on the selected site. Architectural renderings will convey materials and finishes and the general theme of the plant as it relates to local design guidelines and site specific architectural context. Coordinate with process building layouts and refined landscaping plans, and prepare one (1) site plan to illustrate the proposed appearance of the site, showing general land forms, planting, plant entrance, and parking.

Subtask 623 – Implementation Plan
Prepare an implementation plan for the recommended alternative, including a project schedule, phasing plan, anticipated project cost for each phase, and expected cash expenditure for the improvements.

Subtask 624 – Financial Analysis
Evaluate potential capital funding sources to develop funding strategy alternatives for the City. Estimate timing associated with potential funding programs, discuss eligibility, and note anticipated or potential program changes.

Prepare a financial analysis showing the project costs, how the project can be funded, and the how the debt can be repaid over a 20-year period. Reflect anticipated increases in operation and maintenance (O&M) costs and growth in connections in the analysis, including the financial history of the sewer utility and current outstanding debt. Summarize results and prepare the financial analysis chapter of the Facilities Plan.

Subtask 625 – Draft Facilities Plan
Deliver Draft Facilities Plans to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Facilities Plan will be provided. Following City review of the Draft Facilities Plan, incorporate comments into an Agency Draft Facilities Plan to be submitted to Ecology for review.

Subtask 620 Assumptions:

1. The output of the City's recent utility rate study will be used as the base for identifying history, policies and comparing funding strategies.

2. Infiltration and inflow (I/I) must be addressed to satisfy Ecology requirements for a Facilities Plan. Consultant will evaluate I/I according to Ecology Publication No. 97-03, using flow data provided by the City. It is assumed that the analysis will conclude with a determination of "Non-Excessive I/I". Field investigation of I/I sources and an evaluation of projects to reduce I/I are not included in this Scope of Services.
3. The financial analysis will be prepared for selected alternative.

Subtask 630 – Respond to Agency Review Comments

Consolidate Agency review comments on the Facilities Plan and Comprehensive Sewer Plan Amendment, and prepare a response to each comment. Review comments and responses with the City and Ecology.

Subtask 630 Assumptions:

1. Ecology review of the Facilities Plan and Comprehensive Sewer Plan Amendment will be conducted concurrently with review and approval of Environmental Documents.
2. Agency review workshops conducted throughout the project are expected to result in a minimal number of comments and changes to the Facilities Plan and Comprehensive Sewer Plan Amendment.

Subtask 640 – Final Facilities Plan Development

Following review of the Agency Draft Facilities Plan and following approval of the Environmental Documents, incorporate Agency comments submit a Final Facilities Plan.

Subtask 640 Assumptions:

1. None.

Subtask 650 – Technical/Agency Review Workshops

Conduct Technical/Agency Review Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff/Agency Review Workshop	Objectives
T5 – Draft Facilities Plan Review	Review Draft Facilities Plan
A1 – Agency Draft Facilities Plan Review	Review Amended Comprehensive Sewer Plan Review Agency Draft Facilities Plan
A2 – Review Comment Responses	Review Responses to Agency Comments

Subtask 650 Assumptions:

1. Technical Workshops will be held at City of Oak Harbor facilities.
2. Agency Review Workshops will be held at Ecology facilities in Bellevue.

3. Consultant Project Manager and required team members will attend workshops.
4. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 600 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Draft Comprehensive Sewer Plan Amendment (for City review)	610	January 2012
(10) Agency Draft Comprehensive Sewer Plan Amendment	610	January 2012
(1) Rendered Site Plan	620	November 2011
(4) 3D Renderings of Facilities	620	November 2011
(10) Draft Facilities Plan (for City review)	620	January 2012
(10) Agency Draft Facilities Plan	620	January 2012
(1) Potential Capital Funding Sources TM	620	November 2012
(1) Response to Agency Comments Log	630	June 2012
(10) Final Comprehensive Sewer Plan Amendment	640	July 2012
(10) Final Facilities Plan	640	July 2012
(2) Staff Workshop Materials, Agenda, Minutes	650	Per Workshop Schedule
(2) Agency Review Workshop Materials, Agenda	650	Per Workshop Schedule

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

Multiple environmental approvals are required for approval of the wastewater facilities plan and the comprehensive sewer plan amendment. The preferred alternative will have differing documentation requirements, depending upon the facility site, outfall improvements, and conveyance components. The environmental review and documentation task has been developed to encompass as many of these potentially differing requirements within a single document as possible, but will require finalization as the team proceeds through the alternative screening and review process.

Task 700 includes environmental documentation according to the National Environment Policy Act (NEPA), with either the Environmental Protection Agency (EPA) or Department of Defense as the NEPA lead agency. NEPA will be triggered by the need for approvals or permits from the Navy, or a funding request from the US EPA. NEPA compliance would also be triggered by a Corps of Engineers permit. The NEPA document will be adopted by the City for State Environmental Policy Act (SEPA) compliance, and will be used by the City to meet State Environmental Review Process (SERP) documentation requirements associated with submission of the Facilities Plan. This will also meet requirements for potential State Revolving Fund applications in the future.

The NEPA document will be an Environmental Assessment (EA), and it is assumed that NEPA EA will receive a Finding of No Significant Impact (FONSI). Meeting this determination will require that significant impacts can be identified and mitigated or avoided. The City will adopt

the EA to meet their SEPA requirements; at this time, we are assuming this would be a Mitigated DNS, consistent with the FONSI.

The objective of this task is to prepare documentation to evaluate the environmental impacts of the recommended project. Information to be gathered or issues to be addressed includes:

- Soils/erosion, based on Geotechnical Reconnaissance.
- Air quality/odor, based on qualitative odor assessment.
- Water quality, based on anticipated water quality impacts, wetlands delineation and impacts, and ground water impacts.
- Floodplain/flood insurance, based on information from Federal Emergency Management Agency (FEMA) maps.
- Fish and wildlife, based on information on existing animals on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Vegetation, based on information on existing vegetation on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Environmental health (biosolids), based on information on the quality of biosolids and potential health impacts.
- Environmental health (reclaimed water), based on information on the quality of reclaimed water and potential health impacts.
- Environmental health (hazardous materials), based on a list of hazardous materials that will be stored or used on the WWTP site.
- Noise, based on a qualitative description of typical noise level at the plant during both construction and operation.
- Compatibility with surrounding land use, based on land use information provided by the City.
- Aesthetics, based on architectural drawings and landscaping plans to illustrate the proposed appearance of the site.
- Historical and archaeological resources.
- Transportation.
- Funding.

Except as noted under assumptions, Consultant will provide the following services under Task 700:

Subtask 710 – Environmental Services / NEPA/SEPA documentation

Prepare an environmental assessment in accordance with the NEPA, conduct the required environmental reviews and studies; and release required notices and documents. Develop text, figures, and sections required to assemble prepared environmental documents to meet NEPA. This effort will rely heavily on previous documents, including the Facility Plan, prepared for the project with site specific information obtained as part of Tasks 200 and 300. Information will be incorporated from other tasks and outside sources such as public involvement and the cultural/historic resources review. Agency correspondence will be conducted and documented in accordance with NEPA requirements. This document will be used to meet the environmental

documentation requirements for the Facilities Plan. This approach will be finalized with the City and the NEPA lead agency during the alternative selection process.

Subtask 710 Assumptions:

1. The Consultant will meet with the City of Oak Harbor to formalize the proposed environmental document approach, based on anticipated funding requests and other requirements. This scope and accompanying budget is based on the assumption that the City will be submitting a Facilities Plan and will prepare a NEPA EA to meet the requirements of SERP documentation.
2. The City will issue the appropriate SEPA review document. It is assumed that document will be a Mitigated DNS, in accordance with a Finding of No Significant Impact (FONSI) from the NEPA process. If significant impacts are identified during the NEPA EA that do not warrant a FONSI, it will be necessary to revisit the SEPA process.
3. SERP documentation will be covered by the NEPA document.
4. The NEPA documentation will incorporate the findings and results of the Public Outreach program.

Subtask 720 – Biological Assessment and Essential Fish Habitat (EFH)

Prepare a biological assessment (BA) for species listed as threatened or endangered under the federal ESA, including Puget Sound Chinook salmon and bull trout, and candidate species, including Coho salmon. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the United States Fish and Wildlife Service (Services) under Section 7 of the ESA. The BA will address the recommended plan identified during Task 300 and described in the Facilities Plan. It is assumed that analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor. The project may result in a "no effect" determination and consultation with the federal services would not be required. This will be determined during the initial steps of the project. Subtasks will include the following:

- Draft BA. Prepare a draft BA for review by the City and Carollo. Included activities involved in preparation of the BA are:
  - Communications with the National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS), and Washington Department of Fish and Wildlife (WDFW), to obtain habitat and species information.
  - Review of the literature and published information for each Listed, Proposed, and Candidate species identified by USFWS and NMFS occurring within the project area. This task also includes a site visit and a review of reports that have already been prepared for this project or similar projects in the vicinity.
  - Preparation of an internal review draft document.
- Final BA. Prepare a final BA document incorporating the City's and Carollo's comments on the draft report for submittal by the City to the Department of Ecology.
- Consultation assistance. Following submittal of the BA, provide responses to comments on the document by the federal action agency) and the federal services (if appropriate) up to the hours indicated. It is assumed that Ecology will be serving as representative for EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required.

Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.

- Attend at up to two meetings with Ecology and liaisons for both NMFS and USFWS during consultation.

Subtask 720 Assumptions:

1. Analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor.
2. ESA consultation is typically coordinated through the federal action agency, anticipated in this case to be Ecology on behalf of the Environmental Protection Agency (EPA), as outlined in the SERP guidelines. The existing wetland report and geotechnical study are assumed to be sufficient for the purposes of the BA.
3. The BA will be conducted for the recommended alternative, with appropriate level of design detail provided by Carollo.
4. An Essential Fish Habitat Assessment (EFH) will be submitted and reviewed as a component of the BA.
5. The project action area includes all locations at which the proposed project could potentially impact ESA listed species or their critical habitat including locations distant from the project site.
6. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the Services under Section 7 of the ESA.
7. Conclusion of the BA consultation process will be dictated by the timelines of the federal agency responses. Consultant will respond promptly to agency requests during the consultation process.
8. Ecology will be serving as representative for EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required. Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.

Subtask 730 – Section 106 Compliance

Using Subtask 233 as a starting point, prepare a memorandum regarding historical and archaeological resources for inclusion in the Environmental Assessment. Prepare Section 106 consultation correspondence for signature of Federal lead agency.

Task 700 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Draft and Final NEPA EA	710	July 2012
(1) Draft and Final BA or No Affect Letter (electronic and 6 hard copies)	720	July 2012
Draft and Final responses (electronic) to federal agency comments	720	July 2012

TASK 800 – PUBLIC PROCESS SUPPORT

The objective of this task is to support successful project implementation by proactively identifying and addressing public and stakeholder issues. As defined below, the City will lead public process activities for the Project, with significant support from the Consultant. Except as noted under assumptions, Consultant will provide the following services for Task 800:

Subtask 810 – Public Process Planning

Participate in two (2) meetings with the City to develop a project-specific public/stakeholder involvement plan (PIP) that meets NEPA, SERP, and SEPA requirements and that identifies the following:

- Target audiences and issues;
- Anticipated schedule of activities;
- Interrelationships and responsibilities; and
- Public involvement tools for each phase of the project.

Prepare a Draft PIP, review with the City, make revisions, and produce a final PIP. Participate in coordinating phone calls with City of Oak Harbor staff to provide strategic advice on public involvement and communications issues as they arise throughout the Project.

Subtask 810 Assumptions:

1. Consultant will update the PIP once during the project.

Subtask 820 – Stakeholder Workshop Facilitation

Assist the City in planning and conducting Stakeholder Workshop No. 1. Participate in a preparation session for the workshop. Prepare a workshop plan in advance that identifies goals, objectives, agenda, roles and responsibilities, and materials. Produce presentation materials, and develop draft and final agendas. Facilitate the Stakeholder Workshop and produce one (1) draft and one (1) final summary (minutes).

Assist the City in planning and conducting up to three (3) meetings with the U.S. Navy to communicate project status and obtain feedback. For each meeting, provide technical, financial, and environmental information to assist discussions facilitated by the City.

Subtask 820 Assumptions:

1. Stakeholder Workshop No. 1 will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for Stakeholder Workshop No. 1 and deliver workshop materials to attendees.
3. In addition to City staff, it is anticipated that Stakeholder Workshop No. 1 attendees will include representatives of NASWI Public Works, local community members, local Tribes, and permitting agencies (Ecology, DOH, DNR, and the Army Corps of Engineers).
4. Consultant Project Manager will attend Navy meetings and provide technical information. City staff will facilitate discussion and summarize action items.

Subtask 830 – Public Meeting Facilitation

Assist the City in planning and conducting Public Meetings, defined below. Participate in up one (1) preparation session for each meeting. Facilitate the Public Meetings and produce one (1) draft and one (1) final summary (minutes). For each meeting: arrange for suitable meeting locations; prepare meeting plans; produce presentation materials; develop sign in sheets and public comment forms; develop draft and final agendas; and develop draft and final meeting announcements/save the date notices.

Throughout the Project, develop and maintain a contact list of stakeholders and interested parties. Maintain a log of public comments received outside of the public meetings (via the website, emails to project team staff, phone calls, etc.), and responses to public inquiries as requested by the City.

Public Meeting	Objectives
P1 – Public Meeting No. 1	Communicate Project Purpose and Objectives Report Project Plan and Schedule Obtain Input on Decision Making Methodology Communicate Future Opportunities for Input
P2 – Public Meeting No. 2	Report Results of Alternatives Screening Obtain Input on Short Listed Alternatives (4)
P3 – Public Meeting No. 3	Obtain Input to Refine Proposed Alternative (1)

Subtask 830 Assumptions:

1. The City will arrange for meeting locations and facilities.
2. The City will publish announcements in the local paper and include notices of meetings on their website.
3. The City will pay for all costs related to mailings, including printing and postage.

Subtask 840 – Council/Committee Meeting Participation

Assist the City in planning and conducting Council/Committee Meetings, defined below. Prepare meeting objectives, agendas, roles and responsibilities, and presentation materials in advance of the meetings. Participate in up to one (1) preparation session for each meeting.

Council/Committee Meeting	Objectives
C1 – Council Committee Meeting No. 1	Report Progress Report Project Challenges and Opportunities
C2 – Council Workshop No. 1	Report Feedback from Stakeholders and Public Establish Decision Making Criteria Process (basic technical and environmental) Sites (policy considerations) Alternatives (TBL+ objectives)

C3 – Council Committee Meeting No. 2	Report Results of Alternative Screening Report Feedback from Stakeholders and Public Confirm Short Listed Alternatives (4)
C4 – Council Committee Meeting No. 3	Report/Obtain Input on Proposed Alternative (1)
C5 – Council Meeting No. 1	Confirm Proposed Alternative (1)
C6 – Council Meeting No. 2	Report Feedback from Public and Stakeholders Provide Overview of Draft Facilities Plan Confirm Draft Facilities Plan Submission to Ecology

Subtask 840 Assumptions:

1. Council/Committee Meetings will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for meetings and deliver meeting materials to attendees.
3. Consultant staff will lead/facilitate and provide information for discussion at Council Workshops.
4. Consultant Project Manager will attend City Council Committee Meetings/City Council Meetings, and assist City staff in presenting technical information.

Subtask 850 – Public/Stakeholder Involvement Product Development

In consultation with City of Oak Harbor staff, develop a project website and periodically update the website content. Prepare one (1) draft and one (1) final project brochure for informing the public about the background, goals, and specifics of the project.

Other options for products and activities, subject to Oak Harbor authorization and decisions from the Public Involvement Plan include:

- One additional or updated brochure, likely focused on the range of alternatives.
- In consultation with City of Oak Harbor staff, the Consultant may produce a segment for the City of Oak Harbor public access channel. It is intended that the Consultant will prepare a script and be involved in organizing and producing these segments, but assumed that the City will do the actual filming and production. Assume City staff would appear in the video segment.
- Consultant will assist with strategy and development of presentations for local community groups that City staff would make.

Task 850 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City of Oak Harbor staff/consultants.
2. The City will print and send materials to the public.
3. Public Access TV facilities and costs are paid by the City.

Task 800 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Stakeholder Interviews	810	October 2010
(1) Draft PIP	810	September 2010
(1) Final PIP	810	October 2010
(1) Stakeholder Workshop Plan, Agenda, Materials	820	November 2010
(3) Public Meeting Plan, Agenda, Materials	830	Per Public Meeting Schedule
(1) Council Workshop Plan, Agenda, Materials	840	December 2010
(5) Technical information/documents/presentations for City Council Committee/City Council Meetings	840	Per Council Committee/Council Meeting Schedule
(1) Project Website	850	November 2010
(12) Updates to Project Website	850	As Needed
(1) Project Brochure	850	March 2011
(1) Public Access TV Production Plan	850	As Needed

TASK 900 – MANAGEMENT RESERVE

This objective of this task is to provide additional engineering services throughout delivery of the Project (e.g. additional workshops, meetings, evaluations, etc.). Any work performed under this task will require prior written authorization from the City's Project Manager. Authorization will specify the requested scope of services and cost for the work, which will be reviewed, negotiated, and agreed upon by the Project Manager and Consultant prior to performing the work.

Consultant Agreement Amendment Number 1	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4522	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00	Execution Date 9/16/10	Completion Date (Prior) December 2012
Project Title: Preliminary Engineering and Facilities Plan	New Maximum Amount Payable $1,089,561	
Description of Work: This phase of the work includes development of preliminary engineering and a Facilities Plan.		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers
and executed on 9/16/10 and identified as: Preliminary Engineering and Facilities Plan

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:

SCOPE OF WORK is hereby amended to add the following:
Please see the attached scope of work.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: April 2013
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum payable amount of $1,089,561 does not change. The management reserve fund has been reduced by $14,683 for the additional services. The budget for the additional services is attached. The remaining balance of the management reserve fund is $35,317.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: BRIAN MATSON
Consultant Signature

By: J. SLOWIK, MAYOR
Approving Authority Signature

7-6-11
Date

ATTACHMENT 2
MAJOR PROJECT ELEMENTS LIST

The Scope of Services for the Oak Harbor WWTP Preliminary Design Project will include 30 percent design documents that are sufficient to develop a full set of contract plans and specifications for the recommended Phase 1 improvements without substantial changes as required by the State of Washington Administrative Code (WAC) 173-240-060. The Scope of Services for Preliminary Design Documents is based on the major elements identified in the following Project Elements List:

Facility Area	Name
0X	**General**
1X	**Yard Site Systems**
2X	**Preliminary Treatment**
3X	**Aeration/Equalization Basin**
4X	**Membrane System**
5X	**UV Disinfection/Effluent Equalization**
6X	**Solids Handling**
7X	**Ancillary Systems**
	Gallery (mechanical equipment)
	Chemical System
	Odor Control
	Standby Generator
8X	**Non-Process Facilities**
	Administration Building
	Maintenance Building
	Electrical Building
	Landscaping
	Public Areas

Facility Area 0X – General

General information for the overall project such vicinity and location maps, design data/schematics, existing site/utilities, and explanation for symbols and abbreviations. Area includes:

1. Design Criteria.
2. Process Flow Diagrams.
3. Hydraulic Profile.
4. Notes, Schedules, and Abbreviations.
5. Building Analysis.

Facility Area 1X – Yard Site Systems

Plans depicting new structure footprints, locations, and orientation onsite/offsite.

1. Existing Facility Demolition.
2. Site Preparation.
3. Anticipated ground improvements such as stone columns.
4. Off-site Yard Utilities:
    a. Influent Diversion Structure from collection system and piping to site.
    b. Piping to effluent outfall connection.
5. Electrical site service.
6. Paving and Grading.
7. On site Stormwater System.
8. Routing of general process piping.
9. Routing of Small Diameter Piping Utilities (during final design):
    a. Potable Water.
    b. Non-Potable Water (potable with air gap).
    c. Plant Water (low pressure).
    d. Plant Water (high pressure).
    e. Natural Gas.
    f. Service/Instrument Air.
    g. Plant Building/Process Drains.
    h. Fire Flow Water.
10. Routing of Other Utilities (during final design):
    a. Electrical distribution system.
    b. Communication Devices.
    c. Site Lighting.
    d. Site Security.
    e. Telephone/Fiber Optic System.

Facility Area 2X – Preliminary Treatment

Plans depicting specific preliminary treatment components:

1. First-stage coarse screening.
2. Screenings washer/compactor.
3. Influent pump station.
4. Influent flow measurement and sampling.
5. Grit removal system and grit handling.
6. Flow splitting to flow equalization basin.
7. Second-stage fine screening.

Facility Area 3X – Aeration/Equalization Basins

Plans depicting specific secondary components:

1. Flow distribution structure.
2. 2-below grade aeration basins (4 stages) in MLE configuration (2 anoxic zones, 2 aerobic zones).
3. 1-below grade flow equalization basin with provisions to convert to aeration basin in the future.
4. Associated mechanical equipment.
5. Fine bubble diffusers in each aerobic zone.
6. Flow equalization pump system.
7. Scum handling (spray and removal), flushing systems, etc.

Facility Area 4X – Membrane System

Initial design will be capable of accommodating footprint needs of proven manufacturers to assist in early procurement. Final design will be based on specific requirements of selected manufacturer. General components include:

1. 5 –MBR trains/tanks.
2. Membrane cassettes and ancillary instrumentation.
3. Provisions for 1 future MBR train.

Facility Area 5X – UV Disinfection/Effluent Equalization

Initial design for UV Disinfection and effluent system will be capable of accommodating footprint needs of proven manufacturers to assist in early procurement. Final design will be based on specific requirements of selected manufacturer. General components include:

1. 3-trains of ultraviolet (UV) disinfection reactor units, cleaning system, power distribution, and control.
2. Flow measurement per train.
3. Single Effluent equalization/storage tank.

Facility Area 6X – Solids Handling

Solids handling will produce Class B solids for components include:

1. Aerated WAS storage tank.
2. Dewatering systems and equipment.
3. Lime stabilization facilities.
4. Footprint/electrical provisions for a future thermal drying system.
5. Truck loadout facilities.

Facility Area 7X – Ancillary Systems

Ancillary facility areas support the main process units. Specific components include:

1. Mechanical Gallery below-grade.
   a. Aeration basin blowers.
   b. Membrane blowers.
   c. Membrane feed pumps (mixed liquor pump station).

d. Membrane permeate pumps and flow measurement per train.
e. Plant water pump system.

2. Chemical Systems:
   a. Sodium hydroxide (NaOH) feed for alkalinity content.
   b. Sodium hypochlorite (NaOCl) feed for membrane cleaning and potentially to support odor control and/or introduction of chlorine residual.
   c. Citric acid or phosphoric acid feed for membrane cleaning and potentially UV cleaning
   d. Lime feed for solids stabilization.
3. Odor Control System – odor scrubbing technology to treat foul air streams. Areas scrubbed are anticipated to include:
   a. Headworks.
   b. Aeration Basins.
   c. Pump wetwells/open channels.
   d. Solids handling area (to extent necessary)
4. Standby Generator – a single diesel unit capable of providing continuous operation for the entire facility in the event of a loss of utility power. The unit will be housed in the mechanical building and sound dampening devices will be employed to decrease the noise level while in operation.

Facility Area 8X – Non-Process Buildings

Process support buildings and areas highly visible/accessed by the public:

1. Administration Building meeting ADA standards to support plant control, meeting/training, break areas, restroom/lockers, building mechanical systems, office(s), and laboratory.
2. Maintenance Building for plant maintenance activities such as disassembling pumps, working on instrumentation, and in-house fabrication. The building will include a parking stall /loading dock.
3. Electrical Building for housing electrical equipment such as main switch gear, motor control centers, variable frequency drives, programmable logic controllers, and other control panels.

ATTACHMENT 3
OAK HARBOR WWTP

Date Printed: 3/5/2013

ANTICIPATED DESIGN DRAWING LIST

178 dwgs anticipated at 30% Design

SHEET NO	DWG NO.	DRAWING
	GENERAL	
1	00 G 01	COVER SHEET
2	00 G 02	DRAWING INDEX I
3	00 G 03	DRAWING INDEX II
4	00 G 04	DESIGN CRITERIA
5	00 G 05	PROCESS FLOW DIAGRAM
6	00 G 06	HYDRAULIC PROFILE
7	00 G 07	OVERALL SITE PLAN
8	00 G 08	ABBREVIATIONS
9	00 G 09	PIPING SYMBOLS AND GENERAL MECHANICAL NOTES
10	00 G 10	HVAC SYMBOLS AND NOTES
11	00 G 11	GENERAL STRUCTURAL NOTES
12	00 G 12	SUB-GRADE PREPARATION AT STRUCTURES - 1
13	00 G 13	SUB-GRADE PREPARATION AT STRUCTURES - 2
14	00 G 14	ARCHITECTURAL SYMBOLS AND CODE ANALYSIS
15	00 G 15	ARCHITECTURAL SCHEDULES
16	00 G 16	UTILITY SERVICE CONNECTIONS (WATER, ELECTRICAL, GAS)
17	00 G 17	STAGING PLAN
	CIVIL	
18	10 C 01	KEY MAP AND GENERAL CIVIL NOTES
19	11 C 02	OFF-SITE DIVERSION STRUCTURE PLAN AND PROFILE
20	11 C 03	CONNECTION TO COLLECTION PIPING PLAN 1
21	11 C 04	CONNECTION TO COLLECTION PIPING PLAN 2
22	11 C 05	CONNECTION TO COLLECTION PIPING PROFILE
23	11 C 06	CONNECTION TO EFFLUENT PIPING PLAN 1
24	11 C 07	CONNECTION TO EFFLUENT PIPING PLAN 2
25	11 C 08	CONNECTION TO EFFLUENT PIPING PROFILE
26	12 C 01	SITE DEMOLITION PLAN AND TEMP UTILITY RELOCATION
27	12 C 02	UTILITY RELOCATION DETAILS
28	13 C 03	SITE PAVING AND GRADING 1
29	13 C 04	SITE PAVING AND GRADING 2
30	13 C 05	PLANT ENTRANCE ROAD PLAN AND PROFILE
31	13 C 06	PLANT ENTRANCE ROAD PLAN AND PROFILE
32	13 C 07	TRUCK LOADOUT AREAS
33	14 C 01	YARD PIPING 1
34	14 C 02	YARD PIPING 2
35	14 C 03	MISCELLANEOUS YARD SECTIONS AND DETAILS
36	14 C 04	MISCELLANEOUS YARD SECTIONS AND DETAILS
37	14 C 05	MISCELLANEOUS YARD SECTIONS AND DETAILS
38	14 C 06	MISCELLANEOUS YARD SECTIONS AND DETAILS
39	15 C 01	TEMPORARY EROSION & SEDIMENT CONTROL PLAN
40	15 C 02	TEMPORARY EROSION & SEDIMENT CONTROL DETAILS
41	15 C 03	TEMPORARY EROSION & SEDIMENT CONTROL DETAILS
	STRUCTURAL	
42	11 S 01	OFF-SITE DIVERSION STRUCTURE PLAN, AND SECTION
43	20 S 01	HEADWORKS BUILDING - BOTTOM PLAN
44	20 S 02	HEADWORKS BUILDING - BOTTOM PLAN
45	20 S 03	HEADWORKS BUILDING - TOP PLAN
46	20 S 04	HEADWORKS BUILDING - TOP PLAN
47	20 S 05	HEADWORKS BUILDING - ROOF PLAN
48	20 S 06	HEADWORKS BUILDING - ROOF PLAN
49	20 S 07	HEADWORKS BUILDING - SECTIONS AND DETAILS
50	20 S 08	HEADWORKS BUILDING - SECTIONS AND DETAILS
51	20 S 09	HEADWORKS BUILDING - SECTIONS AND DETAILS
52	20 S 10	HEADWORKS BUILDING - SECTIONS AND DETAILS
53	20 S 11	HEADWORKS BUILDING - SECTIONS AND DETAILS
54	20 S 12	HEADWORKS BUILDING - SECTIONS AND DETAILS

SHEET NO	DWG NO.	DRAWING
55	30 S 01	AERATION BASIN OVERVIEW PLAN
56	30 S 02	AERATION BASIN - SPLITTER BOX PLANS AND SECTIONS
57	30 S 03	AERATION BASIN 1 - BOTTOM PLAN
58	30 S 04	AERATION BASIN 1 - TOP PLAN
59	30 S 05	AERATION BASIN 2 - BOTTOM PLAN
60	30 S 06	AERATION BASIN 2 - TOP PLAN
61	30 S 07	EQUALIZATION BASIN - BOTTOM PLAN
62	30 S 08	EQUALIZATION BASIN 1 - TOP PLAN
63	30 S 09	AERATION BASIN - SECTIONS AND DETAILS
64	30 S 10	AERATION BASIN - SECTIONS AND DETAILS
65	31 S 11	AERATION BASIN - SECTIONS AND DETAILS
66	32 S 12	AERATION BASIN - SECTIONS AND DETAILS
67	30 S 11	AERATION BASIN - SECTIONS AND DETAILS
68	30 S 12	AERATION BASIN - ML WETWELL PLANS AND SECTIONS
69	40 S 01	MEMBRANE TANKS - BOTTOM PLAN
70	40 S 02	MEMBRANE TANKS - TOP PLAN
71	40 S 03	MEMBRANE TANKS - SECTIONS AND DETAILS
72	40 S 04	MEMBRANE TANKS - SECTIONS AND DETAILS
73	40 S 05	MEMBRANE TANKS - SECTIONS AND DETAILS
74	40 S 06	MEMBRANE TANKS - DETAILS
75	40 S 07	MEMBRANE TANKS - DETAILS
76	40 S 08	MEMBRANE TANKS - DETAILS
77	50 S 01	UV DISINFECTION - PLANS
78	50 S 02	UV DISINFECTION - SECTIONS, ELEVATIONS, AND DETAILS
79	47 S 03	UV DISINFECTION - DETAILS
80	49 S 04	UV DISINFECTION - DETAILS
81	50 S 05	UV DISINFECTION - DETAILS
82	51 S 01	EFFLUENT STORAGE TANK - PLAN AND SECTIONS
83	60 S 01	SOLIDS HANDLING BUILDING - BOTTOM PLAN
84	60 S 02	SOLIDS HANDLING BUILDING - TOP PLAN
85	60 S 03	SOLIDS HANDLING BUILDING - ROOF PLAN
86	60 S 04	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS
87	60 S 05	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS
88	60 S 06	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS
89	70 S 01	GALLERY - LOWER PLAN
90	70 S 02	GALLERY - TOP PLAN
91	70 S 03	GALLERY - SECTIONS AND DETAILS
92	70 S 04	GALLERY - SECTIONS AND DETAILS
93	70 S 05	GALLERY - SECTIONS AND DETAILS
94	70 S 06	GALLERY - SECTIONS AND DETAILS
95	70 S 07	GALLERY - SECTIONS AND DETAILS
96	71 S 01	CHEMICAL FACILITY - ROOF AND LOWER PLANS
97	71 S 02	CHEMICAL FACILITY - SECTIONS, ELEVATIONS, AND DETAILS
98	71 S 03	CHEMICAL FACILITY - DETAILS
99	72 S 04	CHEMICAL FACILITY - DETAILS
100	72 S 01	ODOR CONTROL FACILITY - PLANS
101	72 S 02	ODOR CONTROL FACILITY - SECTIONS
102	72 S 03	ODOR CONTROL FACILITY - DETAILS
103	72 S 04	ODOR CONTROL FACILITY - DETAILS
104	73 S 01	MECHANICAL BUILDING - BOTTOM PLAN
105	73 S 02	MECHANICAL BUILDING - ROOF PLAN
106	73 S 03	MECHANICAL BUILDING - SECTIONS AND DETAILS
107	73 S 04	MECHANICAL BUILDING - DETAILS
108	80 S 01	ADMINISTRATION BUILDING
109	80 S 02	ADMINISTRATION BUILDING
110	80 S 03	ADMINISTRATION BUILDING
111	80 S 04	ADMINISTRATION BUILDING
112	80 S 05	ADMINISTRATION BUILDING
113	80 S 06	ADMINISTRATION BUILDING
114	80 S 07	ADMINISTRATION BUILDING
115	80 S 08	ADMINISTRATION BUILDING
116	81 S 01	MAINTENANCE BUILDING

SHEET NO	DWG NO.	DRAWING
117	81 S 02	MAINTENANCE BUILDING
118	81 S 03	MAINTENANCE BUILDING
119	81 S 04	MAINTENANCE BUILDING
120	81 S 05	MAINTENANCE BUILDING
121	81 S 06	MAINTENANCE BUILDING
122	81 S 07	MAINTENANCE BUILDING
123	82 S 01	ELECTRICAL BUILDING
124	82 S 02	ELECTRICAL BUILDING
125	82 S 03	ELECTRICAL BUILDING
126	82 S 04	ELECTRICAL BUILDING
127	82 S 05	ELECTRICAL BUILDING
128	82 S 06	ELECTRICAL BUILDING
129	82 S 07	ELECTRICAL BUILDING
	MECHANICAL	
130	11 M 01	OFF-SITE DIVERSION STRUCTURE PLAN, AND SECTION
131	20 M 01	HEADWORKS BUILDING - BOTTOM PLAN
132	20 M 02	HEADWORKS BUILDING - BOTTOM PLAN
133	20 M 03	HEADWORKS BUILDING - TOP PLAN
134	20 M 04	HEADWORKS BUILDING - TOP PLAN
135	20 M 05	HEADWORKS BUILDING - HVAC BOTTOM PLAN
136	20 M 06	HEADWORKS BUILDING - HVAC TOP PLAN
137	21 M 07	HEADWORKS BUILDING - SECTIONS AND DETAILS
138	21 M 08	HEADWORKS BUILDING - SECTIONS AND DETAILS
139	21 M 09	HEADWORKS BUILDING - SECTIONS AND DETAILS
140	30 M 01	AERATION BASIN OVERVIEW PLAN
141	30 M 02	AERATION BASIN - SPLITTER BOX PLANS AND SECTIONS
142	30 M 03	AERATION BASIN 1 - BOTTOM PLAN
143	30 M 04	AERATION BASIN 1 - TOP PLAN
144	30 M 05	AERATION BASIN 2 - BOTTOM PLAN
145	30 M 06	AERATION BASIN 2 - TOP PLAN
146	30 M 07	EQUALIZATION BASIN - BOTTOM PLAN
147	30 M 08	EQUALIZATION BASIN 1 - TOP PLAN
148	30 M 09	AERATION BASIN - SECTIONS AND DETAILS
149	30 M 10	AERATION BASIN - SECTIONS AND DETAILS
150	30 M 11	AERATION BASIN - SECTIONS AND DETAILS
151	30 M 12	AERATION BASIN - SECTIONS AND DETAILS
152	30 M 12	AERATION BASIN - ML WETWELL PLANS AND SECTIONS
153	40 M 01	MEMBRANE TANKS - BOTTOM PLAN
154	40 M 02	MEMBRANE TANKS - TOP PLAN
155	40 M 03	MEMBRANE TANKS - SECTIONS AND DETAILS
156	40 M 04	MEMBRANE TANKS - SECTIONS AND DETAILS
157	40 M 05	MEMBRANE TANKS - DETAILS
158	40 M 06	MEMBRANE TANKS - DETAILS
159	50 M 01	UV DISINFECTION - PLAN
160	50 M 02	UV DISINFECTION - SECTIONS, AND DETAILS
161	50 M 03	UV DISINFECTION - DETAILS
162	51 M 01	EFFLUENT STORAGE TANK - PLAN AND SECTIONS
163	60 M 01	SOLIDS HANDLING BUILDING - BOTTOM PLAN
164	60 M 02	SOLIDS HANDLING BUILDING - TOP PLAN
165	61 M 03	SOLIDS HANDLING BUILDING - HVAC BOTTOM PLAN
166	62 M 04	SOLIDS HANDLING BUILDING - HVAC TOP PLAN
167	60 M 05	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS
168	60 M 06	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS
169	70 M 01	GALLERY - OVERVIEW AND HVAC PLAN
170	70 M 02	GALLERY - AERATION BASIN BLOWER PLANS AND SECTIONS
171	70 M 03	GALLERY - MEMBRANE BLOWER PLANS AND SECTIONS
172	70 M 04	GALLERY - MEMBRANE FEED PUMPS AND SECTIONS
173	70 M 05	GALLERY - MEMBRANE PERMEATE PUMPS AND SECTIONS
174	70 M 06	GALLERY - PLANT WATER SYSTEM AND SECTIONS
175	70 M 07	GALLERY -PLANT/INSTRUMENT AIR SYSTEM (IF NECESSARY)
176	70 M 08	GALLERY - SECTIONS AND DETAILS

SHEET NO	DWG NO.	DRAWING
177	70 M 09	GALLERY - SECTIONS AND DETAILS
178	70 M 10	GALLERY - SECTIONS AND DETAILS
179	71 M 01	CHEMICAL FACILITY - PLAN
180	71 M 02	CHEMICAL FACILITY - SECTIONS AND DETAILS
181	71 M 03	CHEMICAL FACILITY - DETAILS
182	72 M 01	ODOR CONTROL FACILITY - PLAN
183	72 M 02	ODOR CONTROL FACILITY - SECTIONS AND DETAILS
184	73 M 01	MECHANICAL BUILDING - STANDBY GENERATOR PLAN
185	73 M 03	MECHANICAL BUILDING - SECTIONS AND DETAILS
186	80 M 01	ADMINISTRATION BUILDING
187	80 M 02	ADMINISTRATION BUILDING
188	80 M 03	ADMINISTRATION BUILDING
189	80 M 04	ADMINISTRATION BUILDING
190	80 M 05	ADMINISTRATION BUILDING
191	81 M 01	MAINTENANCE BUILDING
192	81 M 02	MAINTENANCE BUILDING
193	81 M 03	MAINTENANCE BUILDING
194	81 M 04	MAINTENANCE BUILDING
195	81 M 05	MAINTENANCE BUILDING
196	82 M 01	ELECTRICAL BUILDING
197	82 M 02	ELECTRICAL BUILDING
198	82 M 03	ELECTRICAL BUILDING
199	82 M 04	ELECTRICAL BUILDING
200	82 M 05	ELECTRICAL BUILDING
	ARCHITECTURAL	
201	00 A 01	PROJECT SUMMARY GENERAL NOTES
202	00 A 02	ARCHITECTURAL SYMBOLS AND SCHEDULES
203	20 A 01	HEADWORKS BUILDING - SECTIONS
204	40 A 01	MBR BUILDING - SECTIONS
205	60 A 01	SOLIDS HANDLING BUILDING - SECTIONS
206	71 A 01	CHEMICAL BUILDING - SECTIONS
207	72 A 01	ODOR CONTROL BUILDING - SECTIONS
208	73 A 01	MECHANICAL BUILDING - SECTIONS
209	80 A 01	ADMINISTRATION BUILDING
210	80 A 02	ADMINISTRATION BUILDING
211	80 A 03	ADMINISTRATION BUILDING
212	80 A 04	ADMINISTRATION BUILDING
213	80 A 05	ADMINISTRATION BUILDING
214	80 A 06	ADMINISTRATION BUILDING
215	80 A 07	ADMINISTRATION BUILDING
216	80 A 08	ADMINISTRATION BUILDING
217	81 A 01	MAINTENANCE BUILDING
218	81 A 02	MAINTENANCE BUILDING
219	81 A 03	MAINTENANCE BUILDING
220	81 A 04	MAINTENANCE BUILDING
221	81 A 05	MAINTENANCE BUILDING
222	81 A 06	MAINTENANCE BUILDING
223	81 A 07	MAINTENANCE BUILDING
224	81 A 08	MAINTENANCE BUILDING
225	82 A 01	ELECTRICAL BUILDING
226	82 A 02	ELECTRICAL BUILDING
227	82 A 03	ELECTRICAL BUILDING
228	82 A 04	ELECTRICAL BUILDING
229	82 A 05	ELECTRICAL BUILDING
230	82 A 06	ELECTRICAL BUILDING
231	82 A 07	ELECTRICAL BUILDING
232	82 A 08	ELECTRICAL BUILDING
	LANDSCAPING	
233	83 L 01	PLANTING NOTES AND LEGEND

SHEET NO	DWG NO.	DRAWING
234	83 L 02	PLANTING PLAN I
235	83 L 03	PLANTING PLAN II
236	83 L 04	IRRIGATION NOTES AND LEGEND
237	83 L 05	IRRIGATION PLAN
238	83 L 06	PUBLIC SITE ACCESS NOTES AND LEGEND
239	83 L 07	SITE ACCESS PLAN
240	83 L 08	SITE ACCESS SECTIONS
241	83 L 09	SITE ACCESS DETAILS
	ELECTRICAL	
242	00 GE 01	ELECTRICAL LEGENDS & ABBREVIATIONS
243	00 GE 02	ANSI DEVICE FUNCTION NUMBERS
244	00 GE 03	CONTROL SCHEMATIC LEGENDS
245	E SC 01	SCHEDULES - DISCONNECT, PANELBOARD, LUMINAIRE
246	E SC 02	SCHEDULES - RACEWAYS - AERATION BASIN 1
247	E SC 03	SCHEDULES - RACEWAYS - AERATION BASIN 2
248	E SC 04	SCHEDULES - RACEWAYS - EQ BASIN
249	E SC 05	SCHEDULES - RACEWAYS - MEMBRANE TANKS
250	E SC 06	SCHEDULES - RACEWAYS - MEMBRANE TANKS
251	E SC 07	SCHEDULES - RACEWAYS - UV DISINFECTION
252	E SC 08	SCHEDULES - RACEWAYS - SOLIDS HANDLING BUILDING
253	E SC 09	SCHEDULES - RACEWAYS - SOLIDS HANDLING BUILDING
254	E SC 10	SCHEDULES - RACEWAYS - GALLERY
255	E SC 11	SCHEDULES - RACEWAYS - CHEMICAL FACILITY
256	E SC 12	SCHEDULES - RACEWAYS - ODOR CONTROL FACILITY
257	E SC 13	SCHEDULES - RACEWAYS - MECHANICAL BUILDING
258	E SC 14	SCHEDULES - RACEWAYS - MECHANICAL BUILDING
259	E SC 15	SCHEDULES - RACEWAYS - ADMINISTRATION BUILDING
260	E SC 16	SCHEDULES - RACEWAYS - MAINTENANCE BUILDING
261	E SC 17	SCHEDULES - RACEWAYS - ELECTRICAL BUILDING
262	E SC 18	SCHEDULES - RACEWAYS - ELECTRICAL BUILDING
263	E OL 01	ONE-LINE DIAGRAM - OVERALL POWER SYSTEM
264	E OL 02	ONE-LINE DIAGRAM - SWGR-MAIN
265	E OL 03	ONE-LINE DIAGRAM - MCC-HEADWORKS
266	E OL 04	ONE-LINE DIAGRAM - MCC-HEADWORKS
267	E OL 05	ONE-LINE DIAGRAM - MCC-AERATION BASINS
268	E OL 06	ONE-LINE DIAGRAM - MCC-MEMBRANE
269	E OL 07	ONE-LINE DIAGRAM - MCC-UV DISINFECTION
270	E OL 08	ONE LINE DIAGRAM - MCC-SOLIDS HANDLING
271	E OL 09	ONE-LINE DIAGRAM - MCC-GALLERY
272	E OL 10	ONE LINE DIAGRAM - MCC-CHEMICAL FACILITY
273	E OL 11	ONE-LINE DIAGRAM - MCC-ODOR CONTROL FACILITY
274	E OL 12	ONE-LINE DIAGRAM - MCC-MECHANICAL BUILDING
275	E OL 13	ONE-LINE DIAGRAM - MCC-ADMINISTRATION BUILDING
276	E OL 14	ONE-LINE DIAGRAM - MCC-MAINTENANCE BUILDING
277	E OL 15	ONE-LINE DIAGRAM - MCC-ELECTGRICAL BUILDING
278	E OL 16	ELEVATION - MCC-HEADWORKS
279	E OL 17	ELEVATION - MCC-HEADWORKS
280	E OL 18	ELEVATION - MCC-AERATION BASINS
281	E OL 19	ELEVATION - MCC-MEMBRANE
282	E OL 20	ELEVATION - MCC-UV DISINFECTION
283	E OL 21	ELEVATION - MCC-UV DISINFECTION
284	E OL 22	ELEVATION - MCC-SOLIDS HANDLING BUILDING
285	E OL 23	ELEVATION - MCC-GALLERY
286	E OL 24	ELEVATION - MCC-CHEMICAL FACILITY
287	E OL 25	ELEVATION - MCC-ODOR CONTROL FACILITY
288	E OL 26	ELEVATION - MCC-MECHANICAL BUILDING
289	E OL 27	ELEVATION - MCC-ADMINISTRATION BUILDING
290	E OL 28	ELEVATION - MCC-MAINTENANCE BUILDING
291	E OL 29	ELEVATION - MCC-ELECTRICAL BUILDING
292	14 SE 01	ELECTRICAL SITE PLAN-1
293	14 SE 02	ELECTRICAL SITE PLAN -2

SHEET NO	DWG NO.	DRAWING
294	14 SE 03	ELECTRICAL SITE PLAN - DUCTBANK SECTIONS
295	14 SE 04	ELECTRICAL SITE PLAN - DUCTBANK SECTIONS
296	14 SE 05	ELECTRICAL SITE PLAN - DUCTBANK SECTIONS
297	20 E 01	DETAILED CONDUIT ROUTING PLAN - HEADWORKS BOTTOM PLAN - POWER
298	20 E 02	HEADWORKS BOTTOM PLAN - LIGHTING AND GROUNDING
299	20 E 03	DETAILED CONDUIT ROUTING PLAN - HEADWORKS TOP PLAN - POWER
300	20 E 04	HEADWORKS TOP PLAN - LIGHTING AND GROUNDING
301	30 E 01	DETAILED CONDUIT ROUTING PLAN - AERATION BASIN 1 PLAN - POWER
302	30 E 02	AERATION BASIN 1 PLAN - LIGHTING & GROUNDING
303	30 E 03	DETAILED CONDUIT ROUTING PLAN - AERATION BASIN 2 PLAN - POWER
304	30 E 04	AERATION BASIN 2 PLAN - LIGHTING & GROUNDING
305	30 E 05	DETAILED CONDUIT ROUTING PLAN - EQUALIZATION BASIN PLAN - POWER
306	30 E 06	EQUALIZATION BASIN PLAN - LIGHITNG & GROUNDING
307	30 E 07	DETAILED CONDUIT ROUTING PLAN - AERATION BASIN WETWELL PLAN - POWER
308	30 E 08	AERATION BASIN WETWELL PLAN - LIGHTING & GROUNDING
309	40 E 01	DETAILED CONDUIT ROUTING PLAN - MEMBRANE TANKS PLAN - POWER
310	40 E 02	MEMBRANE TANKS PLAN - LIGHTING AND GROUNDING
311	50 E 01	DETAILED CONDUIT ROUTING PLAN - UV DISINFECTION PLAN - POWER
312	50 E 02	DETAILED CONDUIT ROUTING PLAN - UV DISINFECTION PLAN - POWER
313	50 E 03	UV DISINFECTION PLAN - LIGHTING & GROUNDING
314	50 E 04	DETAILED CONDUIT ROUTING PLAN - EFFLUENT STORAGE TANK PLAN - POWER, LIGHITNG & GROUNDING
315	60 E 01	DETAILED CONDUIT ROUTING PLAN - SOLIDS HANDLING BUILDING BOTTOM PLAN - POWER
316	60 E 02	SOLIDS HANDLING BUILDING BOTTOM PLAN - LIGHTING & GROUNDING
317	60 E 03	DETAILED CONDUIT ROUTING PLAN - SOLIDS HANDLING BUILDING TOP PLAN - POWER
318	60 E 04	DETAILED CONDUIT ROUTING PLAN - SOLIDS HANDLING BUILDING TOP PLAN - LIGHTING & GROUNDING
319	70 E 01	DETAILED CONDUIT ROUTING PLAN - GALLERY LOWER PLAN - POWER
320	70 E 02	GALLERY LOWER PLAN - LIGHTING AND GROUNDING
321	70 E 03	DETAILED CONDUIT ROUTING PLAN - GALLERY TOP PLAN - POWER
322	70 E 04	DETAILED CONDUIT ROUTING PLAN - GALLERY TOP PLAN - LIGHTING & GROUNDING
323	71 E 01	DETAILED CONDUIT ROUTING PLAN - CHEMICAL FACILITY PLAN - POWER
324	71 E 02	DETAILED CONDUIT ROUTING PLAN - CHEMICAL FACILITY PLAN - LIGHTING & GROUNDING
325	72 E 01	DETAILED CONDUIT ROUTING PLAN - ODOR CONTROL FACILITY PLAN - POWER
326	72 E 02	DETAILED CONDUIT ROUTING PLAN - ODOR CONTROL FACILITY PLAN - LIGHTING & GROUNDING
327	73 E 01	DETAILED CONDUIT ROUTING PLAN - MECHANICAL BUILDING PLAN - POWER
328	73 E 02	DETAILED CONDUIT ROUTING PLAN - MECHANICAL BUILDING PLAN - LIGHTING & GROUNDING
329	80 E 01	DETAILED CONDUIT ROUTING PLAN - ADMINISTRATION BUILDING PLAN - POWER
330	80 E 02	DETAILED CONDUIT ROUTING PLAN - ADMINISTRATION BUILDING PLAN LIGHTING & GROUNDING
331	81 E 01	DETAILED CONDUIT ROUTING PLAN - MAINTENANCE BUILDING PLAN - POWER
332	81 E 02	DETAILED CONDUIT ROUTING PLAN - MAINTENANCE BUILDING PLAN - LIGHTING & GROUNDING
333	82 E 01	DETAILED CONDUIT ROUTING PLAN - ELECTRICAL BUILDING PLAN - POWER
334	82 E 02	DETAILED CONDUIT ROUTING PLAN - ELECTRICAL BUILDING PLAN - LIGHTING & GROUNDING
335	EC S 01	CONTROL SCHEMATICS 1
336	EC S 02	CONTROL SCHEMATICS 2
337	EC S 03	CONTROL SCHEMATICS 3
338	EC S 04	CONTROL SCHEMATICS 4
339	EC S 05	CONTROL SCHEMATICS 5
340	EC S 06	CONTROL SCHEMATICS 6
341	EC S 07	CONTROL SCHEMATICS 7
342	EC S 08	CONTROL SCHEMATICS 8
343	EC S 09	CONTROL SCHEMATICS 9
344	EC S 10	CONTROL SCHEMATICS 10
345	EC S 11	CONTROL SCHEMATICS 11
346	EC S 12	CONTROL SCHEMATICS 12
347	EC S 13	CONTROL SCHEMATICS 13
348	EC S 14	CONTROL SCHEMATICS 14
349	EC S 15	CONTROL SCHEMATICS 15

INSTRUMENTATION

ATTACHMENT 3
OAK HARBOR WWTP

Date Printed: 3/5/2013

SHEET NO	DWG NO.	DRAWING
350	00 GN 01	SYMBOLS AND ABBREVIATIONS I
351	00 GN 02	SYMBOLS AND ABBREVIATIONS II
352	00 GN 03	SYMBOLS AND ABBREVIATIONS III
353	00 GN 04	SYMBOLS AND ABBREVIATIONS IV
354	00 GN 05	SYMBOLS AND ABBREVIATIONS V
355	00 GN 06	CONTROL SYSTEM BLOCK DIAGRAM
356	11 N 01	PROCESS & INSTRUMENTATION DIAGRAM - DIVERSION STRUCTURE
357	20 N 01	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - COARSE SCREENINGS
358	20 N 02	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - COARSE SCREENINGS
359	20 N 03	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - COARSE SCREENINGS
360	20 N 04	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - INFLUENT PUMPING
361	20 N 05	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - INFLUENT PUMPING
362	20 N 06	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - INFLUENT PUMPING
363	20 N 07	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - DEGRITTING
364	20 N 08	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - DEGRITTING
365	20 N 09	PROCESS & INSTRUMENTATION DIAGRAM - HEADWORKS - DEGRITTING
366	20 N 10	PROCESS & INSTRUMENTATION DIAGRAM - DIVERSION STRUCTURE
367	20 N 11	PROCESS & INSTRUMENTATION DIAGRAM - FINE SCREENINGS
368	20 N 12	PROCESS & INSTRUMENTATION DIAGRAM - FINE SCREENINGS
369	30 N 01	PROCESS & INSTRUMENTATION DIAGRAM - AERATION BASIN 1
370	30 N 02	PROCESS & INSTRUMENTATION DIAGRAM - AERATION BASIN 2
371	30 N 03	PROCESS & INSTRUMENTATION DIAGRAM - AERATION BASIN 3 (FUTURE)/EQUALIZATION BASIN
372	30 N 04	PROCESS & INSTRUMENTATION DIAGRAM - AERATION BASIN WETWELL
373	40 N 01	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE TRAIN 1
374	40 N 02	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE TRAIN 2
375	40 N 03	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE TRAIN 3
376	40 N 04	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE TRAIN 4
377	40 N 05	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE TRAIN 5
378	40 N 06	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE BLOWERS
379	40 N 07	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE BLOWERS
380	40 N 08	PROCESS & INSTRUMENTATION DIAGRAM - MEMBRANE PERMEATE PUMPS
381	50 N 01	PROCESS & INSTRUMENTATION DIAGRAM - UV DISINFECTION - INFLUENT CHANNEL
382	50 N 02	PROCESS & INSTRUMENTATION DIAGRAM - UV DISINFECTION 1
383	50 N 03	PROCESS & INSTRUMENTATION DIAGRAM - UV DISINFECTION 2
384	50 N 04	PROCESS & INSTRUMENTATION DIAGRAM - UV DISINFECTION 3
385	50 N 05	PROCESS & INSTRUMENTATION DIAGRAM - EFFLUENT EQUALIZATION AND STORAGE TANK
386	60 N 01	PROCESS & INSTRUMENTATION DIAGRAM - DEWATERING
387	60 N 02	PROCESS & INSTRUMENTATION DIAGRAM - DEWATERING
388	60 N 03	PROCESS & INSTRUMENTATION DIAGRAM - SOLIDS HANDLING 1
389	60 N 04	PROCESS & INSTRUMENTATION DIAGRAM - SOLIDS HANDLING 2
390	71 N 01	PROCESS & INSTRUMENTATION DIAGRAM - CHEMICAL FACILITY 1
391	71 N 02	PROCESS & INSTRUMENTATION DIAGRAM - CHEMICAL FACILITY 2
392	71 N 03	PROCESS & INSTRUMENTATION DIAGRAM - CHEMICAL FACILITY 3
393	71 N 04	PROCESS & INSTRUMENTATION DIAGRAM - CHEMICAL FACILITY 4
394	72 N 01	PROCESS & INSTRUMENTATION DIAGRAM - ODOR CONTROL FACILITY 1
395	72 N 02	PROCESS & INSTRUMENTATION DIAGRAM - ODOR CONTROL FACILITY 2
396	73 N 01	PROCESS & INSTRUMENTATION DIAGRAM - STANDBY GENERATOR
397	74 N 01	PROCESS & INSTRUMENTATION DIAGRAM - MISCELLANEOUS HVAC
	TYPICAL DETAILS	
398	AT 01	ARCHITECTURAL TYPICAL DETAILS
399	AT 02	ARCHITECTURAL TYPICAL DETAILS
400	AT 03	ARCHITECTURAL TYPICAL DETAILS
401	AT 04	ARCHITECTURAL TYPICAL DETAILS
402	AT 05	ARCHITECTURAL TYPICAL DETAILS
403	AT 06	ARCHITECTURAL TYPICAL DETAILS
404	AT 07	ARCHITECTURAL TYPICAL DETAILS
405	CT 01	CIVIL TYPICAL DETAILS
406	CT 02	CIVIL TYPICAL DETAILS
407	DT 01	CORROSION PROTECTION TYPICAL DETAILS
408	DT 02	CORROSION PROTECTION TYPICAL DETAILS
409	ET 01	ELECTRICAL TYPICAL DETAIL GROUNDING - EG

ATTACHMENT 3
OAK HARBOR WWTP

Date Printed: 3/5/2013

SHEET NO	DWG NO.	DRAWING
410	ET 02	ELECTRICALTYPICAL DETAIL GROUNDING - EG
411	ET 03	ELECTRICAL TYPICAL DETAIL LIGHTING - EL
412	ET 04	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
413	ET 05	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
414	ET 06	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
415	ET 07	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
416	ET 08	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
417	ET 09	ELECTRICAL TYPICAL DETAIL NAMEPLATES - EN
418	ET 10	ELECTRICALTYPICAL DETAIL OPERATORS - EO
419	HT 01	HVAC TYPICAL DETAILS
420	HT 02	HVAC TYPICAL DETAILS
421	NT 01	INSTRUMENTATION TYPICAL DETAILS
422	NT 02	INSTRUMENTATION TYPICAL DETAILS
423	NT 03	INSTRUMENTATION TYPICAL DETAILS
424	NT 04	INSTRUMENTATION TYPICAL DETAILS
425	NT 05	INSTRUMENTATION TYPICAL DETAILS
426	NT 06	INSTRUMENTATION TYPICAL DETAILS
427	NT 07	INSTRUMENTATION TYPICAL DETAILS
428	MT 01	MECHANICAL TYPICAL DETAILS
429	MT 02	MECHANICAL TYPICAL DETAILS
430	MT 03	MECHANICAL TYPICAL DETAILS
431	PT 02	PIPING TYPICAL DETAILS
432	PT 03	PIPING TYPICAL DETAILS
433	PT 04	PIPING TYPICAL DETAILS
434	PT 05	PIPING TYPICAL DETAILS
435	PT 06	PIPING TYPICAL DETAILS
436	PT 07	PIPING TYPICAL DETAILS
437	PT 08	PIPING TYPICAL DETAILS
438	PT 09	PIPING TYPICAL DETAILS
439	PT 10	PIPING TYPICAL DETAILS
440	ST 02	STRUCTURAL TYPICAL DETAILS
441	ST 03	STRUCTURAL TYPICAL DETAILS
442	ST 02	STRUCTURAL TYPICAL DETAILS
443	ST 03	STRUCTURAL TYPICAL DETAILS
444	ST 04	STRUCTURAL TYPICAL DETAILS
445	ST 05	STRUCTURAL TYPICAL DETAILS
446	ST 06	STRUCTURAL TYPICAL DETAILS
447	ST 07	STRUCTURAL TYPICAL DETAILS

ATTACHMENT 4

SPECIFICATION SAMPLE LIST
(Procurement Packages not identified separately)

OAK HARBOR WWTP
TABLE OF CONTENTS

VOLUME 1
DIVISION 0 - BIDDING REQUIREMENTS, CONTRACT FORMS AND CONDITIONS OF THE CONTRACT

VOLUME 2
TECHNICAL SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

DIVISION 2 - SITE WORK

Section No.	Title
02050	Basic Site Materials and Methods
02084	Utility Structures
02200	Site Preparation
02222	Building Demolition
02240	Dewatering
02260	Excavation Support and Protection
02300	Earthwork
02312	Controlled Low Strength Material (CLSM)
02318	Trenching
02370	Riprap
02580	Manholes
02622	Filter Fabric for Drains and Underdrains
02738	Decomposed Granite
02742A	Asphaltic Concrete Paving
02760	Sewer Line Cleaning
02761	Closed Circuit Television Inspection of Sewer Lines
02772	Concrete Curbs, Gutters, and Sidewalks
02810	Irrigation System
02820	Fence, Plant Entrance Gates, and Motorized Gate Operators
02821	Chain Link Fences and Gates
02845	Guardrails
02900	Landscaping
02952	Pavement Restoration and Rehabilitation

DIVISION 3 - CONCRETE

Section No.	Title
03055	Epoxy Bonding Reinforcing Bars and All Thread Rods in Concrete
03071	Epoxies
03072	Epoxy Resin/Portland Cement Bonding Agent
03102	Concrete Formwork
03150	Concrete Accessories
03154	Hydrophilic Rubber Waterstop
03155	Thermoplastic Elastomeric Rubber Waterstops
03200	Concrete Reinforcement
03212	Reinforcing Bar Couplers
03300	Cast-in-Place Concrete
03302	Mass Concrete
03366	Tooled Concrete Finishes
03491	Glass Fiber Reinforced Concrete
03565	Basin Bottom Grout
03600	Grouts
03931	Epoxy Injection System
03936	Water Leakage Test for Concrete Structures

DIVISION 4 - MASONRY

Section No.	Title
04090	Masonry Accessories
04100	Mortar and Masonry Grout
04220	Concrete Masonry Units

DIVISION 5 - METALS

Section No.	Title
05120	Structural Steel
05122	Galvanized Steel For Influent Screening Mezzanine
05140	Structural Aluminum
05310	Steel Deck
05410	Structural Metal Stud Framing
05500	Metal Fabrications

DIVISION 6 - WOOD AND PLASTICS

Section No.	Title
06072	Preservative Pressure Treated Wood
06100	Rough Carpentry
06200	Finish Carpentry
06400	Architectural Woodwork
06608	Fiberglass Reinforced Plastic
06611	Fiberglass Reinforced Plastic Fabrications
06620	Plastic Liner (Polyvinyl Chloride)
06650	Solid Polymer Fabrications
06651	Fiberglass Reinforced Polyester Baffles and Appurtenances

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

Section No.	Title
07110	Dampproofing
07130	Sheet Waterproofing
07190	Water Repellents
07212	Wall Insulation System
07214	Batt Insulation
07220	Roof and Deck Insulation
07240	Exterior Insulation and Finish Systems
07321	Clay Roofing Tiles
07322	Concrete Roofing Tiles
07416	Metal Roof and Soffit Panels
07530	Single Ply Membrane Roofing
07600	Flashing and Sheet Metal
07700	Roof Specialties and Accessories
07722	Roof Hatches
07840	Firestopping
07900	Joint Sealers

DIVISION 8 - DOORS AND WINDOWS

Section No.	Title
08110	Steel Doors and Frames
08212	Flush Wood Doors
08255	FRP Flush Doors
08320	Floor Access Doors
08330	Ceiling Access Doors
08362	Sectional Overhead Doors
08412	Aluminum Entrances and Storefronts
08710	Door Hardware
08800	Glazing

VOLUME 3
TECHNICAL SPECIFICATIONS

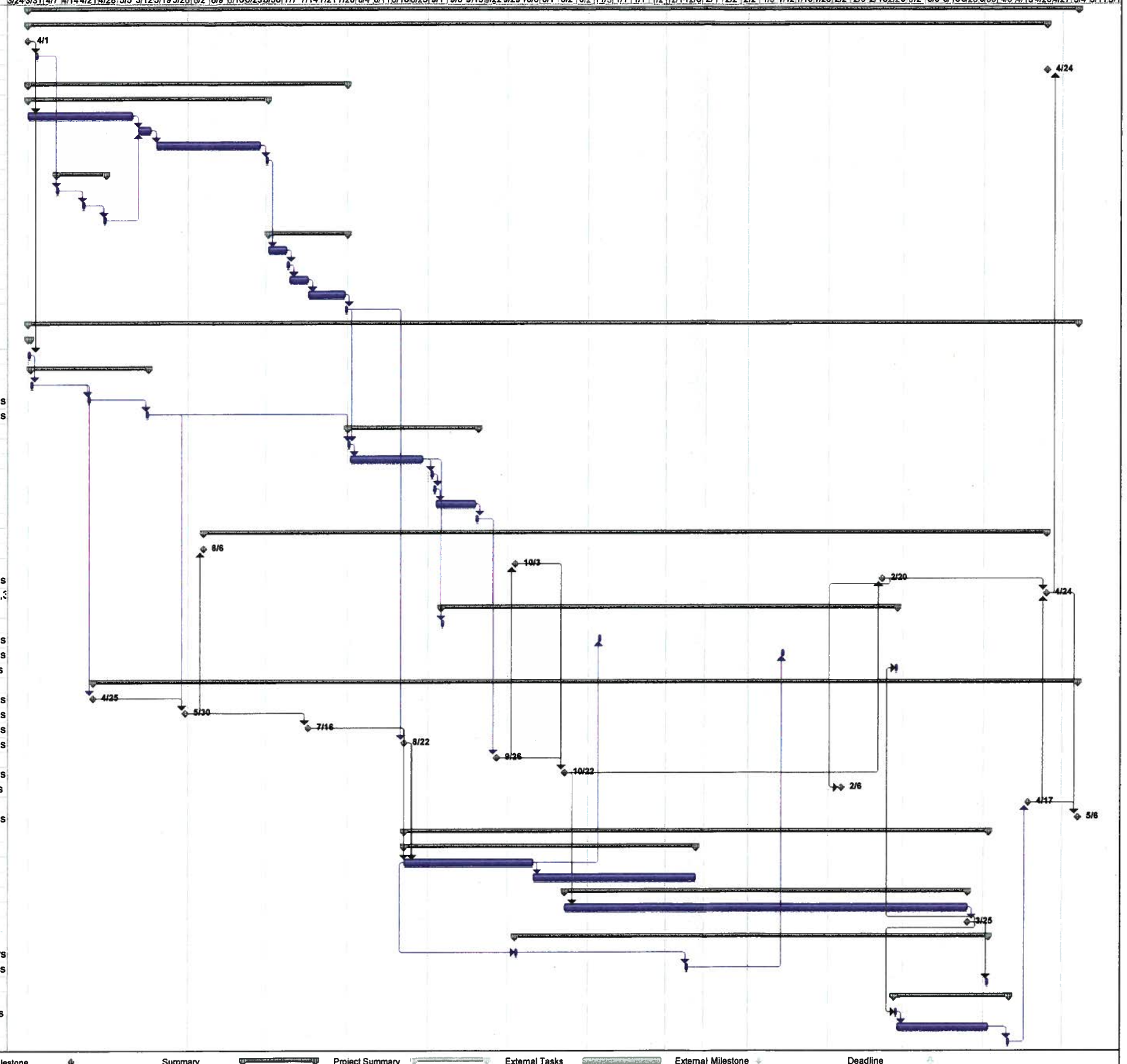
DIVISION 16 - ELECTRICAL

DIVISION 17 - INSTRUMENTATION AND CONTROLS

END OF TABLE OF CONTENTS

ATTACHMENT 1 - PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Predecessors
1	**PRELIMINARY DESIGN PHASE**	**287 days**	**Mon 4/1/13**	**Tue 5/6/14**	
2	**TASK 100 - PROJECT MANAGEMENT**	**279 days**	**Mon 4/1/13**	**Thu 4/24/14**	
3	Notice-to-Proceed	0 days	Mon 4/1/13	Mon 4/1/13	
4	Tech Team Meeing - Project Kickoff	1 day	Thu 4/4/13	Thu 4/4/13	3FS+3 days
5	Negotiate Final Design	0 days	Thu 4/24/14	Thu 4/24/14	40
6	**TASK 200 - VALUE ENGINEERING SUPPORT**	**88 days**	**Mon 4/1/13**	**Wed 7/31/13**	
7	**Subtask 210 - Conceptual Design Development**	**66 days**	**Mon 4/1/13**	**Mon 7/1/13**	
8	Prepare for CAMP	30 days	Mon 4/1/13	Fri 5/10/13	3
9	Tech Team Conduct CAMP	5 days	Mon 5/13/13	Fri 5/17/13	8,15
10	Document CAMP	30 days	Mon 5/20/13	Fri 6/28/13	9
11	Tech Team Meeting - CAMP Results	1 day	Mon 7/1/13	Mon 7/1/13	10
12	**Subtask 220 - WWTP Site Visits**	**13 days**	**Fri 4/12/13**	**Tue 4/30/13**	
13	Tech Team Site Visit 1	1 day	Fri 4/12/13	Fri 4/12/13	4FS+5 days
14	Tech Team Site Visit 2	1 day	Mon 4/22/13	Mon 4/22/13	13FS+5 days
15	Tech Team Site Visit 3	1 day	Tue 4/30/13	Tue 4/30/13	14FS+5 days
16	**Subtask 230 - VE Support**	**22 days**	**Tue 7/2/13**	**Wed 7/31/13**	
17	Prepare for VE	5 days	Tue 7/2/13	Mon 7/8/13	11
18	Tech Team Meeting - VE Prep	1 day	Tue 7/9/13	Tue 7/9/13	17
19	VE Workshop	5 days	Wed 7/10/13	Tue 7/16/13	18
20	Review Results/Develop Recommendations	10 days	Wed 7/17/13	Tue 7/30/13	19
21	Teach Team Meeting - VE Results	1 day	Wed 7/31/13	Wed 7/31/13	20
22	**TASK 300 - PUBLIC PROCESS SUPPORT**	**287 days**	**Mon 4/1/13**	**Tue 5/6/14**	
23	**Subtask 310 - Public Process Planning**	**1 day**	**Mon 4/1/13**	**Mon 4/1/13**	
24	Tech Team Meeting - Public Process Planning	1 day	Mon 4/1/13	Mon 4/1/13	3
25	**Subtask 320 - Policy Framework**	**33 days**	**Tue 4/2/13**	**Thu 5/16/13**	
26	Tech Team Meeting - Policy Framework	1 day	Tue 4/2/13	Tue 4/2/13	24
27	Tech Team Meeting - Policy Framework	1 day	Wed 4/24/13	Wed 4/24/13	26FS+15 days
28	Tech Team meeting - Policy Framework	1 day	Thu 5/16/13	Thu 5/16/13	27FS+15 days
29	**Subtask 330 - Charrette Workshops**	**36 days**	**Thu 8/1/13**	**Thu 9/19/13**	
30	Tech Team Meeting - Charrette Planning	1 day	Thu 8/1/13	Thu 8/1/13	28,21
31	Prepare for Charrette	20 days	Fri 8/2/13	Thu 8/29/13	30
32	Charrette Day 1	1 day	Mon 9/2/13	Mon 9/2/13	31FS+1 day
33	Charrette Day 2	1 day	Tue 9/3/13	Tue 9/3/13	32
34	Develop Charrette Alternatives	11 days	Wed 9/4/13	Wed 9/18/13	33
35	Tech Team Meeting - Charrette Results	1 day	Thu 9/19/13	Thu 9/19/13	34
36	**Subtask 340 - Public Meetings/Council Workshops**	**230 days**	**Thu 6/6/13**	**Thu 4/24/14**	
37	P1 - Input on Siting Policy	0 days	Thu 6/6/13	Thu 6/6/13	48FS+5 days
38	P2 - Input on Final Location	0 days	Thu 10/3/13	Thu 10/3/13	51FS+5 days
39	P3 - Input on Design Features	0 days	Thu 2/20/14	Thu 2/20/14	52FS+87 days
40	P4 - Final Plan, Next Steps	0 days	Thu 4/24/14	Thu 4/24/14	54FS+5 days,3
41	**Subtask 350 - Working Group Meetings**	**124 days**	**Fri 9/6/13**	**Wed 2/26/14**	
42	WG1 - Working Group 1	1 day	Fri 9/6/13	Fri 9/6/13	31FS+5 days
43	WG2 - Working Group 2	1 day	Tue 11/5/13	Tue 11/5/13	58FS+17 days
44	WG3 - Working Group 3	1 day	Tue 1/14/14	Tue 1/14/14	65FS+25 days
45	WG4 - Working Group 4	1 day	Wed 2/26/14	Wed 2/26/14	62FS-20 days
46	**Subtask 360 - Council/Committee Meetings**	**268 days**	**Thu 4/25/13**	**Tue 5/6/14**	
47	C1 - Committee Briefing (Policy Questions, Navy Status)	0 days	Thu 4/25/13	Thu 4/25/13	26FS+17 days
48	C2 - Committee Briefing (Policy Questions, Navy Status)	0 days	Thu 5/30/13	Thu 5/30/13	28FS+10 days
49	C3 - Council Meeting 1 (Siting Policy Decisions, Navy Decision)	0 days	Tue 7/16/13	Tue 7/16/13	48FS+33 days
50	C4 - Committee Briefing (VE Results)	0 days	Thu 8/22/13	Thu 8/22/13	21FS+16 days
51	C5 - Committee Briefing (Charrette Results)	0 days	Thu 9/26/13	Thu 9/26/13	35FS+5 days
52	C6 - Council Meeting 2 (VE Results, Final WWTP Location)	0 days	Tue 10/22/13	Tue 10/22/13	38FS+13 days
53	C7 - Committee Briefing - Progress Update	0 days	Thu 2/6/14	Thu 2/6/14	39FS-11 days
54	C8 - Committee Briefing (Delivery Options)	0 days	Thu 4/17/14	Thu 4/17/14	70FS+5 days
55	C9 - Council Meeting 3 (Select Project Delivery)	0 days	Tue 5/6/14	Tue 5/6/14	54FS+13 days
56	**TASK 400 - PRELIMINARY DESIGN**	**159 days**	**Fri 8/23/13**	**Wed 4/2/14**	
57	**Subtask 410 - Procurement Documents**	**80 days**	**Fri 8/23/13**	**Thu 12/12/13**	
58	Develop Procurement Documents	35 days	Fri 8/23/13	Thu 10/10/13	50,49
59	Procure/Award Equipment	45 days	Fri 10/11/13	Thu 12/12/13	58
60	**Subtask 420 - Preliminary Design Document**	**110 days**	**Wed 10/23/13**	**Tue 3/25/14**	
61	Develop Preliminary Design	110 days	Wed 10/23/13	Tue 3/25/14	52
62	Submit Preliminary Design	0 days	Tue 3/25/14	Tue 3/25/14	61
63	**Subtask 430 - Preliminary Design Meetings**	**129 days**	**Fri 10/4/13**	**Wed 4/2/14**	
64	Tech Team Meeting - Info Gathering	1 day	Fri 10/4/13	Fri 10/4/13	58SS+30 days
65	Tech Team Meeting - Info Gathering	1 day	Mon 12/9/13	Mon 12/9/13	64FS+45 days
66	Tech Team Meeting - Preliminary Design Review	1 day	Wed 4/2/14	Wed 4/2/14	62FS+5 days
67	**TASK 500 - PROJECT DELIVERY OPTIONS**	**32 days**	**Wed 2/26/14**	**Thu 4/10/14**	
68	Tech Team Meeting - Delivery Options	1 day	Wed 2/26/14	Wed 2/26/14	62FS-20 days
69	Develop Delivery Alternatives Analysis	25 days	Thu 2/27/14	Wed 4/2/14	68
70	Tech Team Meeting - Delivery Recommendations	1 day	Thu 4/10/14	Thu 4/10/14	69FS+5 days



Project: DRAFT Predesign Schedule_1
Date: Mon 3/4/13

Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

EXHIBIT B – SCOPE OF SERVICES

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY DESIGN PHASE

BACKGROUND

The City of Oak Harbor (City) has completed a Draft Facilities Plan (Plan) that recommends constructing a new wastewater treatment plant (WWTP), marine outfall, and associated collection system improvements by 2017. The Plan identifies the "Windjammer Vicinity" as the proposed site for a new membrane bioreactor (MBR) treatment facility that is expandable to treat projected Year 2060 flows (6 mgd, maximum month basis). The Windjammer Vicinity site is approximately 50 acres in size. The actual footprint needed for the MBR treatment facility is between three and four acres. This phase of the work includes: development of preliminary engineering documents for Value Engineering (VE); additional engineering and public process support to select the final location within the Windjammer Vicinity site; development of procurement documents to select key process equipment (membranes and ultraviolet [UV] disinfection equipment); development of WWTP preliminary design to approximately 30 percent detail; assisting with selecting the preferred delivery method to complete WWTP construction; and development of Final Construction Documents, permits and bid period services for a replacement marine outfall into Oak Harbor.

This Scope of Services is authorized as an amendment to an existing contract between the City and Carollo Engineers, Inc. (Carollo). Subsequent phases are anticipated to include:

- Preparation of Final Construction Documents and Permitting for the WWTP (with participation from the City's General Contractor/Construction Manager [GC/CM] if this delivery method is selected).
- Bid Period Services (or assistance with negotiating a Maximum Allowable Construction Cost (MACC), if GC/CM delivery is selected to complete the WWTP.
- Construction Support Services for the WWTP and Outfall Projects.
- Preparation of Operation and Maintenance (O&M) Manuals.
- Start-up, Training, and Facility Commissioning.

Project Objectives

The objectives of the Project are to:

- Complete VE to identify potential cost saving and value-added measures. Prior to selecting the final location for the WWTP.
- Assist the City in identifying the final location for the City's WWTP within the Windjammer Vicinity.
- Procure major treatment process equipment (membranes, UV) as a basis for final design of the new WWTP, using competitive bidding. NOTE: Contracts for pre-procured equipment will be assigned to the construction contractor.
- Prepare preliminary design information to approximately 30 percent level to be used as a basis for construction delivery analysis.

- Assist the City in selecting the preferred method for construction delivery.

Project Team
Carollo will serve as the Prime Consultant for the Project, and will be responsible for overall Project management and delivery. In completing the work defined by this Scope of Services, Carollo is authorized to use the following Subconsultants:

Subconsultant	Role
ESA	Environmental/Cultural Resources Permitting Support
EnviroIssues (EI)	Public Meeting Facilitation and/or Support
Michael Willis Architects (MWA)	Architectural Design Services
GeoEngineers(Geo)	Geotechnical Design Services
Bruce Dees & Associates (BDA)	Landscape Architectural Design Services
Webster Environmental (WE)	Odor Control Design Services
Cosmopolitan Engineering Group (CEG)	Outfall Design Services
Harmsen Associates, Inc. (HAI)	Topographical Surveying

Related Documents

The following documents provide background information for this project:

- Wastewater Treatment Plant Site Evaluation, City of Oak Harbor, October 2007.
- City of Oak Harbor Comprehensive Sewer Plan, TetraTech/KCM, December 2008.
- City of Oak Harbor Draft Facilities Plan, Carollo, March 2013.

SCOPE OF SERVICES

Carollo (Consultant) will provide engineering and other services for the City of Oak Harbor Wastewater Treatment Plant Preliminary Design Phase (Project), as defined by this Scope of Services. Work products submitted electronically will be produced using software as defined below:

- Word Processing — Microsoft Word
- Spreadsheets — Microsoft Excel
- Scheduling — Microsoft Project
- Drawings — Bentley MicroStation and Portable Document Format (PDF)

This Scope of Services is divided into the following tasks:

Task 100 Project Management
Task 200 Value Engineering Support
Task 300 Public Process Support
Task 400 WWTP Preliminary Design
Task 500 Project Delivery Analysis
Task 600 Outfall Design
Task 700 Management Reserve

PROJECT SCHEDULE

A preliminary schedule for the Project is attached (Attachment 1). The Schedule defines anticipated durations for major tasks, Project milestones, and major deliverable dates, assuming Notice to Proceed (NTP) in April 2013. Throughout this Scope of Services, anticipated delivery dates for major deliverables are established based on this preliminary schedule. The Consultant and City recognize that the preliminary schedule and corresponding delivery dates are subject to change, should NTP be issued after April 2013 and/or for other reasons. Schedule changes may be approved by the City without an amendment to this Scope of Services, provided both Consultant and City staff approve of the change. An amendment modifying the Project schedule and dates for major deliverables will be issued if required by either the City or Consultant.

TASK 100 – PROJECT MANAGEMENT

The objective of this task is to manage and coordinate engineering and related services required for Project completion. Consultant will provide the following services for Task 100:

Subtask 110 – Project Management Plan

Complete a draft Project Management Plan (PMP) including scope, work plan and products, work breakdown structure, budget, schedule, organization and staffing, communication protocol, and project standards within ten (10) days of Notice to Proceed (NTP). Finalize the PMP following the Startup Workshop and receipt of City comments. Monitor the PMP throughout the project and provide one update of the PMP upon request by the City.

Subtask 111 – Quality Management

Develop and follow a Quality Management Plan (QMP) for the Project to be included in the PMP. Review technical memos, documents, drawings, reports, and address review comments addressed prior to submission in accordance with the QMP. For major work products develop a Record of Comment (ROC) to document City comments and Consultant responses.

Subtask 110 Assumptions:

1. A Draft PMP will be reviewed at the Project Startup Meeting.
2. A Final PMP will be issued to incorporate City comments collected following the Project Startup Meeting.
3. The PMP will be updated once during the project.

Subtask 120 – Project Monitoring and Reporting

Manage the Project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, and time and budget needed to complete this Scope of Services. Prepare monthly project status reports that compare work accomplished with schedule activities and compare expenditures with task budgets, and submit reports to the City's Project Manager with monthly invoices. Document expenditures on a task basis, and show hours by project personnel and other direct expenses related to work. Include a project S-curve developed using Earned Valve Management (EVM) detailing anticipated progress, percent complete, and percent billed for each month.

Subtask 120 Assumptions:

1. Total Project duration for this phase is 12 months.

Subtask 130 – Project Management Meetings

Schedule and conduct Project Management Meetings throughout the project as directed by the City's Project Manager. Meetings will be used to discuss project status, action items, and potential areas of concern. Publish meeting minutes with Action Items that require a response by team members, City staff, or other agencies identified at the meeting. A draft of the minutes will be submitted to the City within three (3) working days after the meeting. The final version will be submitted within five (5) working days after comments on the draft have been received from the City.

Subtask 130 Assumptions:

1. Up to six (6) Project Management Meetings will be held.
2. Agendas, meeting minutes, and Action Items will be distributed electronically by the Consultant to City's Project Manager.

Task 100 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) PMP	110	April 2013
(12) Monthly Invoices and Progress Reports	120	Monthly
(6) Project Management Meeting Agendas	130	As Needed
(6) Project Management Meeting Action Items Log	130	As Needed

TASK 200 – VALUE ENGINEERING SUPPORT

Value Engineering (VE) is required to satisfy Federal funding requirements, and is considered good practice to identify ways to reduce cost and/or improve the overall value of the Project. The objective of this task is to assist the City in completing VE to confirm key planning and conceptual design assumptions and identify potential cost-saving or value-added measures. Consultant will develop conceptual level design information prior to VE, to focus objectives and improve the benefit of the VE process. Consultant will provide the following services for Task 200:

Subtask 210 – Conceptual Design Development

Develop conceptual level detail (approximately 15 percent) for the proposed alternative as defined by the 2013 Draft Facilities Plan. A Project Elements List is attached (Attachment 2). The conceptual design package is anticipated to include the following: updated hydraulic profile; major plans and sections for each facility listed in Attachment 2; major equipment cut sheets and equipment/electrical load lists; process control philosophies and control diagrams for major systems; overall control system block diagram; electrical single line drawings; and an updated cost estimate. Consolidate information into a conceptual level design package. Meet with City staff to review and confirm information.

Subtask 210 Assumptions:

1. Conceptual level design information will be developed based on information provided in the Draft Facilities Plan, March 2013.
2. Consultant will use a facilitated design workshop approach to streamline conceptual level of design development.
3. The conceptual level design package will consist of a brief summary, drawing package (approximately 30 drawings), and narrative process control philosophies for major systems (approximately 10 control philosophies).
4. Consultant will present conceptual level design information to City staff at a full-day meeting, conducted at City of Oak Harbor facilities.
5. The conceptual level design package will serve as the basis for VE.

Subtask 220 – WWTP Site Visits

Site visits to nearby facilities will help to address questions from City staff related to equipment selection, performance, O&M concerns, and level of technical support. Schedule and conduct up to three (3) independent site visits to nearby facilities. Participate in site tours, facilitate Q&A, and complete brief trip reports summarizing results and recommendations collected as a result of the site tours. Incorporate recommendations into conceptual design information prepared under Subtask 210.

Subtask 220 Assumptions:

1. Site visits will be completed in the Pacific Northwest as close to Oak Harbor as possible. Costs for mileage and per diem for City and Consultant staff are included. Airline travel is not anticipated.
2. Site visits will be conducted in a single day. If coupling site visits requires an overnight staff, lodging for Consultant and City staff will be billed at-cost.
3. Two (2) members of consultant staff will participate in site visits.

Subtask 230 – VE Support

Develop a presentation and present basis of planning and conceptual design information to the VE team. Meet with the VE team at the onset of the VE workshop to review and present information. Meet with the VE team at the close of the VE workshop to receive comments and ideas. Review VE team recommendations with City and develop a narrative response accepting ideas or describing why ideas are not recommended. Meet with City staff to review responses. Consolidate comments and develop a brief memorandum and presentation to City Council summarizing the results of the VE effort.

Subtask 230 Assumptions:

1. City will contract directly with a Certified Value Engineering Specialist to conduct the VE workshop.
2. Consultant level of effort includes preparation for and participation in two (2) full day meetings associated with the VE workshop, and one (1) 4-hour meeting with the City to review VE results.

3. Two (2) members of Consultant staff will participate in the VE workshop and City review meeting.
4. VE workshop will be held at or near City of Oak Harbor facilities.
5. Effort for City Council presentation is included in Task 300.

Task 200 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Conceptual Design Package	210	Per Schedule
(3) Site Visit Trip Reports	220	As Required
(1) Materials for Staff Meeting	230	Per Schedule
(1) VE Response Report to Council	230	Per Schedule

TASK 300 – PUBLIC PROCESS SUPPORT

The objectives of this task include: 1) support the City in selecting the final location for the WWTP within the Windjammer Vicinity; and 2) support successful project implementation by proactively identifying and addressing public and stakeholder concerns related to the Project. As defined below, the City will lead public process activities for the Project, with significant support from the Consultant. Consultant will provide the following services for Task 300:

Subtask 310 – Public Process Planning

Participate in one (1) meeting with the City to develop a project-specific public/stakeholder involvement plan (PIP) that identifies the following:

- Target audiences and issues.
- Anticipated schedule of activities.
- Interrelationships and responsibilities.
- Public involvement tools for each phase of the project.

Prepare a Draft PIP, review with the City, make revisions, and produce a final PIP. Participate in coordinating phone calls with City staff to provide strategic advice on public involvement and communications issues as they arise throughout the Project.

Throughout the Project, develop and maintain a contact list of stakeholders and interested parties. Maintain a log of public comments received outside of the public meetings (via the website, emails to project team staff, phone calls, etc.), and responses to public inquiries as requested by the City.

Subtask 310 Assumptions:

None.

Subtask 320 – Establish Policy Framework

Assist the City in planning and conducting a up to four (4) meetings with City officials to establish the policy framework for selecting the final location for the WWTP within the

Windjammer Vicinity site. Assist City staff in preparing advance plans that identify: information needed; options to be considered; and impacts associated with each option. Assist City staff in summarizing policy-level decisions into a briefing document that can be shared with the public and potentially affected property owners prior to selecting the final WWTP location.

Subtask 320 Assumptions:

1. All meetings and planning sessions for Subtask 320 will be held at City of Oak Harbor facilities.
2. The City will contract directly with others to provide specialized advice related to property acquisition, urban planning, commercial real estate, and cultural resources.
3. Consultant Project Manager will attend all Subtask 320 meetings.

Subtask 330 – Charrette Workshops

Assist the City in planning and conducting a charrette workshop to collect additional community input and assist with selecting the final WWTP location within the Windjammer Vicinity site. Meet with City staff to develop charrette objectives, constraints, and other information reflecting policy decisions developed in Subtask 320. With City input, prepare conceptual layout options for up to three (3) different locations within the Windjammer Vicinity site as a starting point for the charettes. Assist charrette team in revising layout options during the workshop, and/or in developing new layout options that are consistent with City policy. Coordinate with City's independent charrette facilitator to develop a final, recommended location based on charrette input. Summarize cost and non-cost/policy issues and present recommended final layout to City Council for direction.

Subtask 330 Assumptions:

1. All charrette workshops for Subtask 330 will be held at City of Oak Harbor facilities.
2. Consultant Project Manager, Design Manager, and Architect Lead will attend and participate in charrette workshops.
3. City will contract directly with a charrette facilitator to plan, facilitate, and document the charrette process.
4. The City will contract directly with others to provide specialized advice and expertise that may be useful during the charrette process, including services related to property acquisition, urban planning, commercial real estate, and cultural resources. NOTE: Effort to negotiate land acquisition and to confirm the presence of cultural resources as a condition of land acquisition is not included in Consultant's Scope o f Services.
5. Effort for presenting charrette information to the Public and City Council is included in Subtasks 340 and 360.

Subtask 340 – Public Meetings/City Council Workshops

Assist in planning for and delivering joint Public Meetings/City Council Workshops, defined below. Participate in up one (1) preparation session for each meeting. Coordinate with City staff to direct Public Meetings/Workshops and produce one (1) draft and one (1) final summary (minutes). For each meeting: assist City to arrange for suitable meeting locations; prepare meeting plans; produce presentation materials; develop sign-in sheets and public comment

forms; develop draft and final agendas; and develop draft and final meeting announcements/save the date notices.

Public Meeting/Council Workshop	Objectives
P1 – Public Meeting No. 1 (Input on Siting Policy)	Update Status of Navy Coordination Obtain Input to Set Policy for Final WWTP Location Communicate Future Opportunities for Input
P2 – Public Meeting No. 2 (Input on Final Location)	Communicate Results of Value Engineering Communicate Results of Charrette Process Update Status of Navy Coordination Obtain Input to Determine Final WWTP Location Communicate Future Opportunities for Input
P3 – Public Meeting No. 3 (Input on Design Features)	Communicate Final WWTP Location Update Status of Navy Coordination Obtain Input to Assist in Architectural Themes Communicate Future Opportunities for Input
P4 – Public meeting No. 4 (Final Plan, Next Steps)	Present Preliminary Design Communicate Decision RE: Navy Participation Update Project Phasing/Cost Information Communicate Future Opportunities for Input

Subtask 340 Assumptions:

1. Public Meetings will be held in conjunction with City Council Workshops to enhance efficiency for sharing information.
2. The City will arrange and pay for meeting locations and facilities.
3. The City will publish announcements in the local paper and include notices of meetings on their website.
4. The City will pay for all costs related to meeting notifications, including printing and postage.

Subtask 350 – Working Groups

Working Group Meetings will be used to inform design decisions related to project features, architecture, public spaces, landscaping, etc. Assist City in planning for and conducting four (4) Working Group Meetings during the preliminary design process. Coordinate with City staff to prepare information necessary to communicate design layouts, opportunities and obtain input. Document input and issue meeting minutes with decisions to City.

Subtask 350 Assumptions:

1. Working Group Meetings will held at City of Oak Harbor facilities
2. City staff will select community participants, schedule meetings, and communicate with participants as needed to maximize participation.

3. Working Group Meetings will be attended by approximately five (5) members of the community, in addition to Consultant and City staff.
4. Consultant Design Manager and Lead Architect will attend Working Group Meetings.

Subtask 360 – Council/Committee Meeting Participation

Assist the City in planning and conducting Council/Committee Meetings, defined below. Prepare meeting objectives, agendas, roles and responsibilities, and presentation materials in advance of the meetings. Participate in up to one (1) preparation session for each meeting.

Council/Committee Meeting	Objectives
C1 – Council Committee Meeting No. 1	Communicate Project Schedule and Approach Establish Policy Need for Final WWTP Location Review Status of Navy Discussions
C2 – Council Committee Meeting No. 2	Discuss Policy for Final WWTP Location Review Status of Navy Discussions Communicate Plan for P1
C3 – Council Meeting No. 1	Establish Policy for Final WWTP Location Confirm Navy Participation (in or out)
C4 – Council Committee Meeting No. 3	Report Results of VE Process
C5 – Council Committee Meeting No. 4	Report Results of Charrette Process Communicate Plan for P2
C6 – Council Meeting No. 2	Accept Final VE Recommendations Select Final WWTP Location
C7 – Council Committee Meeting No. 5	Update Project Status Communicate Plan for P3
C8 – Council Committee Meeting No. 6	Summarize Project Delivery Options Communicate Plan for P4
C9 – Council Meeting No. 3	Select Project Delivery Option

Subtask 360 Assumptions:

1. Council/Committee Meetings will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for meetings and deliver meeting materials to attendees.
3. Consultant Project Manager will attend City Council Committee Meetings/City Council Meetings, and assist City staff in presenting technical information.

Subtask 370 – Public/Stakeholder Involvement Product Development

In consultation with City staff, develop a project website and periodically update the website content. Other options for products and activities, subject to Oak Harbor authorization and decisions from the PIP include:

- Project brochures/mailers.
- In consultation with City staff, the Consultant may produce a segment for the City of Oak Harbor public access channel. As directed, Consultant will prepare a script and be involved in organizing productions that are filmed and produced by the City.
- Consultant will assist with strategy and development of presentations for local community groups made by City staff.

Task 370 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City staff/consultants.
2. City will print and send materials to the public.
3. Costs for production of materials and Public Access TV productions are paid by the City outside of this contract.

Task 300 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Updated PIP	310	Per Schedule
(1) Information for Charrette Workshops	330	Per Schedule
(4) Public Meeting/Council Workshop Materials	340	Per Schedule
(4) Working Group Meeting Materials and Minutes	350	Per Schedule
(9) Presentations for Council/Committee Meetings	360	Per Schedule
(1) Project Website	370	As Needed
(12) Updates to Project Website	370	As Needed
(6) Project Brochure/Public Information Materials	370	As Needed
(1) Public Access TV Production Plan	370	As Needed

TASK 400 – WWTP PRELIMINARY DESIGN

The objective of this task is to complete a Preliminary Design of the recommended WWTP (as defined in the Facilities Plan and by Tasks 200 and 300) to approximately 30 percent level of completion. The Preliminary Design will consist of a Preliminary Design Document, Preliminary Design Drawings, and Preliminary Design Specifications. The expected project elements list for the WWTP is included as Attachment 2.

Preliminary Design documents will be submitted in electronic (PDF) and hard copy format for City review. Five (5) hard copies of will be provided to the City. City review comments will be documented using the Record of Comment (ROC) log. City comments, modifications, and revisions to the Preliminary Design documents will be incorporated during subsequent development of Final Design documents.

Subtask 410 - Preliminary Design Document

Prepare and submit for City review a Preliminary Design Document (PDD) to include the following elements:

- Process equipment information and data sheets for major pieces of new equipment (updated from Task 200).
- Preliminary equipment and electrical load list for major pieces of new equipment (updated from Task 200).
- Process Flow Diagrams (PFDs) and narrative control strategies for major processes (updated from Task 200).
- HVAC and odor control requirements (updated from Task 200).
- Three dimensional (3D) renderings of selected Phase 1 processes areas and buildings.
- Building code classification table.
- Architectural basis of design and renderings.
- Project construction and sequencing schedule.
- Final Geotechnical Report.
- Updated opinion of Project Cost.
- Decision log.

Subtask 410 Assumptions:

None.

Subtask 420 - Preliminary Design Drawings

Complete additional site survey as needed and prepare Preliminary Design drawings, including site plans, schematics, facility layout and equipment drawings, and major architectural, structural, mechanical, HVAC, odor control, electrical, instrumentation and control drawings, P&IDs for major processes. Develop a 3D model of selected process areas to assist in staff review of these facilities. The expected sheet list for the Preliminary Design Drawings is included as Attachment 3.

Subtask 420 Assumptions:

1. The 30 percent submittal will include approximately 120 to 180 drawings.

Subtask 430 - Preliminary Design Specifications

Prepare Preliminary Design Specifications using Consultant's Master Specifications. Identify potential material and equipment requiring procurement outside of the general construction contract. The list of specifications expected to be submitted with Preliminary Design is included as Attachment 4.

Subtask 430 Assumptions:

1. The 30 percent submittal will include draft specifications for major equipment and control strategies for major systems.

Subtask 440 – Procurement Documents

The objective of this task is to assist the City in selecting manufacturers for membrane and UV process equipment using a competitive bidding process. Preliminary design information prepared under Task 400 will be developed to 30 percent level around the selected equipment manufacturers based on the specific details of the selected UV equipment manufacturer.

Prepare competitive bid documents for membrane and UV equipment procurement, including: preliminary layout drawings for each manufacturer; general ancillary facility requirements; and required technical specifications. Coordinate with City staff to include terms, conditions, and contract times (submittal dates and delivery dates) into procurement documents. Meet with City staff to review draft bid documents, incorporate comments, and issue final bid documents.

Assist the City during the equipment bidding period by answering questions from the UV equipment manufacturers and preparing addenda. Attend the pre-bid conference. Assist the County in evaluating all bids and in selecting equipment manufacturers.

Subtask 440 Assumptions:

1. Bid documents will be prepared and bids solicited for up to two (2) UV equipment manufacturers and up to two (2) membrane equipment manufacturers.
2. Contracts for low bidders will include assistance with design phase. Contracts for production and delivery of process equipment will be assigned to a General Contractor during subsequent phases of work.
3. Consultant standard procurement documents will be used for technical and front-end documents.
4. One (1) addendum will be prepared during the equipment bid period for each manufacturer, two (2) total addenda.
5. The city will cover reproduction costs for bid sets as required.

Subtask 450 – Technical Team Meetings

Technical Team Meetings will be held during preliminary design to collect information from City staff, enhance communication with the design team, and to present 30 percent design concepts. Plan for and conduct three (3) Technical Team Meetings during the preliminary design process. Prepare information necessary to communicate with City staff and obtain input. Document input and issue meeting minutes with decisions to City.

Subtask 450 Assumptions:

1. Technical Team Meetings will held at City of Oak Harbor facilities
2. Technical Team Meetings will be approximately four (4) hours in duration.
3. Approximately three (3) members of Consultant design team will attend each meeting, including Design Manager and other necessary staff/discipline engineers.
4. Meeting materials and minutes will be distributed electronically.

Task 400 Deliverables

Deliverable	Subtask	Anticipated Delivery Date
(5) Preliminary Design Document	410	Per Schedule
(5) Preliminary Design Drawing Sets	420	Per Schedule
(5) Preliminary Design Specifications	430	Per Schedule
(5) Draft and Final Procurement Documents	440	Per Schedule
(3) Technical Team Meeting Materials and Notes	450	Per Schedule
(1) Preliminary Design ROC	410 - 440	Per Schedule

TASK 500 – PROJECT DELIVERY ANALYSIS

The objective of this task is to select the preferred method for delivering the WWTP final design and construction. Consultant will provide the following services under Task 500:

Develop and evaluate potential delivery alternatives for the project, including: 1) conventional design-bid-build (DBB), 2) design-build (DB); and 3) General Contractor/Construction Manager (GC/CM). Prepare a qualitative list of advantages and disadvantages associated with each delivery option. The list is anticipated to include factors such as quality, cost, schedule, and risk mitigation.

Prepare a brief Project Memorandum (PM) summarizing results of delivery analysis. Review PM with City staff and present findings and recommendations to City officials for direction.

Task 500 Assumptions:

1. City will hire third-party advisor(s) to assist in evaluating project delivery options.
2. Consultant support of City's application to use alternate delivery will be included in a subsequent phase of services, if needed.
3. Consultant Project Manager and Design Manager will attend one (1) Technical Team Meeting to review delivery options with City and City's third-party advisor(s).

Task 500 Deliverables:

1. Project Delivery Alternatives PM (Draft and Final).

TASK 600 – OUTFALL DESIGN

The objective of this task is to provide preliminary and final design services, and bid-period assistance for the City's new marine outfall into Oak Harbor. The marine outfall will be constructed to replace the City's existing failed Oak Harbor outfall, in a similar location and alignment occupied by the existing outfall.

Subtask 610 – Preliminary Design Documents

Develop preliminary design documents to a level of detail required to achieve final permit approval (Shoreline Permit, JARPA, HPA, and BA) for the new/replacement outfall. Complete survey and geotechnical work to support outfall final design. Confirm required mixing is achieved for final diffuser design detail. Prepare final design criteria for mixing, wind/wave and current data, buoyancy/thrust/anchoring details, and other pertinent information needed for the outfall design. Develop 30 percent level drawings showing connection details and plan/profile views of the outfall and diffuser. Evaluate construction options and develop an engineer's estimate of probable construction cost. Attend and participate in a Technical Team Meeting to review 30 percent design. Document City comments using ROC process and incorporate comments into subsequent submittals.

Subtask 610 Assumptions:

1. The 30 percent review meeting will be held at City of Oak Harbor facilities.
2. Consultant Design Manager and required engineering staff will attend 30 percent review meeting.
3. 30 percent design submittal will include three (3) hard copies of drawings and technical specifications in CSI format, and one electronic (PDF) copy on CD.

Subtask 620 – Outfall Permitting Support

Coordinate between Consultant team members to secure permits associated with the outfall, including Shoreline Permit, JARPA, HPA, and BA. Prepare necessary figures and details to support permitting requirements.

Subtask 620 Assumptions:

1. Consultant level of effort includes two (2) meetings with regulatory agencies to review information and address questions and/or comments.
2. Consultant will provide 30 percent design information as required to facilitate final permitting.

Subtask 630 – Final Design Documents

Develop final design documents (plans and technical specifications) for bidding and construction of the new/replacement outfall. Submit a progress submittal at approximately 60 percent completion. Review progress submittal with City staff, document and incorporate comments using the ROC process. Update engineer's opinion of cost at 60 percent.

Complete final design documents (ready to bid) incorporating comments from regulatory agencies and City staff. Prepare an engineer's option of cost at final design.

Subtask 630 Assumptions:

1. The 60 percent review meeting will be held at City of Oak Harbor facilities.
2. Consultant Design Manager and required engineering staff will attend 60 percent review meeting.
3. 60 percent design submittal will include three (3) hard copies of drawings and technical specifications in CSI format, and one electronic (PDF) copy on CD.
4. City front-end documents will be used for final design submittal. Consultant will coordinate City front-end documents with consultant's technical specifications.
5. Final design submittal will include ten (10) hard copies of drawings and technical specifications in CSI format, and one print ready electronic (PDF) copy on CD.

Subtask 640 – Bid Period Services

Attend and participate in pre-bid meeting at City of Oak Harbor facilities. Respond to questions and requests for information (RFI) during the bid period. Develop contract addenda as required. Review submitted bids upon opening for conformance with contract documents, and provide recommendations for award of the contract.

Task 600 Deliverables:

Deliverable		Subtask	Anticipated Delivery Date
(3)	30 Percent Design Documents	610	Per Schedule
	Information in Support of Permitting	620	As Needed
(3)	60 Percent Design Documents	630	Per Schedule
(10)	Final Design Documents	630	Per Schedule
(1)	Contract Document Addendum	640	Per Schedule
(5)	RFI Responses	640	Per Schedule
(1)	Written Recommendation for Award	640	Per Schedule

EXHIBIT B - SCOPE OF SERVICES
AMENDMENT NO. 1 – June 8, 2011

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

BACKGROUND

The City of Oak Harbor (City) currently operates two wastewater facilities: a Rotating Biological Contactor (RBC) plant located near Windjammer Park; and a lagoon plant located on Naval Air Station (NAS) Whidbey Island. The two current facilities serve a population of approximately 23,000 of which approximately 4,000 are housed at the NAS. It is anticipated that future demands will approach the permit limits in approximately 2017 as described in greater detail in the City's Comprehensive Sewer Plan. The City anticipates the need to have a new treatment facility in operation by 2017. The City intends to construct new wastewater treatment facilities to meet initial demands (3 million gallons per day [mgd]), with expansion capacity to meet long-term demand projections (6 mgd). Recognizing that the City of Oak Harbor is connected to the pristine waters of Puget Sound, specifically Oak Harbor and Crescent Harbor Bay, the City's goal is to obtain the highest level of water quality practical while recognizing the limitations of the rate payers of the City of fund improvements. A primary goal of the City is the continued protection of the water quality of the waters in and around Oak Harbor to meet the goals outlined in the Puget Sound Action Plan developed by Puget Sound Partnership for the cleanup and protection of Puget Sound.

This phase of the work includes development of preliminary engineering and a Facilities Plan. Subsequent phases, though not specifically authorized by this contract, may include the following:

- Final Design and Permitting
- Preparation of Construction Documents
- Bid Period Services
- Construction Support Services
- Preparation of Operation and Maintenance Manuals
- Start-up, Training, and Facility Commissioning

Project Objectives

The objectives of the Project are to:

1. Prepare Technical Memoranda (TM) evaluating wastewater treatment process, siting, and discharge options;
2. Identify a proposed alternative for wastewater facilities;
3. Prepare preliminary design information and an approved Facilities Plan in compliance with WAC 173-240-060 and 40 CFR 35.917-1;
4. Prepare the required supporting Environmental Documents; and
5. Provide support for public, agency, and stakeholder involvement.

Project Team

Carollo Engineers, P.C. (Carollo) will serve as the Prime Consultant for the Project, and will be responsible for overall Project management and delivery. In completing the work defined by this Scope of Services, Carollo is authorized to use the following Subconsultants:

Subconsultant	Role
BHC Consultants	Conveyance System Alternatives Analysis Satellite MBR Alternatives Analysis Feasibility of Connecting Non-Sewered Residents Regional Biosolids Alternative Feasibility
ESA Adolfson	Environmental Support and Documentation
Triangle Associates	Public Process Support
EnviroIssues	Public Meeting Facilitation
Michael Willis Architects	Architectural Services
GeoEngineers	Geotechnical Services
Katy Isaksen & Associates	Financial Analysis for Proposed Alternative
Bruce Dees & Associates	Landscape Architectural Services
Cosmopolitan Engineering Group	Outfall Analysis and Alternatives
Certified Land Services	Property Acquisition Support Services
Paragon Research Associates	Cultural Resources Assessment Services

Related Documents

The following documents provide background information for this project:

- Wastewater Treatment Plant Site Evaluation, City of Oak Harbor, October 2007.
- City of Oak Harbor Comprehensive Sewer Plan, TetraTech/KCM, December 2008.

SCOPE OF SERVICES

Carollo (Consultant) will provide engineering and other services for the City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan Project (Project), as defined by this Scope of Services. Work products submitted electronically will be produced using software as defined below:

- Word Processing — Microsoft Word
- Spreadsheets — Microsoft Excel
- Scheduling — Microsoft Project
- Drawings — Bentley MicroStation and Portable Document Format (PDF)

This Scope of Services is divided into the following tasks:

Task 100 Project Management
Task 200 Preliminary Alternatives Development and Screening
Task 300 Final Alternatives Development and Screening
Task 400 Outfall Evaluation
Task 500 Reuse Opportunities
Task 600 Facilities Plan
Task 700 Environmental Review and Documentation
Task 800 Public Process Support
Task 900 Management Reserve

PROJECT SCHEDULE

A preliminary schedule for the Project is attached (Attachment 1). The Schedule defines anticipated durations for major tasks, Project milestones, and major deliverable dates, assuming Notice to Proceed (NTP) in August 2010. Throughout this Scope of Services, anticipated delivery dates for major deliverables are established based on this preliminary schedule. The Consultant and City recognize that the preliminary schedule and corresponding delivery dates are subject to change, should NTP be issued after August 2010 and/or for other reasons. Schedule changes may be approved by the City without an amendment to this Scope of Services, provided both Consultant and City staff approve of the change. An amendment modifying the Project schedule and dates for major deliverables will be issued if required by either the City or Consultant.

TASK 100 – PROJECT MANAGEMENT

The objective of this task is to manage and coordinate engineering and related services required for project completion. Except as noted under assumptions, Consultant will provide the following services for Task 100:

Subtask 110 – Project Management Plan

Complete a draft Project Management Plan (PMP) including scope, work plan and products, work breakdown structure, budget, schedule, organization and staffing, communication protocol, and project standards within ten (10) days of Notice to Proceed (NTP). Finalize the PMP following the Startup Workshop and receipt of City comments. Monitor the PMP throughout the project and provide one update of the PMP upon request by the City.

Subtask 111 – Quality Management

Develop and follow a Quality Management Plan (QMP) for the project to be included in the PMP. Review technical memos, documents, drawings, reports, etc. and address review comments addressed prior to submission in accordance with the QMP. For major work products (TM and Facilities Plan) develop a Record of Comment (ROC) to document City comments and Consultant responses.

Subtask 110 Assumptions:

1. A Draft PMP will be reviewed at the Project Startup Meeting.
2. A Final PMP will be issued to incorporate City comments collected following the Project Startup Meeting.
3. The PMP will be updated once during the project.

Subtask 120 – Project Monitoring and Reporting

Manage the project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete this Scope of Services. Prepare monthly project status reports that compare work accomplished with schedule activities and compare expenditures with task budgets, and submit reports to the City's Project Manager with monthly invoices. Document expenditures on a task basis, and show hours by project personnel and other direct expenses related to work. Include a project S-curve developed using Earned Valve Management (EVM) detailing anticipated progress, percent complete and percent billed for each month.

Subtask 120 Assumptions:

1. Total project duration is 26 months.

Subtask 130 – Project Management Meetings

Schedule and conduct Project Management Meetings throughout the project as directed by the City's Project Manager. Meetings will be used to discuss project status, action items, and potential areas of concern. Publish meeting minutes with action items that require a response by team members, City staff, or other agencies identified at the meeting. A draft of the minutes will be submitted to the City within three (3) working days after the meeting. The final version will be submitted within five (5) working days after comments on the draft have been received from the City.

Subtask 130 Assumptions:

1. Up to eight (8) Project Management Meetings will be held.
2. Project Management Meetings will be held via teleconference.
3. Agendas, meeting minutes, and Action Items will be distributed electronically by the Consultant to City's Project Manager.

Subtask 140 – Project Team Website

Develop and maintain a collaborative Web Site accessible through the Internet by all project team members. The Web Site will be maintained from NTP through final approval of the Facilities Plan. Essential project information will be logged, recorded, and made available through this Web Site during the project, including:

- Project team and contact information.
- Calendar of events.
- Document library including agendas, presentation materials, meeting minutes, submittals, and deliverables.
- Updated Action List providing assignments and status.
- Decision Log.

Subtask 140 Assumptions:

1. Project Team Website will only be accessible to members of the project team (i.e. City and Consultant staff). Consultant will develop and maintain a project website for external use under Task 800 – Public Process Support.

Task 100 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) PMP	110	September 2010
(22) Monthly Invoices and Progress Reports	120	Monthly
(8) Project Management Meeting Agendas	130	As Needed
(8) Project Management Meeting Action Items Log	130	As Needed
(1) Project Team Website	140	September 2010

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to develop a matrix of preliminary alternatives (treatment process options and candidate sites) and identify a short list of final alternatives to be evaluated and refined in subsequent phases of work. Except as noted under assumptions, Consultant will provide the following services for Task 200:

Subtask 210 – Basis of Design Documentation

Subtask 211 – Engineering Basis of Design

Review and comment on previous projections developed by the City, and confirm population, flow, and waste load data for the Oak Harbor service area. Establish flow peaking factors (maximum month, maximum day, and peak hour) based on City-provided data. Using these projections and available plant loading data, establish loading estimates and peaking factors for flow, organics (BOD), total suspended solids (TSS), phosphorus and nitrogen loading to the plant.

Evaluate the City's exiting National Pollutant Discharge Elimination System (NPDES) permit, potential future water quality requirements, and establish water quality objectives for conventional effluent parameters, nutrients, fecal coliform bacteria, temperature, and pH. Document basis of design (flows, loads, and effluent requirements) in TM1 – Basis of Design.

Subtask 212 – Decision Making Methodology

Treatment process options and candidate sites will be evaluated in a manner that is consistent with City policy objectives, and to meet basic technical, performance, and environmental requirements. Two (2) process options and up to nine (9) candidate sites will be placed into a matrix of preliminary alternatives. These preliminary alternatives will be screened using Triple Bottom Line Plus Technical (TBL+) methodology, considering financial, social, environmental, and technical criteria and objectives developed by the City and project team. A short list of five (5) alternatives (5 sites with corresponding process options) will be refined for subsequent TBL+ evaluation. A final list of alternatives (3 sites with corresponding process options) will be further refined and used to select the proposed alternative.

Coordinate with City staff to develop a list of basic policy, technical, performance, and environmental requirements that will be used to create the matrix of preliminary alternatives (Wastewater Treatment Plant [WWTP] process options and sites). Develop a list of TBL+ criteria and objectives to be used for preliminary and final alternatives evaluation. Document the basis for decision making in TM2 – Decision Making Methodology.

Subtask 210 Assumptions:

1. Population, flow, and loading data for the Oak Harbor service area will be based on the December 2008 Comprehensive Sewer Plan.
2. Meetings with regulatory stakeholders and City input will be used to establish potential future NPDES permit requirements. Negotiation of permit limits is not included in this Scope of Services.
3. A matrix of preliminary alternatives will be developed based on City policy and basic technical, performance, and environmental requirements.
4. Preliminary and final alternatives will be evaluated using the TBL+ approach.

Subtask 220 – Preliminary Alternatives Development

Subtask 221 – Centralized Treatment Process Evaluation

Develop and evaluate treatment process options to treat all flow from the City and NAS. Identify Washington Department of Ecology (Ecology) requirements for reliability and redundancy, and prepare conceptual design and cost information for processes being considered. Screen potential treatment process options using basic technical and performance requirements established by the project team, and identify up to two (2) process options to be included in the matrix of preliminary alternatives. For these options, develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs). Document the evaluation and recommended options in TM3 – Treatment Process Evaluation. The following facilities will be evaluated:

- Preliminary/Primary Treatment. Headworks (preliminary treatment) options, including influent pumping, screening grit removal, flow measurement, and influent sampling. Primary treatment options, including clarification and sludge pumping facilities.
- Secondary Treatment. Secondary (biological) treatment process options, including up to four (4) processes capable of meeting identified performance requirements. It is anticipated that more detailed technical and cost information will be developed for up to two (2) process options: activated sludge (AS) and membrane bioreactors (MBR).
- Disinfection. Disinfection options, including chlorination/dechlorination (using bulk or on-site generation of hypochlorite) and ultraviolet (UV) disinfection.
- Solids Handling. Solids handling options, including a range of processes to achieve a Class B biosolids product on-site, as well as continued use of existing solids handling facilities on an interim or permanent basis. The feasibility of providing biosolids stabilization and/or disposal on a regional basis will be evaluated by the Consultant under a separate task.
- Odor Control. Identify potential odor impacts, foul air treatment requirements to meet these impacts, and establish the basis for odor control facilities. Prepare conceptual design information for odor control system components based on the treatment process options being considered.
- Non-Process Facilities. Evaluate space needs for plant administration, operation, maintenance, and laboratory facilities to support future treatment facilities through Architectural Programming. Develop a programming questionnaire to determine rough but conservative space needs for new non-process facilities. Interview City staff and prepare a brief Programming Narrative outlining preliminary space needs, laboratory requirements, maintenance functions and desired adjacencies to other plant space, and coordinate with process needs, landscaping, and zoning requirements. Integrate non-process facilities into diagrams, including structural footprints, roadways, and landscaping areas for up to two (2) alternative layouts. In addition to the plant non-process facilities, plan the space and accessibility needs for the potential to add education centers, tour group meeting areas, and interior and exterior public spaces to welcome and educate the public.

Subtask 222 – Satellite MBR Facility Evaluation
Develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs) for a satellite MBR facility treating up to 0.5 mgd of flow per Ecology requirements. Document the recommended option in TM3 – Treatment Process Evaluation.

Subtask 223 – Candidate Site Inventory
Develop a list of potential sites to locate a centralized WWTP and satellite MBR. Coordinate with City staff to identify potential sites for the recommended treatment options, considering factors such as: size (land area); location; ownership and real-estate considerations; conveyance system impacts; environmental impacts; land use restrictions; and adjacency to existing outfalls.

Screen potential sites based on City policy and using basic technical and environmental requirements, and establish a candidate site inventory to be included in the matrix of preliminary alternatives. Document the site development and screening process in TM4 – Preliminary Alternatives.

Subtask 220 Assumptions:

1. None.

Subtask 230 – Preliminary Alternatives Screening

Pair recommended process options with candidate sites to develop a matrix of preliminary alternatives. Refine conceptual site layouts based on candidate site requirements and evaluate collection/conveyance system impacts. Integrate the results of Subtask 410 – Preliminary Outfall Assessment and confirm outfall options. Update cost information to reflect preliminary alternative layouts and system-wide impacts.

Develop an initial assessment of potential social impacts, including noise, odor potential, visual aesthetics, construction impacts, and long-term operation impacts. Develop a TBL+ analysis for up to eight (9) preliminary alternatives (9 sites with corresponding process options). Screen preliminary alternatives to a short list of five (5) alternatives (5 sites with corresponding process options), and document results in TM4 – Preliminary Alternatives.

Subtask 231 – Environmental Review
Conduct a one day field investigation and perform an initial environmental assessment of candidate sites. Identify sensitive areas, fish and wildlife impacts, wetlands, streams and shoreline impacts, site soils and sediments, effluent water quality impacts, potential permitting requirements, and other pertinent information that will use used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives. Meet with City to finalize environmental documentation approach.

Subtask 232 – Preliminary Geotechnical Assessment
Conduct a one day field reconnaissance and perform an initial geotechnical assessment of the candidate sites. Base the assessment on available information, including geologic and other publicly available maps that document geotechnical conditions and geo-hazard considerations in the project vicinity.

Provide a TM summarizing the pertinent geotechnical issues that would impact site selection, design, and construction at the candidate sites, including: anticipated soil types and groundwater conditions; identified geo-hazards (seismic/ liquefaction, slope stability, etc.);

potential mitigation strategies; general foundation types including ground improvement techniques or other appropriate considerations; and preliminary construction considerations including shoring and dewatering based on the assumed site conditions. Information will be used to rate preliminary alternatives on their ability to meet the established TBL+ criteria and objectives.

Subtask 233 – Cultural Resources Review
Conduct background research to identify known cultural resources in the project vicinity using state records, historic maps, and other available information.

Subtask 234 – Zoning/Land Use Review
. Identify ownership, confirm code requirements and land use restrictions, and establish a preliminary estimate of property values that will be used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives.

Subtask 230 Assumptions:

1. Subtask 232 assumes that the City of Oak Harbor will provide available geotechnical information/reports from site and vicinity. Up to five potential sites will be evaluated (based on right-of-entry considerations). No geotechnical explorations will be conducted during this phase.
2. Subtask 233 assumes that up to nine potential sites will be evaluated (based on right-of-entry considerations). No subsurface explorations will be conducted during this phase.

Subtask 240 – Evaluation of the Feasibility of Connecting Non-Sewered Residents

The City is interested in investigating the extension of sewer service beyond those parcels that are currently on sewers. Some of these parcels are within and some outside the current City limits. However, all parcels to be considered are within the Urban Growth Boundary (UGB) limits.

Those parcels outside the City limits fall into three categories: highly and fully developed, underdeveloped and non-conforming parcels. Attachment 2 identifies the eleven distinct areas that are within the UGB but outside the City limits.

Specific tasks associated with this work will include the following:

1. Investigate feasibility of extending sewer service to those parcels within the City limits.
2. Investigate the feasibility of extending sewer service to the eleven areas outside the City limits.
3. Provide a schematic service alternative for these two groupings of parcels.
4. Provide a planning level cost estimate for the proposed service scheme.
5. For the proposed plan to extend sewer service to unsewered areas, develop a financial analysis for three (3) potential funding scenarios; to be selected by the City.
6. Provide public involvement associated with this task. This will specifically include an estimated three public meetings.
7. Prepare a policy statement regarding the extension of sewer service to these two groupings of parcels.

8. Present proposed service scheme, estimated costs, rate impacts, and proposed policy to Staff and City Council.
9. Present findings in a project memorandum.

Subtask 240 Assumptions:

1. None.

Subtask 250 – Staff Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T1 - Project Startup	Review/Finalize Project Management Plan Confirm Basis of Design Establish Decision Making Framework Prepare for Council Meeting No. 1 Prepare for Navy/Stakeholder Workshop No. 1
T2 - Preliminary Alternatives Development	Evaluate Potential Treatment Process Options Select Processes Options for Consideration (2) Confirm Satellite MBR Requirements Establish Non-process Requirements Establish Basis for Site Footprint Develop List of Potential Sites Apply Site Screening to Select Candidate Sites Establish Matrix of Preliminary Alternatives
T3 - Preliminary Alternatives Screening 1	Evaluate Matrix of Preliminary Alternatives (9 sites with corresponding process options) Screen Alternatives to Short List (5 sites with corresponding process options)

Subtask 250 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 200 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM1 – Basis of Design	210	September 2010
(1) TM2 – Decision Making Methodology	210	June 2011
(1) TM3 – Treatment Process Evaluation	220	June 2011
(1) Architectural Programming Questionnaire and Narrative	220	March 2011
(1) Preliminary Geotechnical Assessment TM	230	March 2011
(1) TM4 – Preliminary Alternatives	230	June 2011
(1) Unsewered Area Feasibility Memorandum	240	June 2011
(3) Workshop Materials, Agenda, Minutes	250	Per Workshop Schedule

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to further refine and evaluate the short list of final alternatives to select a proposed alternative for preliminary design. The proposed alternative will define the recommended liquid and solids stream treatment processes, location for centralized and satellite facilities (if applicable), conveyance and collection system improvements, outfall location and necessary improvements, and potential uses for reclaimed water. Except as noted under assumptions, Consultant will provide the following services for Task 300:

Subtask 310 – Final Alternatives Development and Screening

Further refine the final short listed alternatives, adding technical detail to site layouts based on site mapping and additional geotechnical evaluation. Confirm hydraulics and collection/conveyance system requirements. Integrate the results of Subtask 420 – Final Outfall Analysis, and Subtask 510 – Preliminary Effluent Reuse Assessment. Update cost information and TBL+ evaluations of financial, social, environmental, and technical criteria and objectives. Prepare a final screening of alternatives to select a proposed alternative for preliminary design. Document results of final screening in TM7 – Final Alternatives.

Subtask 311 – Site Mapping

Provide background mapping and existing and readily available geographical information system (GIS) data. Mapping will be developed as a basis for site planning at up to five (5) candidate sites. The mapping will show readily available information for property lines, existing structures, significant utilities, site topography, and other significant features.

Subtask 312 – Architectural Development

Conduct a one day field review and provide analysis of sites being considered for the new treatment plant in regards to contextual placement within the surrounding site conditions. Prepare conceptual site plan footprints for recommended facilities, coordinating with process engineers, landscape architects and with zoning requirements that may influence plant layouts on specific available site options. Provide graphic representation of appropriate site organization and utilization plans for three (3) of the five (5) sites recommended following the T3 workshop. Refine graphic layouts and site plans for all three (3) of the final short-listed sites recommended following the T4 workshop. Prepare 3D renderings illustrating up to two (2) facility views for the

final site / process option. Develop landscaping options and prepare up two (2) renderings showing site landscaping for the final alternative site. Prepare order of magnitude estimated probable costs of non-process facilities and develop associated landscaping and architectural theme costs.

Subtask 310 Assumptions:

1. The budget for Subtask 311 assumes existing and readily available GIS data are used, and does not include field visits or detailed surveys of sites or collection system/conveyance piping alignments.

Subtask 320 – Regional Biosolids Alternative Feasibility

The purpose of this subtask is to evaluate the feasibility of implementing a solids handling, stabilization, and biosolids disposal alternative on a regional basis, with participation from the following entities:

- City of Oak Harbor
- Navy Seaplane base
- NAS Ault Field
- Penn Cove Water/Sewer District
- City of Coupeville
- Island Septage

Except as noted under assumptions, Consultant will complete the following services for Subtask 320:

Gather and analyze historic solids production, hauling, and disposal records, including quantities and costs, from the regional entities. Estimate future solids production and handling requirements using growth projections provided by the entities.

Evaluate the capacity of the City of Oak Harbor's existing lagoons, and compare that capacity with the current and future solids loadings from the regional entities to determine the feasibility of using the existing lagoons for regional biosolids stabilization and storage. Estimate the capital cost of lagoon modifications and the operational and maintenance (O&M) costs for such a regional facility.

Estimate the size of a new and separate solids handling and stabilization facility to accept solids from the regional entities. Evaluate disposal alternatives for stabilized biosolids, including: composting; thermal drying; and trucking to an offsite location. Estimate the capital cost and annual O&M costs for such a regional facility.

Document the analysis and conclusions into a project memorandum that estimates the life-cycle costs and revenue potential to the City of Oak Harbor as the owner/operator of a regional solids facility.

Subtask 320 Assumptions

1. Consultant will estimate current and future solids loadings for the City of Oak Harbor, and assist the City in obtaining solids loadings for regional entities. Consultant will not

perform independent analysis to determine current and future solids loadings from the regional entities.

2. City owned property near the intersection of Highway 20 and Sleeper Road will be considered as the regional biosolids handling site.

Subtask 330 – Technical Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T4 – Preliminary Alternatives Screening 2	Evaluate Short Listed Alternative (5 sites with corresponding process options) Refine conveyance, pumping and piping requirements for final alternatives. Screen to Final Alternatives (3 sites with corresponding process options)
T5 – Final Alternatives Screening	Discuss Potential Reuse Opportunities Evaluate Final Short Listed Alternatives (3 sites with corresponding process options) Identify Proposed Alternative (1 site/process option)

Subtask 330 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 300 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM7 – Final Alternatives	310	December 2011
(4) Updated site utilization plans	310	June 2011
(2) 3D site/facility renderings	310	April 2011
(2) Site landscaping renderings	310	December 2011
(1) Regional Biosolids Management Feasibility Memorandum	320	July 2011
(2) Workshop Materials, Agenda, Minutes	330	Per Workshop Schedule

TASK 400 – OUTFALL EVALUATION

The objective of this task is to develop the criteria for saltwater outfall alternatives based on the preliminary and final alternatives being evaluated. Work performed under Task 400 will satisfy the following requirements of an Engineering Report under WAC 173-240-060:

- Degree of treatment required to meet applicable receiving water quality criteria.
- Document compliance with water quality standard outside authorized mixing zones.
- Detailed outfall and mixing zone analysis.

Except as noted under assumptions, Consultant will provide the following services for Task 400:

Subtask 410 – Discharge Alternatives and Performance Assessment

Due to their condition, the City has determined that neither the existing RBC outfall/diffuser nor the existing lagoon outfall/diffuser will meet future needs. This subtask will develop alternative diffuser sites and configurations, and then evaluate their effluent mixing and water quality impacts. This task will establish discharge alternatives (site location and diffuser configuration) for:

1. Outfall for RBC plant site in Oak Harbor (new or rehabilitated existing).
2. Outfall for an alternative site discharging to Oak Harbor or Crescent Harbor.

Subtask 411 – Outfall Inspections

Conduct visual inspections of the existing outfalls as required in Special Condition S11 of the NPDES permit. Both outfalls will be visually inspected and videotaped by experienced outfall design engineers. Rhodamine WT dye will be injected into the effluents to aid in locating and photographing the outfall and diffusers, and will also be used to detect leaks. The inspection will include the near shore section of the RBC outfall that is being evaluated for a temporary repair. The results of the inspections will be presented in a written report and DVD video.

Subtask 412 – Outfall and Diffuser Alternatives

Establish alternative diffuser sites in both Oak Harbor and Crescent Harbor. For practical purposes related to aquatic land use authorizations, preference will be given to siting diffusers at the existing locations. Additional diffuser locations will be considered if there are cost or performance advantages. Up to three diffuser alternatives (length, number and spacing of diffuser ports) will be established at each site. Due to the history of sedimentation around the RBC diffuser, elastomeric duckbill check valves will be considered.

Develop three outfall alignment and profile options (RBC outfall replacement to Oak Harbor, alternate site to Oak Harbor, alternate site to Crescent Harbor). Existing aerial base mapping and NOAA bathymetry will be used for the base map. Establish head loss ranges for diffuser alternatives. Establish pipeline diameter necessary for peak effluent flows and available discharge head. Perform a preliminary assessment of the utility of the two existing outfalls, based on existing drawings and dive inspection reports/videos. For the RBC outfall, evaluate potential slip lining alternative. Based on hydraulic analysis determine the need for effluent pumping for each alternative.

Subtask 413 – Shellfish Harvesting Areas and Aquatic Land Lease Assessment

Assess shellfish closure zone restrictions and potential geoduck damage payments for existing outfalls based on existing shellfish closure zones that have been established for the City's

outfalls by the Washington Department of Health (DOH), and payments that have been pursued by the Department of Natural Resources (DNR) in other areas where outfalls interfere with commercial fishing harvests. Assess potential changes in the closure zones and resource payments as a function of treatment plant flow and treatment technology (e.g. activated sludge versus MBR effluent). Summarize benefits, negative impacts, and potential resource costs of various diffuser siting and treatment technology options. Coordinate analysis and conclusions with DOH shellfish program manager.

Subtask 414 – Mixing Zone Analysis and Water Quality Assessment

Prepare mixing zone studies for up to two (2) combinations of outfall location and design flows, to meet anticipated requirements for development of a future NPDES permit. The analysis will include:

- Determination of acute and chronic mixing zone dilution factors using the existing Ecology/EPA mixing zone models and receiving water data.
- Assessment of the "reasonable potential" to exceed water quality criteria beyond the mixing zone boundaries, which is a statistical test adopted by Ecology to assess the need for effluent limits in the NPDES permit.
- Determination of the potential effluent limitations for toxicants (e.g. ammonia, chlorine, metals) in future NPDES permits.
- Determine compliance with ambient temperature criteria at the mixing zone boundaries.
- Assessment of the potential to impact aquatic sediments using Ecology screening criteria for potential impacts and review of existing sediment data near outfalls.
- Assess potential future Whidbey Basin marine TMDL limitations for nutrient discharge.

Subtask 410 Assumptions:

1. Preliminary effluent flow rates (maximum month, maximum day, and peak instantaneous) and gravity head availability will be used to establish hydraulic capacity of existing outfalls.
2. An objective for Subtask 410 will be to provide outfall information and conclusions to support the wastewater facilities screening conducted in Task 200.

Subtask 420 – Final Outfall Analysis

Subtask 421 – Confirm Mixing, Water Quality, and Shellfish Models

Finalize the mixing zone modeling, water quality assessments, and shellfish closure zone evaluations (updated from the previous subtask) based on the final flow and treatment facility alternatives developed under Task 200.

Subtask 422 – Recommended Outfall Improvements

Develop preliminary recommendations for the upgrade or replacement of the existing outfalls. Data developed in the evaluation will include variations and combinations of design features for up to two (2) outfall options, including:

- Alignment and profile for each outfall option.

- Diffuser criteria for each outfall option (number and size of ports, spacing, and orientation).
- Hydraulic capacity for each outfall option (gravity and pumped as appropriate).
- Recommendations for repair or rehabilitation for existing outfalls (as appropriate).
- Shoreline construction requirements as appropriate for new or repair work.
- Pipeline materials, cathodic protection, anchoring, and construction methods.
- Recommendations for maintenance and prevention of siltation.
- Permitting overview.
- Opinions of probable construction cost.

Summarize the mixing zone analysis and recommended outfall improvements, and document results and recommendations in TM5 – Outfall Evaluation and Recommendations.

Subtask 420 Assumptions:

1. Subtask 420 will be conducted in parallel with the final wastewater treatment alternatives development and screening under Task 300.

Task 400 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
Outfall inspection report and DVD for both existing outfalls	410	November 2010
(1) Preliminary Draft TM5 – Outfall Evaluation and Recommendations	410	November 2010
(1) TM5 – Outfall Evaluation and Recommendations	420	July 2011

TASK 500 – REUSE OPPORTUNITIES

The objective of this task is to evaluate the feasibility of beneficially reusing treated effluent produced by the proposed alternative. Except as noted under assumptions, Consultant will provide the following services under Task 500:

Subtask 510 – Preliminary Effluent Reuse Assessment

Discuss potential alternatives for reuse of treated effluent, including, seasonal irrigation supply (urban and agricultural), wetlands habitat augmentation/creation and in-plant use to meet Ecology requirements for facilities planning. Based on current regulations, identify treatment and facilities requirements, estimate land requirements and permitting restrictions, and prepare capital, operating, and life cycle cost estimates for up to two (2) potential reuse scenarios.

Subtask 510 Assumptions:

1. Budget for subtask 510 is based on requirements for facilities planning as defined in RCW 90.48.112. "The evaluation of any plans submitted under RCW 90.48.110 must include consideration of opportunities for the use of reclaimed water as defined in RCW 90.46.010. Wastewater plans submitted under RCW 90.48.110 must include a statement

describing how applicable reclamation and reuse elements will be coordinated as required under RCW 90.46.120."

Subtask 520 – Reuse Alternatives Development

The authorization and scope of this subtask will be developed pending the results of Subtask 510, and the outcome of the final alternatives screening process. If authorized by the City's Project Manager, Budget for this Subtask will be reallocated from Task 900.

Task 500 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Included in Task 600	510	April 2012

TASK 600 – FACILITIES PLAN

The objective of this task is to amend the City's existing Comprehensive Sewer Plan and complete a Facilities Plan that includes all applicable sections outlined by WAC 173-240-060 and 40CFR 35.917-1. The Facilities Plan will be consistent with federal, state, and local regulations and policies, such as the Endangered Species Act (ESA), the Growth Management Act, the City of Oak Harbor Comprehensive Plan, and the amended City of Oak Harbor Comprehensive Sewer Plan. The Facilities Plan will be sufficiently complete so that plans and specifications can be developed without substantial changes. Except as noted under assumptions, Consultant will provide the following services under Task 600:

Subtask 610 – Comprehensive Sewer Plan Amendment

Review and amend the December 2008 Comprehensive Sewer Plan for Ecology approval. Prepare an amendment with new data and recommendations to provide consistency with the Facilities Plan. Deliver Draft Amendment to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Amendment will be provided. Following City review of the Draft Amendment, incorporate comments into an Agency Draft Amendment to be submitted to Ecology for review.

Subtask 610 Assumptions:

1. The December 2008 Comprehensive Sewer Plan has been approved by Ecology. Consultant will prepare a brief amendment reflecting the proposed alternative developed in the Facilities Plan, including: selected liquid/solids treatment process(s); facilities site(s); collection/conveyance improvements; outfall/reuse of treated effluent; project implementation plan; and updated financial plan.
2. The Comprehensive Sewer Plan Amendment will be reviewed with Ecology as a component of the Agency Draft Facilities Plan.
3. Environmental Documentation prepared for the Facilities Plan will satisfy requirements for amending the Comprehensive Sewer Plan.

Subtask 620 – Develop Draft Facilities Plan

Compile the findings and recommendations documented in the previously defined Scope of Services into a Draft Facilities Plan. The expected outline of the Facilities Plan is included as Attachment 3.

Subtask 621 – Final Proposed Alternative Development
Develop the final proposed alternative in sufficient detail to satisfy facilities planning requirements, including:

- Refine the recommended liquid and solid stream treatment alternative to establish preliminary facility layouts and footprints.
- Develop design data, sizing criteria, liquid and solids stream schematics, and an overall WWTP hydraulic profile that reflects the recommended upgrades.
- Estimate plant electrical, instrumentation, and control requirements as a basis for future design.
- Provide a summary of collection, conveyance, and outfall improvements.

Subtask 622 – Architectural Renderings
Providing select architectural drawings of the proposed alternative to establish building envelopes, edge conditions, and the architectural treatments. Refine/update the 3D model generated in Subtask 312 to establish building mass, roof lines, and edge conditions, and provide up to two (2) rendered views of the new facilities on the selected site. Architectural renderings will convey materials and finishes and the general theme of the plant as it relates to local design guidelines and site specific architectural context. Coordinate with process building layouts and refined landscaping plans, and prepare one (1) site plan to illustrate the proposed appearance of the site, showing general land forms, planting, plant entrance, and parking.

Subtask 623 – Implementation Plan
Prepare an implementation plan for the recommended alternative, including a project schedule, phasing plan, anticipated project cost for each phase, and expected cash expenditure for the improvements.

Subtask 624 – Financial Analysis
Evaluate potential capital funding sources to develop funding strategy alternatives for the City. Estimate timing associated with potential funding programs, discuss eligibility, and note anticipated or potential program changes.

Prepare a financial analysis showing the project costs, how the project can be funded, and the how the debt can be repaid over a 20-year period. Reflect anticipated increases in operation and maintenance (O&M) costs and growth in connections in the analysis, including the financial history of the sewer utility and current outstanding debt. Summarize results and prepare the financial analysis chapter of the Facilities Plan.

Subtask 625 – Draft Facilities Plan
Deliver Draft Facilities Plans to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Facilities Plan will be provided. Following City review of the Draft Facilities Plan, incorporate comments into an Agency Draft Facilities Plan to be submitted to Ecology for review.

Subtask 620 Assumptions:

4. The output of the City's recent utility rate study will be used as the base for identifying history, policies and comparing funding strategies.
5. Infiltration and inflow (I/I) must be addressed to satisfy Ecology requirements for a Facilities Plan. Consultant will evaluate I/I according to Ecology Publication No. 97-03, using flow data provided by the City. It is assumed that the analysis will conclude with a determination of "Non-Excessive I/I." Field investigation of I/I sources and an evaluation of projects to reduce I/I are not included in this Scope of Services.
6. The financial analysis will be prepared for selected alternative.

Subtask 630 – Respond to Agency Review Comments

Consolidate Agency review comments on the Facilities Plan and Comprehensive Sewer Plan Amendment, and prepare a response to each comment. Review comments and responses with the City and Ecology.

Subtask 630 Assumptions:

7. Ecology review of the Facilities Plan and Comprehensive Sewer Plan Amendment will be conducted concurrently with review and approval of Environmental Documents.
8. Agency review workshops conducted throughout the project are expected to result in a minimal number of comments and changes to the Facilities Plan and Comprehensive Sewer Plan Amendment.

Subtask 640 – Final Facilities Plan Development

Following review of the Agency Draft Facilities Plan and following approval of the Environmental Documents, incorporate Agency comments submit a Final Facilities Plan.

Subtask 640 Assumptions:

1. None.

Subtask 650 – Technical/Agency Review Workshops

Conduct Technical/Agency Review Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff/Agency Review Workshop	Objectives
T5 – Draft Facilities Plan Review	Review Draft Facilities Plan
A1 – Agency Draft Facilities Plan Review	Review Amended Comprehensive Sewer Plan Review Agency Draft Facilities Plan
A2 – Review Comment Responses	Review Responses to Agency Comments

Subtask 650 Assumptions:

1. Technical Workshops will be held at City of Oak Harbor facilities.
2. Agency Review Workshops will be held at Ecology facilities in Bellevue.
3. Consultant Project Manager and required team members will attend workshops.
4. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 600 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Draft Comprehensive Sewer Plan Amendment (for City review)	610	April 2012
(10) Agency Draft Comprehensive Sewer Plan Amendment	610	April 2012
(1) Rendered Site Plan	620	November 2011
(4) 3D Renderings of Facilities	620	November 2011
(10) Draft Facilities Plan (for City review)	620	April 2012
(10) Agency Draft Facilities Plan	620	April 2012
(1) Potential Capital Funding Sources TM	620	November 2012
(1) Response to Agency Comments Log	630	September 2012
(10) Final Comprehensive Sewer Plan Amendment	640	October 2012
(10) Final Facilities Plan	640	October 2012
(2) Staff Workshop Materials, Agenda, Minutes	650	Per Workshop Schedule
(2) Agency Review Workshop Materials, Agenda	650	Per Workshop Schedule

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

Multiple environmental approvals are required for approval of the wastewater facilities plan and the comprehensive sewer plan amendment. The preferred alternative will have differing documentation requirements, depending upon the facility site, outfall improvements, and conveyance components. The environmental review and documentation task has been developed to encompass as many of these potentially differing requirements within a single document as possible, but will require finalization as the team proceeds through the alternative screening and review process.

Task 700 includes environmental documentation according to the National Environment Policy Act (NEPA), with either the Environmental Protection Agency (EPA) or Department of Defense as the NEPA lead agency. NEPA will be triggered by the need for approvals or permits from the Navy, or a funding request from the US EPA. NEPA compliance would also be triggered by a Corps of Engineers permit. The NEPA document will be adopted by the City for State Environmental Policy Act (SEPA) compliance, and will be used by the City to meet State Environmental Review Process (SERP) documentation requirements associated with submission of the Facilities Plan. This will also meet requirements for potential State Revolving Fund applications in the future.

The NEPA document will be an Environmental Assessment (EA), and it is assumed that NEPA EA will receive a Finding of No Significant Impact (FONSI). Meeting this determination will require that significant impacts can be identified and mitigated or avoided. The City will adopt the EA to meet their SEPA requirements; at this time, we are assuming this would be a Mitigated DNS, consistent with the FONSI.

The objective of this task is to prepare documentation to evaluate the environmental impacts of the recommended project. Information to be gathered or issues to be addressed includes:

- Soils/erosion, based on Geotechnical Reconnaissance.
- Air quality/odor, based on qualitative odor assessment.
- Water quality, based on anticipated water quality impacts, wetlands delineation and impacts, and ground water impacts.
- Floodplain/flood insurance, based on information from Federal Emergency Management Agency (FEMA) maps.
- Fish and wildlife, based on information on existing animals on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Vegetation, based on information on existing vegetation on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Environmental health (biosolids) based on information on the quality of biosolids and potential health impacts.
- Environmental health (reclaimed water), based on information on the quality of reclaimed water and potential health impacts.
- Environmental health (hazardous materials), based on a list of hazardous materials that will be stored or used on the WWTP site.
- Noise, based on a qualitative description of typical noise level at the plant during both construction and operation.
- Compatibility with surrounding land use, based on land use information provided by the City.
- Aesthetics, based on architectural drawings and landscaping plans to illustrate the proposed appearance of the site.
- Historical and archaeological resources.
- Transportation.
- Funding.

Except as noted under assumptions, Consultant will provide the following services under Task 700:

Subtask 710 – Environmental Services / NEPA/SEPA documentation

Prepare an environmental assessment in accordance with the NEPA, conduct the required environmental reviews and studies; and release required notices and documents. Develop text, figures, and sections required to assemble prepared environmental documents to meet NEPA. This effort will rely heavily on previous documents, including the Facility Plan, prepared for the project with site specific information obtained as part of Tasks 200 and 300. Information will be incorporated from other tasks and outside sources such as public involvement and the

cultural/historic resources review. Agency correspondence will be conducted and documented in accordance with NEPA requirements. This document will be used to meet the environmental documentation requirements for the Facilities Plan. This approach will be finalized with the City and the NEPA lead agency during the alternative selection process.

Subtask 710 Assumptions:

1. The Consultant will meet with the City of Oak Harbor to formalize the proposed environmental document approach, based on anticipated funding requests and other requirements. This scope and accompanying budget is based on the assumption that the City will be submitting a Facilities Plan and will prepare a NEPA EA to meet the requirements of SERP documentation.
2. The City will issue the appropriate SEPA review document. It is assumed that document will be a Mitigated DNS, in accordance with a Finding of No Significant Impact (FONSI) from the NEPA process. If significant impacts are identified during the NEPA EA that do not warrant a FONSI, it will be necessary to revisit the SEPA process.
3. SERP documentation will be covered by the NEPA document.
4. The NEPA documentation will incorporate the findings and results of the Public Outreach program.

Subtask 720 – Biological Assessment and Essential Fish Habitat (EFH)

Prepare a biological assessment (BA) for species listed as threatened or endangered under the federal ESA, including Puget Sound Chinook salmon and bull trout, and candidate species, including Coho salmon. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the United States Fish and Wildlife Service (Services) under Section 7 of the ESA. The BA will address the recommended plan identified during Task 300 and described in the Facilities Plan. It is assumed that analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor. The project may result in a "no effect" determination and consultation with the federal services would not be required. This will be determined during the initial steps of the project. Subtasks will include the following:

- Draft BA. Prepare a draft BA for review by the City and Carollo. Included activities involved in preparation of the BA are:
  - Communications with the National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS), and Washington Department of Fish and Wildlife (WDFW), to obtain habitat and species information.
  - Review of the literature and published information for each Listed, Proposed, and Candidate species identified by USFWS and NMFS occurring within the project area. This task also includes a site visit and a review of reports that have already been prepared for this project or similar projects in the vicinity.
  - Preparation of an internal review draft document.
- Final BA. Prepare a final BA document incorporating the City's and Carollo's comments on the draft report for submittal by the City to the Department of Ecology.
- Consultation assistance. Following submittal of the BA, provide responses to comments on the document by the federal action agency) and the federal services (if appropriate) up to the hours indicated. It is assumed that Ecology will be serving as representative for

EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required. Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.

- Attend at up to two meetings with Ecology and liaisons for both NMFS and USFWS during consultation.

Subtask 720 Assumptions:

1. Analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor.
2. ESA consultation is typically coordinated through the federal action agency, anticipated in this case to be Ecology on behalf of the Environmental Protection Agency (EPA), as outlined in the SERP guidelines. The existing wetland report and geotechnical study are assumed to be sufficient for the purposes of the BA.
3. The BA will be conducted for the recommended alternative, with appropriate level of design detail provided by Carollo.
4. An Essential Fish Habitat Assessment (EFH) will be submitted and reviewed as a component of the BA.
5. The project action area includes all locations at which the proposed project could potentially impact ESA listed species or their critical habitat including locations distant from the project site.
6. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the Services under Section 7 of the ESA.
7. Conclusion of the BA consultation process will be dictated by the timelines of the federal agency responses. Consultant will respond promptly to agency requests during the consultation process.
8. Ecology will be serving as representative for EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required. Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.

Subtask 730 – Section 106 Compliance

Using Subtask 233 as a starting point, prepare a memorandum regarding historical and archaeological resources for inclusion in the Environmental Assessment. Prepare Section 106 consultation correspondence for signature of Federal lead agency.

Task 700 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Draft and Final NEPA EA	710	October 2012
(1) Draft and Final BA or No Affect Letter (electronic and 6 hard copies)	720	October 2012

Draft and Final responses (electronic) to federal agency comments	720	October 2012

TASK 800 – PUBLIC PROCESS SUPPORT

The objective of this task is to support successful project implementation by proactively identifying and addressing public and stakeholder issues. As defined below, the City will lead public process activities for the Project, with significant support from the Consultant. Except as noted under assumptions, Consultant will provide the following services for Task 800:

Subtask 810 – Public Process Planning

Participate in two (2) meetings with the City to develop a project-specific public/stakeholder involvement plan (PIP) that meets NEPA, SERP, and SEPA requirements and that identifies the following:

- Target audiences and issues;
- Anticipated schedule of activities;
- Interrelationships and responsibilities; and
- Public involvement tools for each phase of the project.

Prepare a Draft PIP, review with the City, make revisions, and produce a final PIP. Participate in coordinating phone calls with City of Oak Harbor staff to provide strategic advice on public involvement and communications issues as they arise throughout the Project.

Subtask 810 Assumptions:

1. Consultant will update the PIP once during the project.

Subtask 820 – Stakeholder Workshop Facilitation

Assist the City in planning and conducting Stakeholder Workshop No. 1. Participate in a preparation session for the workshop. Prepare a workshop plan in advance that identifies goals, objectives, agenda, roles and responsibilities, and materials. Produce presentation materials, and develop draft and final agendas. Facilitate the Stakeholder Workshop and produce one (1) draft and one (1) final summary (minutes).

Assist the City in planning and conducting up to five (5) meetings with the U.S. Navy to communicate project status and obtain feedback. For each meeting, provide technical, financial, and environmental information to assist discussions facilitated by the City.

Subtask 820 Assumptions:

1. Stakeholder Workshop No. 1 will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for Stakeholder Workshop No. 1 and deliver workshop materials to attendees.
3. In addition to City staff, it is anticipated that Stakeholder Workshop No. 1 attendees will include representatives of NASWI Public Works, local community members, local Tribes, and permitting agencies (Ecology, DOH, DNR, and the Army Corps of Engineers).

4. Consultant Project Manager will attend Navy meetings and provide technical information. City staff will facilitate discussion and summarize action items.

Subtask 830 – Public Meeting Facilitation

Assist the City in planning and conducting Public Meetings, defined below. Participate in up one (1) preparation session for each meeting. Facilitate the Public Meetings and produce one (1) draft and one (1) final summary (minutes). For each meeting: arrange for suitable meeting locations; prepare meeting plans; produce presentation materials; develop sign in sheets and public comment forms; develop draft and final agendas; and develop draft and final meeting announcements/save the date notices.

Throughout the Project, develop and maintain a contact list of stakeholders and interested parties. Maintain a log of public comments received outside of the public meetings (via the website, emails to project team staff, phone calls, etc.), and responses to public inquiries as requested by the City.

Public Meeting	Objectives
P1 – Public Meeting No. 1	Communicate Project Purpose and Objectives Report Project Plan and Schedule Obtain Input on Decision Making Methodology Communicate Future Opportunities for Input
P2 – Public Meeting No. 2	Report Results of Alternatives Screening Obtain Input on Short Listed Alternatives (5 sites with corresponding process options)
P3 – Public Meeting No. 3	Report Results of Secondary Alternatives Screening Obtain Input on Final Short Listed Alternatives (3 sites with corresponding process options)
P4 – Public Meeting No. 4	Obtain Input to Refine Proposed Alternative (1)

Subtask 830 Assumptions:

1. The City will arrange for meeting locations and facilities.
2. The City will publish announcements in the local paper and include notices of meetings on their website.
3. The City will pay for all costs related to mailings, including printing and postage.

Subtask 840 – Council/Committee Meeting Participation

Assist the City in planning and conducting Council/Committee Meetings, defined below. Prepare meeting objectives, agendas, roles and responsibilities, and presentation materials in advance of the meetings. Participate in up to one (1) preparation session for each meeting.

Council/Committee Meeting	Objectives
C1 – Council Committee Meeting No. 1	Report Progress Report Project Challenges and Opportunities
C2 – Council Workshop No. 1	Report Feedback from Stakeholders and Public Establish Decision Making Criteria Process (basic technical and environmental) Sites (policy considerations) Alternatives (TBL+ objectives)
C3 – Council Workshop No. 2	Report Results of Alternative Screening 1 Report Feedback from Stakeholders and Public Confirm Short Listed Alternatives (5 sites with corresponding process options)
C4 – Council Meeting No. 1	Provide information to City for Council resolution.
C5 – Council Workshop No. 3	Report Results of Alternative Screening 2 Confirm Short Listed Alternatives (3 sites with corresponding process options)
C6 – Council Meeting No. 2	Provide information to City for Council resolution
C7 – Council Workshop No. 4	Report Results of Proposed Alternatives Workshop Confirm Proposed Alternative (1)
C8 – Council Meeting No. 3	Provide information to City for Council resolution
C9 – Council Workshop No. 5	Provide Overview of Draft Facilities Plan Confirm Draft Facilities Plan Submission to Ecology
C10 – Council Meeting No. 4	Provide information to City for Council resolution

Subtask 840 Assumptions:

1. Council/Committee Meetings will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for meetings and deliver meeting materials to attendees.
3. Consultant staff will lead/facilitate and provide information for discussion at Council Workshops.
4. Consultant Project Manager will attend City Council Committee Meetings/City Council Meetings, and assist City staff in presenting technical information.

Subtask 850 – Public/Stakeholder Involvement Product Development

In consultation with City of Oak Harbor staff, develop a project website and periodically update the website content. Prepare one (1) draft and one (1) final project brochure for informing the public about the background, goals, and specifics of the project.

Other options for products and activities, subject to Oak Harbor authorization and decisions from the Public Involvement Plan include:

- One additional or updated brochure, likely focused on the range of alternatives.
- In consultation with City of Oak Harbor staff, the Consultant may produce a segment for the City of Oak Harbor public access channel. It is intended that the Consultant will prepare a script and be involved in organizing and producing these segments, but assumed that the City will do the actual filming and production. Assume City staff would appear in the video segment.
- Consultant will assist with strategy and development of presentations for local community groups that City staff would make.

Task 850 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City of Oak Harbor staff/consultants.
2. The City will print and send materials to the public.
3. Public Access TV facilities and costs are paid by the City.

Task 800 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Stakeholder Interviews	810	October 2010
(1) Draft PIP	810	June 2011
(1) Final PIP	810	June 2011
(1) Stakeholder Workshop Plan, Agenda, Materials	820	November 2010
(4) Public Meeting Plan, Agenda, Materials	830	Per Public Meeting Schedule
(1) Council Workshop Plan, Agenda, Materials	840	December 2010
(10) Technical information/documents/presentations for City Council Committee/City Council Meetings	840	Per Council Committee/Council Meeting Schedule
(1) Project Website	850	November 2010
(12) Updates to Project Website	850	As Needed
(1) Project Brochure	850	April 2011
(1) Public Access TV Production Plan	850	As Needed

TASK 900 – MANAGEMENT RESERVE

This objective of this task is to provide additional engineering services throughout delivery of the Project (e.g. additional workshops, meetings, evaluations, etc.). Any work performed under this task will require prior written authorization from the City's Project Manager. Authorization will specify the requested scope of services and cost for the work, which will be reviewed, negotiated, and agreed upon by the Project Manager and Consultant prior to performing the work.

CITY OF
Oak Harbor
WHIDBEY ISLAND, WASHINGTON

September 17, 2010

Brian Matson, Project Manager
Carollo Engineers
1218 Third Avenue, Suite 1600
Seattle, WA 98101

RE: Preliminary Engineering and Facility Plan Contract Notice to Proceed

Dear Mr. Matson:

Please find enclosed an original copy of a fully executed agreement between the City of Oak Harbor and your firm for the Preliminary Engineering and Facility Plan project. You are instructed to proceed immediately upon receipt of this letter with the scope of work contained in the agreement. Project Manager and your point of contact will be Eric Johnston.

Should there be a change in your organization that results in you no longer being able to be the project manager and the main point of contact with the City of Oak Harbor for this project, please be aware the City may chose to exercise the provisions in the contract related to a change in principally involved employees contained in Section 6 of the General Requirements.

We are pleased to be underway with this project and look forward to a successful and mutually beneficial relationship over the next few years.

Sincerely,

Eric Johnston, PE
City Engineer

cc: City Clerk
File

CITY OF OAK HARBOR
CONSULTANT AGREEMENT
WITH Carollo Engineers, Inc.

PROJECT TITLE: Preliminary Engineering and Facilities Plan

PROJECT COMPLETION DATE: December 2012

MAXIMUM AMOUNT PAYABLE: $1,089,561

TABLE OF CONTENTS

CONSULTANT CONTRACT

GENERAL REQUIREMENTS

EXHIBITS

CONSULTANT CONTRACT
HEADING

I. INSTRUCTIONS

This contract must be completed in full, including all applicable exhibits. If an exhibit is not applicable, it should be marked "VOID".

Any changes or additions to this contract must be made in writing and set forth below. (The parties may attach appendices and exhibits to this contract but they must be listed in Section IV below.) Any exceptions or changes to the General Requirements must be listed in Section XI of the contract.

II. CONSULTANT INFORMATION

Name: Carollo Engineers, Inc.

Address: 1218 Third Avenue, Suite 1600; Seattle, WA 98101-3032

Telephone/Fax No.: 206-684-6532

Federal ID No.: 86-0899222

Do you require a 1099 for the IRS? Yes

III. PROJECT INFORMATION

Protect Title: Preliminary Engineering and Facilities Plan

Project Description: This phase of the work includes the development of preliminary engineering and a Facilities Plan for the wastewater treatment facilities.

Project Completion Date: December 2012
Maximum Amount Payable: $1,089,561
Progress Payments: Monthly

IV. ADDITIONAL DOCUMENTS ADDED TO THIS CONTRACT

Exhibit B: Scope of Services
Exhibit D-3: Level of Effort (Hours) Summary

Consultant Contract - 1
(Hourly Rate(s) Plus Costs)
6/17/2008 11:42 AM

AGREEMENT

V. INTRODUCTION

THIS AGREEMENT, made and entered into this 15th day of September, 2010, between the City of Oak Harbor, Washington, hereinafter called the "CITY", and the below identified organization hereinafter called the "CONSULTANT" consists of this agreement, the exhibits and the General Requirements attached hereto.

WITNESSETH THAT:

WHEREAS, the CITY desires to accomplish the above-referenced project, and

WHEREAS, the CITY does not have sufficient staff to meet the required commitment and, therefore, deems it advisable and desirable to engage the assistance of a CONSULTANT to provide the necessary services for the PROJECT; and

WHEREAS, the CONSULTANT represents that he/she is in compliance with the Washington State statutes relating to professional registration, if applicable, and has signified a willingness to furnish consulting services to the CITY;

NOW, THEREFORE, in consideration of the terms, conditions, covenants and performance contained herein, or attached and incorporated and made a part hereof, the parties hereto agree as follows:

VI. GENERAL DESCRIPTION OF WORK

The work under this AGREEMENT shall consist of the work and services described in Section III of this AGREEMENT and as herein defined and necessary to accomplish the completed work for this PROJECT. The CONSULTANT shall furnish all services, labor and related equipment necessary to conduct and complete the work as designated elsewhere in this AGREEMENT.

VII. SCOPE OF WORK

The Scope of Work and project level of effort for this project is detailed in Exhibit "B" attached hereto, and by this reference made a part of this AGREEMENT.

VIII. PAYMENT

The CONSULTANT shall be paid by the CITY for completed work and services rendered under this AGREEMENT on the basis of a negotiated hourly rate plus costs as provided in Exhibit "C" attached hereto, and by this reference made part of this AGREEMENT. Such payment shall be full compensation for work performed or services rendered and for all labor, materials, supplies, equipment, and incidentals necessary to complete the work specified in Exhibit "B" attached hereto and by this reference made part of this AGREEMENT; except for out of pocket costs as identified in Exhibit "C".

IX. CERTIFICATION OF THE CONSULTANT AND THE CITY

Attached hereto as Exhibit "A-1" is the Certification of the Consultant and Certification of City Official. Exhibit "A-2" is the Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions.

X. COMPLETE AGREEMENT

This document and referenced attachments contain all covenants, stipulations and provisions agreed upon by the parties. No agent or representative of either party has authority to make, and the parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein. No changes, amendments, or modifications of the terms hereof shall be valid unless reduced to writing and signed by the parties as an amendment to this AGREEMENT.

XI. GENERAL REQUIREMENTS

The General Requirements for Consulting Contract, on file in the City Clerk's Office at Oak Harbor City Hall, a copy of which is attached hereto, shall apply to this AGREEMENT except as modified in this Section XI (General Requirements). The CONSULTANT has assured that the attached copy of the General Requirements conforms to the set filed in the City Clerk's Office.

General provisions are modified to provide that "CONSULTANT shall provide period reports as required and not necessarily on a monthly basis."

XII. EXECUTION AND ACCEPTANCE

This AGREEMENT may be simultaneously executed in several counterparts, each of which shall be deemed to be an original having identical legal effect. The CONSULTANT does hereby ratify and adopt all statements, representations, warranties, covenants, and agreements contained in the proposal, and the supporting materials submitted by the CONSULTANT, and does hereby accept the AGREEMENT and agrees to all of the terms and conditions thereof.

IN WITNESS WHEREOF, the parties hereto have executed this AGREEMENT as of the day and year first above written.

By _____
Consultant: Brian Matson

By _____
Consultant: KEN WILKINS

Consultant Contract - 3
(Hourly Rate(s) Plus Costs)
6/17/2008 11:42 AM

By _____
Agency: Mayor
Principal

I, _____, Consultant, certify under penalty of perjury under the laws of the State of Washington that this copy of the General Requirements for Consultant Contract conform to the set filed in the Clerk's Office.

Dated:_____

_____

By_____

GENERAL REQUIREMENTS

1. MISCELLANEOUS PROVISIONS

All aspects of coordination of the work of this AGREEMENT, with outside agencies, groups or individuals shall receive advance approval by the CITY. Necessary contacts and meetings with agencies, groups or individuals shall be coordinated through the CITY.

The CONSULTANT shall attend coordination, progress and presentation meetings with the CITY or such officials, groups or individuals as may be requested by the CITY. The CITY will provide the CONSULTANT sufficient notice prior to meetings requiring CONSULTANT's participation. The minimum number of hours or days notice required shall be agreed to between the CITY and the CONSULTANT and shown in Exhibit "B" attached hereto and made part of this AGREEMENT. The CONSULTANT shall prepare a monthly progress report as needed by the CITY (but in no case shall it be more than once a month), in a form approved by the CITY, that will outline in written and graphical form the various phases and the order of performance of the work in sufficient detail so that the progress of the work can easily be evaluated.

All reports and other data, furnished to the CONSULTANT by the CITY shall be returned. All designs, drawings, specifications, documents, and other work products prepared by the CONSULTANT prior to completion or termination of this AGREEMENT are instruments of service for this PROJECT and are property of the CITY. Reuse by the CITY or by others acting through or on behalf of the CITY of any such instruments of service, not occurring as part of this PROJECT, shall be without liability or legal exposure to the CONSULTANT.

2. TIME FOR BEGINNING AND COMPLETION

The CONSULTANT shall not begin any work under the terms of this AGREEMENT until authorized in writing by the CITY. All work under this AGREEMENT shall be completed by the date shown in Section III of this AGREEMENT under "Project Completion Date".

The established completion time shall not be extended because of any delays attributable to the CONSULTANT, but may be extended by the CITY, in the event of a delay attributable to the CITY, or because of unavoidable delays caused by an act of God, governmental actions or other conditions beyond the control of the CONSULTANT. A prior supplemental agreement issued by the CITY is required to extend the established completion date.

3. SUBCONTRACTING

The CITY permits subcontracts for only those items of work designated for subcontracts in Exhibit "G-1" or "G-2" to this AGREEMENT.

The work of the subconsultant shall not exceed its maximum amount payable unless prior written approval has been issued by the CITY.

All reimbursable direct labor, overhead, direct non-salary costs and fixed fee costs for the subconsultant shall be substantiated in the same manner as outlined in Section VIII. All subcontracts exceeding Ten Thousand Dollars ($10,000.00) in cost shall contain all applicable provisions of this AGREEMENT.

The CONSULTANT shall not subcontract for the performance of any work under this AGREEMENT without prior written permission of the CITY. No permission for subcontracting shall create, between the CITY and subcontractor, any contract or any other relationship.

4. EMPLOYMENT

The CONSULTANT warrants that he/she has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warrant, the CITY shall have the right to annul this AGREEMENT without liability, or in its discretion, to deduct from the AGREEMENT price or consideration or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

Any and all employees of the CONSULTANT or other persons while engaged in the performance of any work or services required of the CONSULTANT under this AGREEMENT, shall be considered employees of the CONSULTANT only and not of the CITY, and any and all claims that may or might arise under any Workers' Compensation Act on behalf of said employees or other persons while so engaged, and any and all claims made by a third party as a consequence of any act or omission on the part of the CONSULTANT's employees or other persons while so engaged on any of the work or services provided to be rendered herein, shall be the sole obligation and responsibility of the CONSULTANT.

The CONSULTANT shall not engage, on a full or part time basis, or other basis, during the period of the contract, any professional or technical personnel who are, or have been, at any time during the period of the contract, in the employ of the CITY, except regularly retired employees, without written consent of the public employer of such person.

5. NONDISCRIMINATION

The CONSULTANT agrees not to discriminate against any client, employee or applicant for employment or for services because of race, creed, color, national origin, marital status, sexual orientation, sex, age, honorably discharged veteran or military status, or the presence of any sensory, mental or physical disability or the use of a trained dog guide or service animal by a person with a disability; unless based upon a bona fide occupational qualification; with regard to, but not limited to, the following: employment upgrading, demotion or transfer, recruitment or any recruitment advertising, a layoff or termination, rate of pay or other forms of compensation, selection for training, or rendition of services. The CONSULTANT understands and agrees that if it violates this provision, this AGREEMENT may be terminated by the CITY and further that

the CONSULTANT shall be barred from performing any services for the CITY now or in the future unless a showing is made satisfactory to the CITY that discriminatory practices have terminated and that recurrence of such action is unlikely.

During the performance of this AGREEMENT, CONSULTANT, for itself, its assignees and successors in interest agrees as follows:

A. **COMPLIANCE WITH REGULATIONS:** The CONSULTANT shall comply with the applicable federal law relative to nondiscrimination, Title 49, Code of Federal Regulations, which are herein incorporated by reference and made a part of this AGREEMENT. The CONSULTANT shall comply with the Americans with Disabilities Act of 1992, as amended.

B. **INFORMATION AND REPORTS:** The CONSULTANT shall provide all information and reports required by the CITY and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the CITY to be pertinent to ascertain compliance with such state or federal law. Where any information required of the CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the CITY, and shall set forth what efforts it has made to obtain the information.

C. **SANCTIONS FOR NONCOMPLIANCE:** In the event of the CONSULTANT's noncompliance with the nondiscrimination provisions of this AGREEMENT, the CITY shall impose such sanctions as it may determine to be appropriate, including, but not limited to:

(1) Withholding of payments to the CONSULTANT under the AGREEMENT until the CONSULTANT complies, and/or

(2) Cancellation, termination or suspension of the AGREEMENT, in whole or in part.

D. **INCORPORATION OF PROVISIONS:** The CONSULTANT shall include the provisions of paragraphs (A) through (E) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The CONSULTANT shall take such action with respect to any subconsultant or procurement as the CITY may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that, in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a subconsultant or supplier as a result of such direction, the CONSULTANT may request the CITY to enter into such litigation to protect the interests of the CITY.

E. **UNFAIR EMPLOYMENT PRACTICES:** The CONSULTANT shall comply with RCW 49.60.180 and Executive Order number E.O. 77-13 of the Governor of the State of Washington which prohibits unfair employment practices.

6. TERMINATION OF AGREEMENT

The right is reserved by the CITY to terminate this AGREEMENT at any time upon ten (10) days' written notice to the CONSULTANT.

In the event this AGREEMENT is terminated by the CITY other than for default on the part of the CONSULTANT, a final payment shall be made to the CONSULTANT as shown in Exhibit "F".

No payment shall be made for any work completed after ten (10) days following receipt by the CONSULTANT of the Notice to Terminate. If the accumulated payment made to the CONSULTANT prior to Notice to Terminate exceeds the total amount that would be due, computed as set forth herein above, then no final payment shall be due and the CONSULTANT shall immediately reimburse the CITY for any excess paid.

If the services of the CONSULTANT are terminated by the CITY for default on the part of the CONSULTANT, the above formula for payment shall not apply. In such an event, the amount to be paid shall be determined by the CITY with consideration given to the actual costs incurred by the CONSULTANT in performing the work to the date of termination, the amount of work originally required which was satisfactorily completed to date of termination, whether that work is in a form or a type which is usable to the CITY at the time of termination; the cost to the CITY of employing another firm to complete the work required and the time which may be required to do so, and other factors which affect the value to the CITY of the work performed at the time of termination. Under no circumstances shall payment made under this subsection exceed the amount which would have been made using the formula set forth in the previous paragraph.

If it is determined for any reasons that the CONSULTANT was not in default or that the CONSULTANT's failure to perform is without it or its employee's fault or negligence, the termination shall be deemed to be a termination for the convenience of the CITY in accordance with the provision of this AGREEMENT.

In the event of death of any member, partner or officer of the CONSULTANT or any of its supervisory personnel assigned to the project, or, dissolution of the partnership, termination of the corporation, or disaffiliation of the principally involved employee, the surviving members of the CONSULTANT hereby agree to complete the work under the terms of this AGREEMENT, if requested to do so by the CITY. This subsection shall not be a bar to renegotiation of the AGREEMENT between the surviving members of the CONSULTANT and the CITY, if the CITY so chooses.

In the event of the death of any of the parties listed in the previous paragraph, should the surviving members of the CONSULTANT, with the CITY's concurrence, desire to terminate this AGREEMENT, payment shall be made as set forth in the second paragraph of this section.

Payment for any part of the work by the CITY shall not constitute a waiver by the CITY of any remedies of any type it may have against the CONSULTANT, or for failure of the

CONSULTANT to perform work required of it by the CITY. Forbearance of any rights under the AGREEMENT will not constitute waiver of entitlement to exercise those rights with respect to any future act or omission by the CONSULTANT.

7. CHANGES OF WORK

The CONSULTANT shall make changes and revisions in the complete work of this AGREEMENT as necessary to correct errors appearing therein, when required to do so by the CITY, without additional compensation thereof. Should the CITY find it desirable for its own purposes to have previously satisfactorily completed work or parts thereof changed or revised, the CONSULTANT shall make such revisions as directed by the CITY. This work shall be considered as Extra Work and will be paid for as herein provided under General Requirements, Section 13.

8. DISPUTES

Any dispute concerning questions of fact in connection with the work not disposed of by AGREEMENT between the CONSULTANT and the CITY shall be referred for determination to the City Administrator or his/her designee, whose decision in the matter shall be final and binding on the parties of this AGREEMENT, provided, however, that if an action is brought challenging the Public Works Superintendent or City Engineer's decision, that decision shall be subject to de novo judicial review.

9. VENUE, APPLICABLE LAW AND PERSONAL JURISDICTION

In the event that either party deems it necessary to institute legal action or proceedings to enforce any right or obligation under this AGREEMENT, the parties hereto agree that any such action shall be initiated in the Superior Court of the State of Washington, situated in Island County. The parties hereto agree that all questions shall be resolved by application of Washington law and that the parties to such action shall have the right of appeal from such decisions of the Superior Court in accordance with the laws of the State of Washington. The CONSULTANT hereby consents to the personal jurisdiction of the Superior Court of the State of Washington, situated in Island County.

10. LEGAL RELATIONS AND INSURANCE

A. The CONSULTANT shall comply with all Federal, State, and local laws and ordinances applicable to the work to be done under this AGREEMENT. This AGREEMENT shall be interpreted and construed in accordance with the laws of Washington.

B. The CONSULTANT's relation to the CITY shall be at all times as an independent contractor and not as an employee.

C. Unless otherwise specified in the AGREEMENT, the CITY shall be responsible for administration of construction contracts, if any, on the project. Subject to the processing of an acceptable, supplemental agreement, the CONSULTANT shall provide on-call

assistance to the CITY during contract administration. By providing such assistance, the CONSULTANT shall assume no responsibility for: proper construction techniques, job site safety, or any construction contractor's failure to perform its work in accordance with the contract documents.

D. The CITY will pay no payments under Section VIII "Payments" until the CONSULTANT has fully complied with this section. This remedy is not exclusive; and the CITY may take such other action as is available to them under other provisions of this AGREEMENT, or otherwise in law.

11. INDEMNIFICATION REQUIREMENTS

Indemnification/Hold Harmless. CONSULTANT shall defend, indemnify and hold the CITY, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or resulting from the acts, errors or omissions of the CONSULTANT in performance of this AGREEMENT, except for injuries and damages caused by the sole negligence of the CITY.

Notwithstanding the provisions of the preceding paragraph, it is understood and mutually agreed by the CONSULTANT and the CITY that neither party will attempt to enforce strict liability for any act, error or omission against either party and that the work covered under this AGREEMENT will be completed by the CONSULTANT with the standard of care of the Engineering profession in the State of Washington.

Should a court of competent jurisdiction determine that this AGREEMENT is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the CONSULTANT and the CITY, its officers, officials, employees, and volunteers, the CONSULTANT's liability hereunder shall be only to the extent of the CONSULTANT's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the CONSULTANT's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this AGREEMENT.

12. INSURANCE.

The CONSULTANT shall procure and maintain for the duration of this AGREEMENT, insurance claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the CONSULTANT, its agents, representatives or employees.

A. **No Limitation.** CONSULTANT's maintenance of insurance as required by the AGREEMENT shall not be construed to limit the liability of the CONSULTANT to the coverage provided by such insurance, or otherwise limit the CITY's recourse to any remedy available at law or in equity.

B. **Minimum Scope of Insurance**. CONSULTANT shall obtain insurance of the types described below:

1. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.

2. Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent contractors and personal injury and advertising injury. The CITY shall be named as an insured under the CONSULTANT's Commercial General Liability insurance policy with respect to the work performed for the CITY.

3. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

4. Professional Liability insurance appropriate to the CONSULTANT's profession.

C. **Minimum Amounts of Insurance**. CONSULTANT shall maintain the following insurance limits:

1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of One Million Dollars ($1,000,000.00) per accident.

2. Commercial General Liability insurance shall be written with limits no less than One Million Dollars ($1,000,000.00) each occurrence, Two Million Dollars ($2,000,000.00) general aggregate.

3. Professional Liability insurance shall be written with limits not less than One Million Dollars ($1,000,000.00) per claim and One Million Dollars ($1,000,000.00) policy aggregate limit.

D. **Other Insurance Provisions**. The insurance policies are to contain, or be endorsed to contain, the following provisions for Automobile Liability, Professional Liability and Commercial General Liability insurance:

1. The CONSULTANT's insurance coverage shall be primary insurance with respect to the CITY. Any insurance, self-insurance, or insurance pool coverage maintained by the CITY shall be in excess of the CONSULTANT's insurance and shall not contribute with it.

2. The CONSULTANT's insurance shall be endorsed to state that coverage shall not be cancelled by either party, except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the CITY.

E. **Acceptability of Insurers.** Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

F. **Verification of Coverage.** CONSULTANT shall furnish the CITY with original certificates and a copy of the amendatory endorsements including, but not necessarily limited to, the additional insured endorsement evidencing the insurance requirements of the CONSULTANT before commencement of the work.

13. EXTRA WORK

A. The CITY may at any time, by written order, make changes within the general scope of the AGREEMENT in the services to be performed.

B. If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under this AGREEMENT, whether or not changed by the order, or otherwise affects any other terms and conditions of the AGREEMENT, the CITY shall make an equitable adjustment in the (1) maximum amount payable; (2) delivery or completion schedule, or both; and (3) other affected terms and shall modify the AGREEMENT accordingly. If the change causes an increase in the maximum amount payable, it shall not become a part of this AGREEMENT unless and until a written amendment to the AGREEMENT is executed by both the CITY and the CONSULTANT.

C. The CONSULTANT must submit its "request for equitable adjustment" (hereafter referred to as "claim") under this clause within thirty (30) days from the date of receipt of the written order. However, if the CITY decides that the facts justify it, the CITY may receive and act upon a claim submitted before final payment of the AGREEMENT.

D. Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the CONSULTANT from proceeding with the AGREEMENT as changed.

E. Notwithstanding the terms and conditions of paragraphs (A) and (B) above, the maximum amount payable for this AGREEMENT shall not be increased or considered to be increased except by specific written supplement to this AGREEMENT.

14. ENDORSEMENT OF PLANS

The CONSULTANT shall place his endorsement on all plans, estimates or any other engineering data furnished by him.

15. EQUAL OPPORTUNITY

A. Compliance with 41 CFR 60-1.4 -- Equal Opportunity Clause. The CITY incorporates 41 CFR 60-1.4 -- Equal Opportunity Clause by reference.

B. Compliance with 41 CFR 60-250.5 -- Equal Opportunity Clause (Special Disabled Veterans).

1. The CONSULTANT will not discriminate against any employee or applicant for employment because he or she is a special disabled veteran, veteran of the Vietnam era, recently separated veteran, or other protected veteran in regard to any position for which the employee or applicant for employment is qualified. The CONSULTANT agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals without discrimination based on their status as a special disabled veteran, veteran of the Vietnam era, recently separated veteran, or other protected veteran in all employment practices, including the following:

   i. Recruitment, advertising, and job application procedures;

   ii. Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

   iii. Rates of pay or any other form of compensation and changes in compensation;

   iv. Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

   v. Leaves of absence, sick leave, or any other leave;

   vi. Fringe benefits available by virtue of employment, whether or not administered by the CONSULTANT;

   vii. Selection and financial support for training, including apprenticeship, and on-the-job training under 38 U.S.C. 3687, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

   viii. Activities sponsored by the CONSULTANT including social or recreational programs; and

   ix. Any other term, condition, or privilege of employment.

2. The CONSULTANT agrees to immediately list all employment openings which exist at the time of the execution of this AGREEMENT and those which occur during the performance of this AGREEMENT, including those not generated by this AGREEMENT and including those occurring at an establishment of the CONSULTANT other than the one wherein the AGREEMENT is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local employment service office of the state employment security agency wherein the opening occurs. Listing employment openings with the U.S. Department of Labor's America's Job Bank shall satisfy the requirement to list jobs with the local employment service office.

3. Listing of employment openings with the local employment service office pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicants or from any particular group of job applicants, and nothing herein is intended to relieve the CONSULTANT from any requirements in Executive orders or regulations regarding nondiscrimination in employment.

4. Whenever the CONSULTANT becomes contractually bound to the listing provisions in paragraphs 2 and 3 of this clause, it shall advise the state employment security agency in each state where it has establishments of the name and location of each hiring location in the state: Provided, That this requirement shall not apply to state and local governmental CONSULTANTS. As long as the CONSULTANT is contractually bound to these provisions and has so advised the state agency, there is no need to advise the state agency of subsequent AGREEMENTS. The CONSULTANT may advise the state agency when it is no longer bound by this AGREEMENT clause.

5. The provisions of paragraphs 2 and 3 of this clause do not apply to the listing of employment openings which occur and are filled outside of the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, and the Virgin Islands.

6. As used in this clause:

   i. All employment openings include all positions except executive and top management, those positions that will be filled from within the CONSULTANT's organization, and positions lasting three (3) days or less. This term includes full-time employment, temporary employment of more than (3) three days' duration, and part-time employment.

ii. Executive and top management means any employee:

(a) whose primary duty consists of the management of the enterprise in which he or she is employed or of a customarily recognized department or subdivision thereof; and

(b) who customarily and regularly directs the work of two (2) or more other employees therein; and

(c) who has the authority to hire or fire other employees or whose suggestions and recommendations as to the hiring or firing and as to the advancement and promotion or any other change of status of other employees will be given particular weight; and

(d) who customarily and regularly exercises discretionary powers; and

(e) who does not devote more than twenty percent (20%), or, in the case of an employee of a retail or service establishment who does not devote as much as forty percent (40%), of his or her hours of work in the work week to activities which are not directly and closely related to the performance of the work described in (a) through (d) of this paragraph 6.ii.; Provided, that (e) of this paragraph 6.ii. shall not apply in the case of an employee who is in sole charge of an independent establishment or a physically separated branch establishment; or who owns at least a twenty percent (20%) interest in the enterprise in which he or she is employed.

iii. Positions that will be filled from within the CONSULTANT's organization means employment openings for which no consideration will be given to persons outside the CONSULTANT's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings which the contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of his or her own organization.

7. The CONSULTANT agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

8. In the event of the CONSULTANT's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

9. The CONSULTANT agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the CONSULTANT's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants who are special disabled veterans, veterans of the Vietnam era, recently separated veterans, or other protected veterans. The CONSULTANT must ensure that applicants or employees who are special disabled veterans are informed of the contents of the notice (e.g., the CONSULTANT may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).

10. The CONSULTANT will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the CONSULTANT is bound by the terms of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, and is committed to take affirmative action to employ and advance in employment qualified special disabled veterans, veterans of the Vietnam era, recently separated veterans, and other protected veterans.

11. The CONSULTANT will include the provisions of this clause in every subcontract or purchase order of Twenty-five Thousand Dollars ($25,000.00) or more, unless exempted by the rules, regulations, or orders of the Secretary issued pursuant to the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, so that such provisions will be binding upon each subcontractor or vendor. The CONSULTANT will take such action with respect to any subcontract or purchase order as the Deputy Assistant Secretary for Federal Contract Compliance may direct to enforce such provisions, including action for noncompliance.

C. Compliance with 41 CFR 60-741.5 -- Equal Opportunity Clause (Workers with Disabilities).

1. The CONSULTANT will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The CONSULTANT agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with disabilities without discrimination based on their physical or mental disability in all employment practices, including the following:

   i. Recruitment, advertising, and job application procedures;

ii. Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

iii. Rates of pay or any other form of compensation and changes in compensation;

iv. Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

v. Leaves of absence, sick leave, or any other leave;

vi. Fringe benefits available by virtue of employment, whether or not administered by the CONSULTANT;

vii. Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

viii. Activities sponsored by the CONSULTANT including social or recreational programs; and

ix. Any other term, condition, or privilege of employment.

2. The CONSULTANT agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

3. In the event of the CONSULTANT's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

4. The CONSULTANT agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the CONSULTANT's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants with disabilities. The CONSULTANT must ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).

5. The CONSULTNAT will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of section 503 of the Rehabilitation Act of 1973, as amended, and is committed to take affirmative

action to employ and advance in employment individuals with physical or mental disabilities.

6. The CONSULTANT will include the provisions of this clause in every subcontract or purchase order in excess of Ten Thousand Dollars ($10,000.00), unless exempted by rules, regulations, or orders of the Secretary issued pursuant to section 503 of the act, as amended, so that such provisions will be binding upon each subcontractor or vendor. The CONSULTANT will take such action with respect to any subcontract or purchase order as the Deputy Assistant Secretary for Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

EXHIBIT A-1
CERTIFICATION OF CONSULTANT

Project No. _____

I hereby certify that I am Brian Matson a duly authorized representative of the firm of Carollo Engineers, Inc. whose address is 1218 Third Ave, Suite 1600; Seattle, WA 98101 and that neither I nor the above firm I here represent has:

(a) employed or retained for a commission, percentage, brokerage, contingent fee or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONSULTANT) to solicit or secure this contract.

(b) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract.

(c) paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above CONSULTANT) any fee, contribution, donation or consideration of any kind for, or in connection with procuring or carrying out the contract; except as here expressly stated (if any).

I further certify that the firm I here represent is authorized to do business in the State of Washington and that the firm is in full compliance with the requirements of the Board of Professional Registration.

I acknowledge that this certificate is subject to applicable State and Federal laws, both criminal and civil.

9/14/10
Date

Signature

CERTIFICATION OF CITY OFFICIAL

I hereby certify that I am the responsible City official for the City of Oak Harbor, Washington, for this AGREEMENT and that the above consulting firm or its representative has not been required directly or indirectly as an express or implied condition in connection with obtaining or carrying out this contract to:

(a) employ or retain, or agree to employ or retain, any firm or person; or

(b) pay or agree to pay to any firm, person or organization, any fee, contribution, donation or consideration of any kind, except as here expressly stated (if any).

I acknowledge that this certificate is subject to applicable State and Federal laws, both criminal and civil.

Date

Signature

Exhibits - 2
6/17/2008 11:42 AM

EXHIBIT A-2
CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS- PRIMARY COVERED TRANSACTIONS

1. The CONSULTANT, through the prospective primary participant, certifies to the best of its knowledge and belief, that it and its principals:

   a. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any State or Federal department or city;

   b. have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission or fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

   c. are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in paragraph 1.b. of this certification; and

   d. have not within a three-year period preceding this application/proposal had one or more public transactions (federal, state or local) terminated for cause or default.

2. Where the CONSULTANT, through the prospective primary participant, is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Consultant (Firm): Carollo Engineers, Inc.

9/14/10
Date

President or Authorized Official or Consultant Signature

EXHIBIT B
SCOPE OF WORK (ADD ON)

Project No. _____

See attached documents furnished by the Consultant

EXHIBIT B - SCOPE OF SERVICES

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

BACKGROUND

The City of Oak Harbor (City) currently operates two wastewater facilities: a Rotating Biological Contactor (RBC) plant located near Windjammer Park; and a lagoon plant located on Naval Air Station (NAS) Whidbey Island. The two current facilities serve a population of approximately 23,000 of which approximately 4,000 are housed at the NAS. It is anticipated that future demands will approach the permit limits in approximately 2017 as described in greater detail in the City's Comprehensive Sewer Plan. The City anticipates the need to have a new treatment facility in operation by 2017. The City intends to construct new wastewater treatment facilities to meet initial demands (3 million gallons per day [mgd]), with expansion capacity to meet long-term demand projections (6 mgd). Recognizing that the City of Oak Harbor is connected to the pristine waters of Puget Sound, specifically Oak Harbor and Crescent Harbor Bay, the City's goal is to obtain the highest level of water quality practical while recognizing the limitations of the rate payers of the City of fund improvements. A primary goal of the City is the continued protection of the water quality of the waters in and around Oak Harbor to meet the goals outlined in the Puget Sound Action Plan developed by Puget Sound Partnership for the cleanup and protection of Puget Sound.

This phase of the work includes development of preliminary engineering and a Facilities Plan. Subsequent phases, though not specifically authorized by this contract, may include the following:

- Final Design and Permitting
- Preparation of Construction Documents
- Bid Period Services
- Construction Support Services
- Preparation of Operation and Maintenance Manuals
- Start-up, Training, and Facility Commissioning

Project Objectives

The objectives of the Project are to:

1. Prepare Technical Memoranda (TM) evaluating wastewater treatment process, siting, and discharge options;
2. Identify a proposed alternative for wastewater facilities;
3. Prepare preliminary design information and an approved Facilities Plan in compliance with WAC 173-240-060 and 40 CFR 35.917-1;
4. Prepare the required supporting Environmental Documents; and
5. Provide support for public, agency, and stakeholder involvement.

Project Team

Carollo Engineers, Inc. (Carollo) will serve as the Prime Consultant for the Project, and will be responsible for overall Project management and delivery. In completing the work defined by this Scope of Services, Carollo is authorized to use the following Subconsultants:

Subconsultant	Role
BHC Consultants	Conveyance System Alternatives Analysis Satellite MBR Alternatives Analysis Feasibility of Connecting Non-Sewered Residents Regional Biosolids Alternative Feasibility
ESA Adolfson	Environmental Support and Documentation
Triangle Associates	Public Process Support
EnviroIssues	Public Meeting Facilitation
Michael Willis Architects	Architectural Services
GeoEngineers	Geotechnical Services
Katy Isaksen & Associates	Financial Analysis for Proposed Alternative
Bruce Dees & Associates	Landscape Architectural Services
Cosmopolitan Engineering Group	Outfall Analysis and Alternatives
Certified Land Services	Property Acquisition Support Services
Fakkema & Kingma	Surveying
Paragon Research Associates	Cultural Resources Assessment Services

Related Documents

The following documents provide background information for this project:

- Wastewater Treatment Plant Site Evaluation, City of Oak Harbor, October 2007.
- City of Oak Harbor Comprehensive Sewer Plan, TetraTech/KCM, December 2008.

SCOPE OF SERVICES

Carollo (Consultant) will provide engineering and other services for the City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan Project (Project), as defined by this Scope of Services. Work products submitted electronically will be produced using software as defined below:

- Word Processing — Microsoft Word
- Spreadsheets — Microsoft Excel
- Scheduling — Microsoft Project
- Drawings — Bentley MicroStation and Portable Document Format (PDF)

This Scope of Services is divided into the following tasks:

Task 100 Project Management
Task 200 Preliminary Alternatives Development and Screening
Task 300 Final Alternatives Development and Screening
Task 400 Outfall Evaluation
Task 500 Reuse Opportunities
Task 600 Facilities Plan
Task 700 Environmental Review and Documentation

Task 800 Public Process Support
Task 900 Management Reserve

PROJECT SCHEDULE

A preliminary schedule for the Project is attached (Attachment 1). The Schedule defines anticipated durations for major tasks, Project milestones, and major deliverable dates, assuming Notice to Proceed (NTP) in August 2010. Throughout this Scope of Services, anticipated delivery dates for major deliverables are established based on this preliminary schedule. The Consultant and City recognize that the preliminary schedule and corresponding delivery dates are subject to change, should NTP be issued after August 2010 and/or for other reasons. Schedule changes may be approved by the City without an amendment to this Scope of Services, provided both Consultant and City staff approve of the change. An amendment modifying the Project schedule and dates for major deliverables will be issued if required by either the City or Consultant.

TASK 100 – PROJECT MANAGEMENT

The objective of this task is to manage and coordinate engineering and related services required for project completion. Except as noted under assumptions, Consultant will provide the following services for Task 100:

Subtask 110 – Project Management Plan

Complete a draft Project Management Plan (PMP) including scope, work plan and products, work breakdown structure, budget, schedule, organization and staffing, communication protocol, and project standards within ten (10) days of Notice to Proceed (NTP). Finalize the PMP following the Startup Workshop and receipt of City comments. Monitor the PMP throughout the project and provide one update of the PMP upon request by the City.

Subtask 111 – Quality Management
Develop and follow a Quality Management Plan (QMP) for the project to be included in the PMP. Review technical memos, documents, drawings, reports, etc. and address review comments addressed prior to submission in accordance with the QMP. For major work products (TM and Facilities Plan) develop a Record of Comment (ROC) to document City comments and Consultant responses.

Subtask 110 Assumptions:

1. A Draft PMP will be reviewed at the Project Startup Meeting.
2. A Final PMP will be issued to incorporate City comments collected following the Project Startup Meeting.
3. The PMP will be updated once during the project.

Subtask 120 – Project Monitoring and Reporting

Manage the project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete this Scope of Services. Prepare monthly project status reports that compare work accomplished with schedule activities and compare expenditures with task budgets, and submit reports to the City's Project Manager with monthly invoices. Document expenditures on a task basis, and

show hours by project personnel and other direct expenses related to work. Include a project S-curve developed using Earned Valve Management (EVM) detailing anticipated progress, percent complete, and percent billed for each month.

Subtask 120 Assumptions:

1. Total project duration is 22 months.

Subtask 130 – Project Management Meetings

Schedule and conduct Project Management Meetings throughout the project as directed by the City's Project Manager. Meetings will be used to discuss project status, action items, and potential areas of concern. Publish meeting minutes with action items that require a response by team members, City staff, or other agencies identified at the meeting. A draft of the minutes will be submitted to the City within three (3) working days after the meeting. The final version will be submitted within five (5) working days after comments on the draft have been received from the City.

Subtask 130 Assumptions:

1. Up to eight (8) Project Management Meetings will be held.
2. Project Management Meetings will be held via teleconference.
3. Agendas, meeting minutes, and Action Items will be distributed electronically by the Consultant to City's Project Manager.

Subtask 140 – Project Team Website

Develop and maintain a collaborative Web Site accessible through the Internet by all project team members. The Web Site will be maintained from NTP through final approval of the Facilities Plan. Essential project information will be logged, recorded, and made available through this Web Site during the project, including:

- Project team and contact information.
- Calendar of events.
- Document library including agendas, presentation materials, meeting minutes, submittals, and deliverables.
- Updated Action List providing assignments and status.
- Decision Log.

Subtask 140 Assumptions:

1. Project Team Website will only be accessible to members of the project team (i.e. City and Consultant staff). Consultant will develop and maintain a project website for external use under Task 800 – Public Process Support.

Task 100 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) PMP	110	September 2010
(22) Monthly Invoices and Progress Reports	120	Monthly
(8) Project Management Meeting Agendas	130	As Needed
(8) Project Management Meeting Action Items Log	130	As Needed
(1) Project Team Website	140	September 2010

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to develop a matrix of preliminary alternatives (treatment process options and candidate sites) and identify a short list of final alternatives to be evaluated and refined in subsequent phases of work. Except as noted under assumptions, Consultant will provide the following services for Task 200:

Subtask 210 – Basis of Design Documentation

Subtask 211 – Engineering Basis of Design

Review and comment on previous projections developed by the City, and confirm population, flow, and waste load data for the Oak Harbor service area. Establish flow peaking factors (maximum month, maximum day, and peak hour) based on City-provided data. Using these projections and available plant loading data, establish loading estimates and peaking factors for flow, organics (BOD), total suspended solids (TSS), phosphorus and nitrogen loading to the plant.

Evaluate the City's exiting National Pollutant Discharge Elimination System (NPDES) permit, potential future water quality requirements, and establish water quality objectives for conventional effluent parameters, nutrients, fecal coliform bacteria, temperature, and pH. Document basis of design (flows, loads, and effluent requirements) in TM1 – Basis of Design.

Subtask 212 – Decision Making Methodology

Treatment process options and candidate sites will be evaluated in a manner that is consistent with City policy objectives, and to meet basic technical, performance, and environmental requirements. Two (2) process options and up to four (4) candidate sites will be placed into a matrix of preliminary alternatives. Up to eight (8) preliminary alternatives will be screened using Triple Bottom Line Plus Technical (TBL+) methodology, considering financial, social, environmental, and technical criteria and objectives developed by the City and project team. A short list of four (4) final alternatives will be refined for subsequent TBL+ evaluation. Coordinate with City staff to develop a list of basic policy, technical, performance, and environmental requirements that will be used to create the matrix of preliminary alternatives (Wastewater Treatment Plant [WWTP] process options and sites). Develop a list of TBL+ criteria and objectives to be used for preliminary and final alternatives evaluation. Document the basis for decision making in TM2 – Decision Making Methodology.

Subtask 210 Assumptions:

1. Population, flow, and loading data for the Oak Harbor service area will be based on the December 2008 Comprehensive Sewer Plan.

2. Meetings with regulatory stakeholders and City input will be used to establish potential future NPDES permit requirements. Negotiation of permit limits is not included in this Scope of Services.
3. A matrix of preliminary alternatives will be developed based on City policy and basic technical, performance, and environmental requirements.
4. Preliminary and final alternatives will be evaluated using the TBL+ approach.

Subtask 220 – Preliminary Alternatives Development

Subtask 221 – Centralized Treatment Process Evaluation
Develop and evaluate treatment process options to treat all flow from the City and NAS. Identify Washington Department of Ecology (Ecology) requirements for reliability and redundancy, and prepare conceptual design and cost information for processes being considered. Screen potential treatment process options using basic technical and performance requirements established by the project team, and identify up to two (2) process options to be included in the matrix of preliminary alternatives. For these options, develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs). Document the evaluation and recommended options in TM3 – Treatment Process Evaluation. The following facilities will be evaluated:

- Preliminary/Primary Treatment. Headworks (preliminary treatment) options, including influent pumping, screening grit removal, flow measurement, and influent sampling. Primary treatment options, including clarification and sludge pumping facilities.
- Secondary Treatment. Secondary (biological) treatment process options, including up to four (4) processes capable of meeting identified performance requirements. It is anticipated that more detailed technical and cost information will be developed for up to two (2) process options: activated sludge (AS) and membrane bioreactors (MBR).
- Disinfection. Disinfection options, including chlorination/dechlorination (using bulk or on-site generation of hypochlorite) and ultraviolet (UV) disinfection.
- Solids Handling. Solids handling options, including a range of processes to achieve a Class B biosolids product on-site, as well as continued use of existing solids handling facilities on an interim or permanent basis. The feasibility of providing biosolids stabilization and/or disposal on a regional basis will be evaluated by the Consultant under a separate task.
- Odor Control. Identify potential odor impacts, foul air treatment requirements to meet these impacts, and establish the basis for odor control facilities. Prepare conceptual design information for odor control system components based on the treatment process options being considered.
- Non-Process Facilities. Evaluate space needs for plant administration, operation, maintenance, and laboratory facilities to support future treatment facilities through Architectural Programming. Develop a programming questionnaire to determine rough but conservative space needs for new non-process facilities. Interview City staff and prepare a brief Programming Narrative outlining preliminary space needs, laboratory requirements, maintenance functions and desired adjacencies to other plant space, and coordinate with process needs, landscaping, and zoning requirements. Integrate non-process facilities into diagrams, including structural footprints, roadways, and

landscaping areas for up to two (2) alternative layouts. In addition to the plant non-process facilities, plan the space and accessibility needs for the potential to add education centers, tour group meeting areas, and interior and exterior public spaces to welcome and educate the public.

Subtask 222 – Satellite MBR Facility Evaluation
Develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs) for a satellite MBR facility treating up to 0.5 mgd of flow per Ecology requirements. Document the recommended option in TM3 – Treatment Process Evaluation.

Subtask 223 – Candidate Site Inventory
Develop a list of potential sites to locate a centralized WWTP and satellite MBR. Coordinate with City staff to identify potential sites for the recommended treatment options, considering factors such as: size (land area); location; ownership and real-estate considerations; conveyance system impacts; environmental impacts; land use restrictions; and adjacency to existing outfalls.

Screen potential sites based on City policy and using basic technical and environmental requirements, and establish a candidate site inventory to be included in the matrix of preliminary alternatives. Document the site development and screening process in TM4 – Preliminary Alternatives.

Subtask 220 Assumptions:

1. None.

Subtask 230 – Preliminary Alternatives Screening

Pair recommended process options with candidate sites to develop a matrix of preliminary alternatives. Refine conceptual site layouts based on candidate site requirements and evaluate collection/conveyance system impacts. Integrate the results of Subtask 410 – Preliminary Outfall Assessment and confirm outfall options. Update cost information to reflect preliminary alternative layouts and system-wide impacts.

Develop an initial assessment of potential social impacts, including noise, odor potential, visual aesthetics, construction impacts, and long-term operation impacts. Develop a TBL+ analysis for up to eight (8) preliminary alternatives. Screen preliminary alternatives to a short list of four (4) final alternatives, and document results in TM4 – Preliminary Alternatives.

Subtask 231 – Environmental Review
Conduct a one day field investigation and perform an initial environmental assessment of candidate sites. Identify sensitive areas, fish and wildlife impacts, wetlands, streams and shoreline impacts, site soils and sediments, effluent water quality impacts, potential permitting requirements, and other pertinent information that will use used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives. Meet with City to finalize environmental documentation approach.

Subtask 232 – Preliminary Geotechnical Assessment
Conduct a one day field reconnaissance and perform an initial geotechnical assessment of the candidate sites. Base the assessment on available information, including geologic and other

publicly available maps that document geotechnical conditions and geohazard considerations in the project vicinity.

Provide a TM summarizing the pertinent geotechnical issues that would impact site selection, design, and construction at the candidate sites, including: anticipated soil types and groundwater conditions; identified geohazards (seismic/ liquefaction, slope stability, etc.); potential mitigation strategies; general foundation types including ground improvement techniques or other appropriate considerations; and preliminary construction considerations including shoring and dewatering based on the assumed site conditions. Information will be used to rate preliminary alternatives on their ability to meet the established TBL+ criteria and objectives.

Subtask 233 – Cultural Resources Review

Conduct background research to identify known cultural resources in the project vicinity using state records, historic maps, and other available information. Conduct a one day visit to identify potentially sensitive areas, regulatory requirements, and other pertinent information that will be used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives.

Subtask 234 – Zoning/Land Use Review

Conduct a one day field visit and perform an initial zoning/land use assessment of candidate sites based on available information. Identify ownership, confirm code requirements and land use restrictions, establish a preliminary estimate of property values, and prepare other pertinent information that will be used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives.

Subtask 230 Assumptions:

1. Subtask 232 assumes that the City of Oak Harbor will provide available geotechnical information/reports from site and vicinity. Up to four potential sites will be evaluated (based on right-of-entry considerations). No geotechnical explorations will be conducted during this phase.
2. Subtask 233 assumes that up to four potential sites will be evaluated (based on right-of-entry considerations). No subsurface explorations will be conducted during this phase.
3. Subtask 234 assumes City Code and zoning research will be conducted on a maximum of two (2) sites.

Subtask 240 – Evaluation of the Feasibility of Connecting Non-Sewered Residents

The City is interested in investigating the extension of sewer service beyond those parcels that are currently on sewers. Some of these parcels are within and some outside the current City limits. However, all parcels to be considered are within the Urban Growth Boundary (UGB) limits.

Those parcels outside the City limits fall into three categories: highly and fully developed, underdeveloped and non-conforming parcels. Attachment 2 identifies the eleven distinct areas that are within the UGB but outside the City limits.

Specific tasks associated with this work will include the following:

1. Investigate feasibility of extending sewer service to those parcel within the City limits.

2. Investigate the feasibility of extending sewer service to the eleven areas outside the City limits.
3. Provide a schematic service alternative for these two groupings of parcels.
4. Provide a planning level cost estimate for the proposed service scheme.
5. For the proposed plan to extend sewer service to unsewered areas, develop a financial analysis for three (3) potential funding scenarios; to be selected by the City.
6. Provide public involvement associated with this task. This will specifically include an estimated three public meetings.
7. Prepare a policy statement regarding the extension of sewer service to these two groupings of parcels.
8. Present proposed service scheme, estimated costs, rate impacts, and proposed policy to Staff and City Council.
9. Present findings in a project memorandum.

Subtask 240 Assumptions:

1. None.

Subtask 250 – Staff Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T1 - Project Startup	Review/Finalize Project Management Plan Confirm Basis of Design Establish Decision Making Framework Prepare for Council Meeting No. 1 Prepare for Navy/Stakeholder Workshop No. 1
T2 - Preliminary Alternatives Development	Evaluate Potential Treatment Process Options Select Processes Options for Consideration (2) Confirm Satellite MBR Requirements Establish Non-process Requirements Establish Basis for Site Footprint Develop List of Potential Sites Apply Site Screening to Select Candidate Sites Establish Matrix of Preliminary Alternatives
T3 - Preliminary Alternatives Screening	Evaluate Matrix of Preliminary Alternatives (8) Screen Alternatives to Short List (4)

Subtask 250 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 200 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM1 – Basis of Design	210	September 2010
(1) TM2 – Decision Making Methodology	210	January 2011
(1) TM3 – Treatment Process Evaluation	220	March 2011
(1) Architectural Programming Questionnaire and Narrative	220	March 2011
(1) Preliminary Geotechnical Assessment TM	230	March 2011
(1) TM4 – Preliminary Alternatives	230	April 2011
(1) Unsewered Area Feasibility Memorandum	240	March 2011
(3) Workshop Materials, Agenda, Minutes	250	Per Workshop Schedule

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to further refine and evaluate the short list of final alternatives to select a proposed alternative for preliminary design. The proposed alternative will define the recommended liquid and solids stream treatment processes, location for centralized and satellite facilities (if applicable), conveyance and collection system improvements, outfall location and necessary improvements, and potential uses for reclaimed water. Except as noted under assumptions, Consultant will provide the following services for Task 300:

Subtask 310 – Final Alternatives Development and Screening

Further refine the final short listed alternatives, adding technical detail to site layouts based on site mapping and additional geotechnical evaluation. Confirm hydraulics and collection/conveyance system requirements. Integrate the results of Subtask 420 – Final Outfall Analysis, and Subtask 510 – Preliminary Effluent Reuse Assessment. Update cost information and TBL+ evaluations of financial, social, environmental, and technical criteria and objectives. Prepare a final screening of alternatives to select a proposed alternative for preliminary design. Document results of final screening in TM7 – Final Alternatives.

Subtask 311 – Site Mapping

Provide background mapping and existing and readily available geographical information system (GIS) and survey data. Mapping will be developed as a basis for site planning at up to four (4) candidate sites. The mapping will show readily available information for property lines, existing structures, significant utilities, site topography, and other significant features.

Subtask 312 – Architectural Development

Conduct a one day field review and provide analysis of sites being considered for the new treatment plant in regards to contextual placement within the surrounding site conditions. Prepare conceptual site plan footprints for recommended facilities, coordinating with process engineers, landscape architects and with zoning requirements that may influence plant layouts on specific available site options. Provide graphic representation of appropriate site organization and utilization plans for the four (4) final alternatives. Prepare 3D renderings illustrating up to two (2) facility views for one site. Develop landscaping options and prepare up two (2) renderings showing site landscaping. Prepare order of magnitude estimated probable costs of non-process facilities and develop associated landscaping and architectural theme costs.

Subtask 310 Assumptions:

1. The budget for Subtask 311 assumes existing and readily available GIS and survey data are used, and does not include field visits or detailed surveys of sites or collection system/conveyance piping alignments.

Subtask 320 – Regional Biosolids Alternative Feasibility

The purpose of this subtask is to evaluate the feasibility of implementing a solids handling, stabilization, and biosolids disposal alternative on a regional basis, with participation from the following entities:

- City of Oak Harbor
- Navy Seaplane base
- NAS Ault Field
- Penn Cove Water/Sewer District
- City of Coupeville
- Island Septage

Except as noted under assumptions, Consultant will complete the following services for Subtask 320:

Gather and analyze historic solids production, hauling, and disposal records, including quantities and costs, from the regional entities. Estimate future solids production and handling requirements using growth projections provided by the entities.

Evaluate the capacity of the City of Oak Harbor's existing lagoons, and compare that capacity with the current and future solids loadings from the regional entities to determine the feasibility of using the existing lagoons for regional biosolids stabilization and storage. Estimate the capital cost of lagoon modifications and the operational and maintenance (O&M) costs for such a regional facility.

Estimate the size of a new and separate solids handling and stabilization facility to accept solids from the regional entities. Evaluate disposal alternatives for stabilized biosolids, including: composting; thermal drying; and trucking to an offsite location. Estimate the capital cost and annual O&M costs for such a regional facility.

Document the analysis and conclusions into a project memorandum that estimates the life-cycle costs and revenue potential to the City of Oak Harbor as the owner/operator of a regional solids facility.

Subtask 320 Assumptions

1. Consultant will estimate current and future solids loadings for the City of Oak Harbor, and assist the City in obtaining solids loadings for regional entities. Consultant will not perform independent analysis to determine current and future solids loadings from the regional entities.
2. City owned property near the intersection of Highway 20 and Sleeper Road will be considered as the regional biosolids handling site.

Subtask 330 – Technical Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T4 – Final Alternatives Screening	Discuss Potential Reuse Opportunities Evaluate Final Short Listed Alternatives (4) Identify Proposed Alternative (1)

Subtask 330 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 300 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM7 – Final Alternatives	310	October 2011
(1) Site Mapping Using Available Data	310	April 2011
(4) Updated site utilization plans	310	April 2011
(2) 3D site/facility renderings	310	April 2011
(2) Site landscaping renderings	310	April 2011
(1) Regional Biosolids Management Feasibility Memorandum	320	July 2011
(2) Workshop Materials, Agenda, Minutes	330	Per Workshop Schedule

TASK 400 – OUTFALL EVALUATION

The objective of this task is to develop the criteria for saltwater outfall alternatives based on the preliminary and final alternatives being evaluated. Work performed under Task 400 will satisfy the following requirements of an Engineering Report under WAC 173-240-060:

- Degree of treatment required to meet applicable receiving water quality criteria.
- Document compliance with water quality standard outside authorized mixing zones.
- Detailed outfall and mixing zone analysis.

Except as noted under assumptions, Consultant will provide the following services for Task 400:

Subtask 410 – Discharge Alternatives and Performance Assessment

Due to their condition, the City has determined that neither the existing RBC outfall/diffuser nor the existing lagoon outfall/diffuser will meet future needs. This subtask will develop alternative diffuser sites and configurations, and then evaluate their effluent mixing and water quality impacts. This task will establish discharge alternatives (site location and diffuser configuration) for:

1. Outfall for RBC plant site in Oak Harbor (new or rehabilitated existing).
2. Outfall for an alternative site discharging to Oak Harbor or Crescent Harbor.

Subtask 411 – Outfall Inspections

Conduct visual inspections of the existing outfalls as required in Special Condition S11 of the NPDES permit. Both outfalls will be visually inspected and videotaped by experienced outfall design engineers. Rhodamine WT dye will be injected into the effluents to aid in locating and photographing the outfall and diffusers, and will also be used to detect leaks. The inspection will include the nearshore section of the RBC outfall that is being evaluated for a temporary repair. The results of the inspections will be presented in a written report and DVD video.

Subtask 412 – Outfall and Diffuser Alternatives

Establish alternative diffuser sites in both Oak Harbor and Crescent Harbor. For practical purposes related to aquatic land use authorizations, preference will be given to siting diffusers at the existing locations. Additional diffuser locations will be considered if there are cost or performance advantages. Up to three diffuser alternatives (length, number and spacing of diffuser ports) will be established at each site. Due to the history of sedimentation around the RBC diffuser, elastomeric duckbill check valves will be considered.

Develop three outfall alignment and profile options (RBC outfall replacement to Oak Harbor, alternate site to Oak Harbor, alternate site to Crescent Harbor). Existing aerial base mapping and NOAA bathymetry will be used for the base map. Establish head loss ranges for diffuser alternatives. Establish pipeline diameter necessary for peak effluent flows and available discharge head. Perform a preliminary assessment of the utility of the two existing outfalls, based on existing drawings and dive inspection reports/videos. For the RBC outfall, evaluate potential slip lining alternative. Based on hydraulic analysis determine the need for effluent pumping for each alternative.

Subtask 413 – Shellfish Harvesting Areas and Aquatic Land Lease Assessment

Assess shellfish closure zone restrictions and potential geoduck damage payments for existing outfalls based on existing shellfish closure zones that have been established for the City's outfalls by the Washington Department of Health (DOH), and payments that have been pursued

by the Department of Natural Resources (DNR) in other areas where outfalls interfere with commercial fishing harvests. Assess potential changes in the closure zones and resource payments as a function of treatment plant flow and treatment technology (e.g. activated sludge versus MBR effluent). Summarize benefits, negative impacts, and potential resource costs of various diffuser siting and treatment technology options. Coordinate analysis and conclusions with DOH shellfish program manager.

Subtask 414 – Mixing Zone Analysis and Water Quality Assessment

Prepare mixing zone studies for up to two (2) combinations of outfall location and design flows, to meet anticipated requirements for development of a future NPDES permit. The analysis will include:

- Determination of acute and chronic mixing zone dilution factors using the existing Ecology/EPA mixing zone models and receiving water data.
- Assessment of the "reasonable potential" to exceed water quality criteria beyond the mixing zone boundaries, which is a statistical test adopted by Ecology to assess the need for effluent limits in the NPDES permit.
- Determination of the potential effluent limitations for toxicants (e.g. ammonia, chlorine, metals) in future NPDES permits.
- Determine compliance with ambient temperature criteria at the mixing zone boundaries.
- Assessment of the potential to impact aquatic sediments using Ecology screening criteria for potential impacts and review of existing sediment data near outfalls.
- Assess potential future Whidbey Basin marine TMDL limitations for nutrient discharge.

Subtask 410 Assumptions:

1. Preliminary effluent flow rates (maximum month, maximum day, and peak instantaneous) and gravity head availability will be used to establish hydraulic capacity of existing outfalls.
2. An objective for Subtask 410 will be to provide outfall information and conclusions to support the wastewater facilities screening conducted in Task 200.

Subtask 420 – Final Outfall Analysis

Subtask 421 – Confirm Mixing, Water Quality, and Shellfish Models

Finalize the mixing zone modeling, water quality assessments, and shellfish closure zone evaluations (updated from the previous subtask) based on the final flow and treatment facility alternatives developed under Task 200.

Subtask 422 – Recommended Outfall Improvements

Develop preliminary recommendations for the upgrade or replacement of the existing outfalls. Data developed in the evaluation will include variations and combinations of design features for up to two (2) outfall options, including:

- Alignment and profile for each outfall option.
- Diffuser criteria for each outfall option (number and size of ports, spacing, and orientation).

- Hydraulic capacity for each outfall option (gravity and pumped as appropriate).
- Recommendations for repair or rehabilitation for existing outfalls (as appropriate).
- Shoreline construction requirements as appropriate for new or repair work.
- Pipeline materials, cathodic protection, anchoring, and construction methods.
- Recommendations for maintenance and prevention of siltation.
- Permitting overview.
- Opinions of probable construction cost.

Summarize the mixing zone analysis and recommended outfall improvements, and document results and recommendations in TM5 – Outfall Evaluation and Recommendations.

Subtask 420 Assumptions:

1. Subtask 420 will be conducted in parallel with the final wastewater treatment alternatives development and screening under Task 300.

Task 400 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
Outfall inspection report and DVD for both existing outfalls	410	November 2010
(1) Preliminary Draft TM5 – Outfall Evaluation and Recommendations	410	November 2010
(1) TM5 – Outfall Evaluation and Recommendations	420	February 2011

TASK 500 – REUSE OPPORTUNITIES

The objective of this task is to evaluate the feasibility of beneficially reusing treated effluent produced by the proposed alternative. Except as noted under assumptions, Consultant will provide the following services under Task 500:

Subtask 510 – Preliminary Effluent Reuse Assessment

Develop and evaluate potential alternatives for reuse of treated effluent, including groundwater recharge, seasonal irrigation supply (urban and agricultural), in-plant use, and wetlands habitat augmentation/creation. Based on current regulations, identify treatment and facilities requirements, estimate land requirements and permitting restrictions, and prepare capital, operating, and life cycle cost estimates for up to two (2) potential reuse scenarios. Document results in TM6 – Reuse Opportunities.

Subtask 510 Assumptions:

1. The City of Oak Harbor will provide hydrogeologic reports, aquifer testing results, construction details and water quality analyses results for their groundwater sources.
2. No field exploration or field reconnaissance will be completed for this task.

Subtask 520 – Reuse Alternatives Development

The authorization and scope of this subtask will be developed pending the results of Subtask 510, and the outcome of the final alternatives screening process. If authorized by the City's Project Manager, Budget for this Subtask will be reallocated from Task 900.

Task 500 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM6 – Reuse Opportunities	510	June 2011

TASK 600 – FACILITIES PLAN

The objective of this task is to amend the City's existing Comprehensive Sewer Plan and complete a Facilities Plan that includes all applicable sections outlined by WAC 173-240-060 and 40CFR 35.917-1. The Facilities Plan will be consistent with federal, state, and local regulations and policies, such as the Endangered Species Act (ESA), the Growth Management Act, the City of Oak Harbor Comprehensive Plan, and the amended City of Oak Harbor Comprehensive Sewer Plan. The Facilities Plan will be sufficiently complete so that plans and specifications can be developed without substantial changes. Except as noted under assumptions, Consultant will provide the following services under Task 600:

Subtask 610 – Comprehensive Sewer Plan Amendment

Review and amend the December 2008 Comprehensive Sewer Plan for Ecology approval. Prepare an amendment with new data and recommendations to provide consistency with the Facilities Plan. Deliver Draft Amendment to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Amendment will be provided. Following City review of the Draft Amendment, incorporate comments into an Agency Draft Amendment to be submitted to Ecology for review.

Subtask 610 Assumptions:

1. The December 2008 Comprehensive Sewer Plan has been approved by Ecology. Consultant will prepare a brief amendment reflecting the proposed alternative developed in the Facilities Plan, including: selected liquid/solids treatment process(s); facilities site(s); collection/conveyance improvements; outfall/reuse of treated effluent; project implementation plan; and updated financial plan.
2. The Comprehensive Sewer Plan Amendment will be reviewed with Ecology as a component of the Agency Draft Facilities Plan.
3. Environmental Documentation prepared for the Facilities Plan will satisfy requirements for amending the Comprehensive Sewer Plan.

Subtask 620 – Develop Draft Facilities Plan

Compile the findings and recommendations documented in the previously defined Scope of Services into a Draft Facilities Plan. The expected outline of the Facilities Plan is included as Attachment 3.

Subtask 621 – Final Proposed Alternative Development
Develop the final proposed alternative in sufficient detail to satisfy facilities planning requirements, including:

- Refine the recommended liquid and solid stream treatment alternative to establish preliminary facility layouts and footprints.
- Develop design data, sizing criteria, liquid and solids stream schematics, and an overall WWTP hydraulic profile that reflects the recommended upgrades.
- Prepare plant electrical facility needs including back-up power generation and plant-wide power distribution.
- Provide a preliminary I/O list for recommended improvements and recommendations for a system-wide SCADA system (treatment facility and collections system).
- Provide a summary of collection, conveyance, and outfall improvements.

Subtask 622 – Architectural Renderings
Providing select architectural drawings of the proposed alternative to establish building envelopes, edge conditions, and the architectural treatments. Refine/update the 3D model generated in Subtask 312 to establish building mass, roof lines, and edge conditions, and provide up to two (2) rendered views of the new facilities on the selected site. Architectural renderings will convey materials and finishes and the general theme of the plant as it relates to local design guidelines and site specific architectural context. Coordinate with process building layouts and refined landscaping plans, and prepare one (1) site plan to illustrate the proposed appearance of the site, showing general land forms, planting, plant entrance, and parking.

Subtask 623 – Implementation Plan
Prepare an implementation plan for the recommended alternative, including a project schedule, phasing plan, anticipated project cost for each phase, and expected cash expenditure for the improvements.

Subtask 624 – Financial Analysis
Evaluate potential capital funding sources to develop funding strategy alternatives for the City. Estimate timing associated with potential funding programs, discuss eligibility, and note anticipated or potential program changes.

Prepare a financial analysis showing the project costs, how the project can be funded, and the how the debt can be repaid over a 20-year period. Reflect anticipated increases in operation and maintenance (O&M) costs and growth in connections in the analysis, including the financial history of the sewer utility and current outstanding debt. Summarize results and prepare the financial analysis chapter of the Facilities Plan.

Subtask 625 – Draft Facilities Plan
Deliver Draft Facilities Plans to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Facilities Plan will be provided. Following City review of the Draft Facilities Plan, incorporate comments into an Agency Draft Facilities Plan to be submitted to Ecology for review.

Subtask 620 Assumptions:

1. The output of the City's recent utility rate study will be used as the base for identifying history, policies and comparing funding strategies.

2. Infiltration and inflow (I/I) must be addressed to satisfy Ecology requirements for a Facilities Plan. Consultant will evaluate I/I according to Ecology Publication No. 97-03, using flow data provided by the City. It is assumed that the analysis will conclude with a determination of "Non-Excessive I/I". Field investigation of I/I sources and an evaluation of projects to reduce I/I are not included in this Scope of Services.
3. The financial analysis will be prepared for selected alternative.

Subtask 630 – Respond to Agency Review Comments

Consolidate Agency review comments on the Facilities Plan and Comprehensive Sewer Plan Amendment, and prepare a response to each comment. Review comments and responses with the City and Ecology.

Subtask 630 Assumptions:

1. Ecology review of the Facilities Plan and Comprehensive Sewer Plan Amendment will be conducted concurrently with review and approval of Environmental Documents.
2. Agency review workshops conducted throughout the project are expected to result in a minimal number of comments and changes to the Facilities Plan and Comprehensive Sewer Plan Amendment.

Subtask 640 – Final Facilities Plan Development

Following review of the Agency Draft Facilities Plan and following approval of the Environmental Documents, incorporate Agency comments submit a Final Facilities Plan.

Subtask 640 Assumptions:

1. None.

Subtask 650 – Technical/Agency Review Workshops

Conduct Technical/Agency Review Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff/Agency Review Workshop	Objectives
T5 – Draft Facilities Plan Review	Review Draft Facilities Plan
A1 – Agency Draft Facilities Plan Review	Review Amended Comprehensive Sewer Plan Review Agency Draft Facilities Plan
A2 – Review Comment Responses	Review Responses to Agency Comments

Subtask 650 Assumptions:

1. Technical Workshops will be held at City of Oak Harbor facilities.
2. Agency Review Workshops will be held at Ecology facilities in Bellevue.

3. Consultant Project Manager and required team members will attend workshops.
4. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 600 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Draft Comprehensive Sewer Plan Amendment (for City review)	610	January 2012
(10) Agency Draft Comprehensive Sewer Plan Amendment	610	January 2012
(1) Rendered Site Plan	620	November 2011
(4) 3D Renderings of Facilities	620	November 2011
(10) Draft Facilities Plan (for City review)	620	January 2012
(10) Agency Draft Facilities Plan	620	January 2012
(1) Potential Capital Funding Sources TM	620	November 2012
(1) Response to Agency Comments Log	630	June 2012
(10) Final Comprehensive Sewer Plan Amendment	640	July 2012
(10) Final Facilities Plan	640	July 2012
(2) Staff Workshop Materials, Agenda, Minutes	650	Per Workshop Schedule
(2) Agency Review Workshop Materials, Agenda	650	Per Workshop Schedule

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

Multiple environmental approvals are required for approval of the wastewater facilities plan and the comprehensive sewer plan amendment. The preferred alternative will have differing documentation requirements, depending upon the facility site, outfall improvements, and conveyance components. The environmental review and documentation task has been developed to encompass as many of these potentially differing requirements within a single document as possible, but will require finalization as the team proceeds through the alternative screening and review process.

Task 700 includes environmental documentation according to the National Environment Policy Act (NEPA), with either the Environmental Protection Agency (EPA) or Department of Defense as the NEPA lead agency. NEPA will be triggered by the need for approvals or permits from the Navy, or a funding request from the US EPA. NEPA compliance would also be triggered by a Corps of Engineers permit. The NEPA document will be adopted by the City for State Environmental Policy Act (SEPA) compliance, and will be used by the City to meet State Environmental Review Process (SERP) documentation requirements associated with submission of the Facilities Plan. This will also meet requirements for potential State Revolving Fund applications in the future.

The NEPA document will be an Environmental Assessment (EA), and it is assumed that NEPA EA will receive a Finding of No Significant Impact (FONSI). Meeting this determination will require that significant impacts can be identified and mitigated or avoided. The City will adopt

the EA to meet their SEPA requirements; at this time, we are assuming this would be a Mitigated DNS, consistent with the FONSI.

The objective of this task is to prepare documentation to evaluate the environmental impacts of the recommended project. Information to be gathered or issues to be addressed includes:

- Soils/erosion, based on Geotechnical Reconnaissance.
- Air quality/odor, based on qualitative odor assessment.
- Water quality, based on anticipated water quality impacts, wetlands delineation and impacts, and ground water impacts.
- Floodplain/flood insurance, based on information from Federal Emergency Management Agency (FEMA) maps.
- Fish and wildlife, based on information on existing animals on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Vegetation, based on information on existing vegetation on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Environmental health (biosolids), based on information on the quality of biosolids and potential health impacts.
- Environmental health (reclaimed water), based on information on the quality of reclaimed water and potential health impacts.
- Environmental health (hazardous materials), based on a list of hazardous materials that will be stored or used on the WWTP site.
- Noise, based on a qualitative description of typical noise level at the plant during both construction and operation.
- Compatibility with surrounding land use, based on land use information provided by the City.
- Aesthetics, based on architectural drawings and landscaping plans to illustrate the proposed appearance of the site.
- Historical and archaeological resources.
- Transportation.
- Funding.

Except as noted under assumptions, Consultant will provide the following services under Task 700:

Subtask 710 – Environmental Services / NEPA/SEPA documentation

Prepare an environmental assessment in accordance with the NEPA, conduct the required environmental reviews and studies; and release required notices and documents. Develop text, figures, and sections required to assemble prepared environmental documents to meet NEPA. This effort will rely heavily on previous documents, including the Facility Plan, prepared for the project with site specific information obtained as part of Tasks 200 and 300. Information will be incorporated from other tasks and outside sources such as public involvement and the cultural/historic resources review. Agency correspondence will be conducted and documented in accordance with NEPA requirements. This document will be used to meet the environmental

documentation requirements for the Facilities Plan. This approach will be finalized with the City and the NEPA lead agency during the alternative selection process.

Subtask 710 Assumptions:

1. The Consultant will meet with the City of Oak Harbor to formalize the proposed environmental document approach, based on anticipated funding requests and other requirements. This scope and accompanying budget is based on the assumption that the City will be submitting a Facilities Plan and will prepare a NEPA EA to meet the requirements of SERP documentation.
2. The City will issue the appropriate SEPA review document. It is assumed that document will be a Mitigated DNS, in accordance with a Finding of No Significant Impact (FONSI) from the NEPA process. If significant impacts are identified during the NEPA EA that do not warrant a FONSI, it will be necessary to revisit the SEPA process.
3. SERP documentation will be covered by the NEPA document.
4. The NEPA documentation will incorporate the findings and results of the Public Outreach program.

Subtask 720 – Biological Assessment and Essential Fish Habitat (EFH)

Prepare a biological assessment (BA) for species listed as threatened or endangered under the federal ESA, including Puget Sound Chinook salmon and bull trout, and candidate species, including Coho salmon. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the United States Fish and Wildlife Service (Services) under Section 7 of the ESA. The BA will address the recommended plan identified during Task 300 and described in the Facilities Plan. It is assumed that analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor. The project may result in a "no effect" determination and consultation with the federal services would not be required. This will be determined during the initial steps of the project. Subtasks will include the following:

- Draft BA. Prepare a draft BA for review by the City and Carollo. Included activities involved in preparation of the BA are:
  - Communications with the National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS), and Washington Department of Fish and Wildlife (WDFW), to obtain habitat and species information.
  - Review of the literature and published information for each Listed, Proposed, and Candidate species identified by USFWS and NMFS occurring within the project area. This task also includes a site visit and a review of reports that have already been prepared for this project or similar projects in the vicinity.
  - Preparation of an internal review draft document.
- Final BA. Prepare a final BA document incorporating the City's and Carollo's comments on the draft report for submittal by the City to the Department of Ecology.
- Consultation assistance. Following submittal of the BA, provide responses to comments on the document by the federal action agency) and the federal services (if appropriate) up to the hours indicated. It is assumed that Ecology will be serving as representative for EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required.

Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.

- Attend at up to two meetings with Ecology and liaisons for both NMFS and USFWS during consultation.

Subtask 720 Assumptions:

1. Analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor.
2. ESA consultation is typically coordinated through the federal action agency, anticipated in this case to be Ecology on behalf of the Environmental Protection Agency (EPA), as outlined in the SERP guidelines. The existing wetland report and geotechnical study are assumed to be sufficient for the purposes of the BA.
3. The BA will be conducted for the recommended alternative, with appropriate level of design detail provided by Carollo.
4. An Essential Fish Habitat Assessment (EFH) will be submitted and reviewed as a component of the BA.
5. The project action area includes all locations at which the proposed project could potentially impact ESA listed species or their critical habitat including locations distant from the project site.
6. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the Services under Section 7 of the ESA.
7. Conclusion of the BA consultation process will be dictated by the timelines of the federal agency responses. Consultant will respond promptly to agency requests during the consultation process.
8. Ecology will be serving as representative for EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required. Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.

Subtask 730 – Section 106 Compliance

Using Subtask 233 as a starting point, prepare a memorandum regarding historical and archaeological resources for inclusion in the Environmental Assessment. Prepare Section 106 consultation correspondence for signature of Federal lead agency.

Task 700 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Draft and Final NEPA EA	710	July 2012
(1) Draft and Final BA or No Affect Letter (electronic and 6 hard copies)	720	July 2012
Draft and Final responses (electronic) to federal agency comments	720	July 2012

TASK 800 – PUBLIC PROCESS SUPPORT

The objective of this task is to support successful project implementation by proactively identifying and addressing public and stakeholder issues. As defined below, the City will lead public process activities for the Project, with significant support from the Consultant. Except as noted under assumptions, Consultant will provide the following services for Task 800:

Subtask 810 – Public Process Planning

Participate in two (2) meetings with the City to develop a project-specific public/stakeholder involvement plan (PIP) that meets NEPA, SERP, and SEPA requirements and that identifies the following:

- Target audiences and issues;
- Anticipated schedule of activities;
- Interrelationships and responsibilities; and
- Public involvement tools for each phase of the project.

Prepare a Draft PIP, review with the City, make revisions, and produce a final PIP. Participate in coordinating phone calls with City of Oak Harbor staff to provide strategic advice on public involvement and communications issues as they arise throughout the Project.

Subtask 810 Assumptions:

1. Consultant will update the PIP once during the project.

Subtask 820 – Stakeholder Workshop Facilitation

Assist the City in planning and conducting Stakeholder Workshop No. 1. Participate in a preparation session for the workshop. Prepare a workshop plan in advance that identifies goals, objectives, agenda, roles and responsibilities, and materials. Produce presentation materials, and develop draft and final agendas. Facilitate the Stakeholder Workshop and produce one (1) draft and one (1) final summary (minutes).

Assist the City in planning and conducting up to three (3) meetings with the U.S. Navy to communicate project status and obtain feedback. For each meeting, provide technical, financial, and environmental information to assist discussions facilitated by the City.

Subtask 820 Assumptions:

1. Stakeholder Workshop No. 1 will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for Stakeholder Workshop No. 1 and deliver workshop materials to attendees.
3. In addition to City staff, it is anticipated that Stakeholder Workshop No. 1 attendees will include representatives of NASWI Public Works, local community members, local Tribes, and permitting agencies (Ecology, DOH, DNR, and the Army Corps of Engineers).
4. Consultant Project Manager will attend Navy meetings and provide technical information. City staff will facilitate discussion and summarize action items.

Subtask 830 – Public Meeting Facilitation

Assist the City in planning and conducting Public Meetings, defined below. Participate in up one (1) preparation session for each meeting. Facilitate the Public Meetings and produce one (1) draft and one (1) final summary (minutes). For each meeting: arrange for suitable meeting locations; prepare meeting plans; produce presentation materials; develop sign in sheets and public comment forms; develop draft and final agendas; and develop draft and final meeting announcements/save the date notices.

Throughout the Project, develop and maintain a contact list of stakeholders and interested parties. Maintain a log of public comments received outside of the public meetings (via the website, emails to project team staff, phone calls, etc.), and responses to public inquiries as requested by the City.

Public Meeting	Objectives
P1 – Public Meeting No. 1	Communicate Project Purpose and Objectives Report Project Plan and Schedule Obtain Input on Decision Making Methodology Communicate Future Opportunities for Input
P2 – Public Meeting No. 2	Report Results of Alternatives Screening Obtain Input on Short Listed Alternatives (4)
P3 – Public Meeting No. 3	Obtain Input to Refine Proposed Alternative (1)

Subtask 830 Assumptions:

1. The City will arrange for meeting locations and facilities.
2. The City will publish announcements in the local paper and include notices of meetings on their website.
3. The City will pay for all costs related to mailings, including printing and postage.

Subtask 840 – Council/Committee Meeting Participation

Assist the City in planning and conducting Council/Committee Meetings, defined below. Prepare meeting objectives, agendas, roles and responsibilities, and presentation materials in advance of the meetings. Participate in up to one (1) preparation session for each meeting.

Council/Committee Meeting	Objectives
C1 – Council Committee Meeting No. 1	Report Progress Report Project Challenges and Opportunities
C2 – Council Workshop No. 1	Report Feedback from Stakeholders and Public Establish Decision Making Criteria Process (basic technical and environmental) Sites (policy considerations) Alternatives (TBL+ objectives)

C3 – Council Committee Meeting No. 2	Report Results of Alternative Screening Report Feedback from Stakeholders and Public Confirm Short Listed Alternatives (4)
C4 – Council Committee Meeting No. 3	Report/Obtain Input on Proposed Alternative (1)
C5 – Council Meeting No. 1	Confirm Proposed Alternative (1)
C6 – Council Meeting No. 2	Report Feedback from Public and Stakeholders Provide Overview of Draft Facilities Plan Confirm Draft Facilities Plan Submission to Ecology

Subtask 840 Assumptions:

1. Council/Committee Meetings will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for meetings and deliver meeting materials to attendees.
3. Consultant staff will lead/facilitate and provide information for discussion at Council Workshops.
4. Consultant Project Manager will attend City Council Committee Meetings/City Council Meetings, and assist City staff in presenting technical information.

Subtask 850 – Public/Stakeholder Involvement Product Development

In consultation with City of Oak Harbor staff, develop a project website and periodically update the website content. Prepare one (1) draft and one (1) final project brochure for informing the public about the background, goals, and specifics of the project.

Other options for products and activities, subject to Oak Harbor authorization and decisions from the Public Involvement Plan include:

- One additional or updated brochure, likely focused on the range of alternatives.
- In consultation with City of Oak Harbor staff, the Consultant may produce a segment for the City of Oak Harbor public access channel. It is intended that the Consultant will prepare a script and be involved in organizing and producing these segments, but assumed that the City will do the actual filming and production. Assume City staff would appear in the video segment.
- Consultant will assist with strategy and development of presentations for local community groups that City staff would make.

Task 850 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City of Oak Harbor staff/consultants.
2. The City will print and send materials to the public.
3. Public Access TV facilities and costs are paid by the City.

Task 800 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Stakeholder Interviews	810	October 2010
(1) Draft PIP	810	September 2010
(1) Final PIP	810	October 2010
(1) Stakeholder Workshop Plan, Agenda, Materials	820	November 2010
(3) Public Meeting Plan, Agenda, Materials	830	Per Public Meeting Schedule
(1) Council Workshop Plan, Agenda, Materials	840	December 2010
(5) Technical information/documents/presentations for City Council Committee/City Council Meetings	840	Per Council Committee/Council Meeting Schedule
(1) Project Website	850	November 2010
(12) Updates to Project Website	850	As Needed
(1) Project Brochure	850	March 2011
(1) Public Access TV Production Plan	850	As Needed

TASK 900 – MANAGEMENT RESERVE

This objective of this task is to provide additional engineering services throughout delivery of the Project (e.g. additional workshops, meetings, evaluations, etc.). Any work performed under this task will require prior written authorization from the City's Project Manager. Authorization will specify the requested scope of services and cost for the work, which will be reviewed, negotiated, and agreed upon by the Project Manager and Consultant prior to performing the work.

ATTACHMENT 3

City of Oak Harbor

PRELIMINARY ENGINEERING AND FACILITIES PLAN

DRAFT TABLE OF CONTENTS

EXHIBIT C
PAYMENT (NEGOTIATED HOURLY RATE PLUS COSTS)

The CONSULTANT shall be paid by the CITY for completed work and services rendered under this AGREEMENT as provided hereinafter. Such payment shall be full compensation for work performed or services rendered and for all labor, materials, supplies, equipment, and incidentals necessary to complete the work. If a federal highway project, the CONSULTANT shall conform with all applicable portions of 48 CFR 31.

1. **Hourly Rates**

The CONSULTANT shall be paid by the CITY for work done, based upon the negotiated hourly rates shown in Exhibits "D-1" and "D-2" attached hereto and by this reference made part of this AGREEMENT. The rates listed shall be applicable for the first twelve (12) month period and shall be subject to negotiation for the following twelve (12) month period upon request of the CONSULTANT or the CITY. If negotiations are not conducted for the second or subsequent twelve (12) month periods within ninety (90) days after completion of the previous period, the rates listed in this AGREEMENT or subsequent written authorization(s) from the CITY shall be utilized for the life of the AGREEMENT. The rates are inclusive of direct salaries, payroll additives, overhead and fees.

In the event renegotiation of the hourly rates is conducted, the CITY reserves the right to audit for any change in the overhead rate currently in use by the CONSULTANT and modify the hourly rates to be paid to the CONSULTANT subsequent to the renegotiation accordingly. Any changes in CONSULTANT's fixed hourly rates may include salary or overhead adjustments.

2. **Direct Non-salary Costs**

Direct non-salary costs will be reimbursed at the actual cost to the CONSULTANT. These charges may include, but are not limited to, the following items: travel, printing, long distance telephone, supplies, computer charges, and fees of subconsultants. Air or train travel will only be reimbursed to economy class levels unless otherwise approved by the CITY. Automobile mileage for travel will be reimbursed as the current rate approved for CITY employees and shall be supported by the date and time of each trip with origin and designation of such trips. Subsistence and lodging expenses will be reimbursed at the same rate as for CITY employees. The billing for non-salary cost, directly identifiable with the PROJECT, shall be an itemized listing of the charges supported by the original bills, invoices, expense accounts, and miscellaneous supporting data retained by the CONSULTANT. Copies of the original supporting documents shall be supplied to the CITY upon request. All above charges must be necessary for the services provided under this AGREEMENT.

3. **Management Reserve Fund**

The CITY may desire to establish a Management Reserve Fund to provide the Agreement Administrator the flexibility of authorizing additional funds to the AGREEMENT for allowable unforeseen costs, or reimbursing the CONSULTANT for additional work beyond that already defined in this AGREEMENT. Such authorization(s) shall be in writing and shall not exceed the lesser of Fifty Thousand Dollars ($50,000.00) or ten percent (10%) of the Total Amount Authorized as shown in the heading of this AGREEMENT. The amount included for the Management Reserve Fund is shown in the heading of this AGREEMENT. This fund may be replenished in a subsequent supplement agreement. Any changes requiring additional costs in excess of the "Management Reserve Fund" shall be made in accordance with Section 11, "Extra Work".

4. **Maximum Amount Payable**

The maximum amount payable for completion of work under this AGREEMENT shall not exceed the amount shown in the heading of this AGREEMENT. The maximum amount payable includes the Management Reserve Fund, but does not include payment for extra work as stipulated in Section 11, "Extra Work" of the General Requirements. No minimum amount payable is guaranteed under this AGREEMENT.

5. **Monthly Progress Payments**

Progress payments may be claimed on a monthly basis for all costs authorized in (1) and (2) above. The monthly invoices shall be supported by detailed statements for hours expended at the rates established in Exhibits "D-1" and "D-2", including names and classifications of all employees, and invoices for all direct non-salary expenses. To provide a means of verifying the invoiced salary costs for the CONSULTANT's employees, the CITY may conduct employee interviews. These interviews may consist of recording the names, titles, salary rates, and present duties of those employees performing work on the project at the time of the interview.

6. **Inspection of Cost Records**

The CONSULTANT and his/her subconsultants shall keep available for inspection by representatives of the CITY, State, and the United States, for a period of three (3) years after final payment, the cost records and accounts pertaining to this AGREEMENT and all items related to or bearing upon these records with the following exception: if any litigation, claim, or audit is started before the three (3) year period, the records shall be retained until all litigation, claims, or audit filings involving the records have been resolved. The three (3) year retention period begins when the CONSULTANT receives final payment.

7. **Final Payment**

Final payment of any balance due the CONSULTANT of the gross amount earned will be made promptly upon its verification by the CITY after the completion of the work under this AGREEMENT, contingent upon receipt of all PS&E, plans, maps, notes, reports, and other related documents which are required to be furnished under this AGREEMENT. Acceptance of such final payment by the CONSULTANT shall constitute a release of all claims for payment which the CONSULTANT may have against the CITY unless such claims are specifically reserved in writing and transmitted to the CITY by the CONSULTANT prior to its acceptance. Said final payment shall not, however, be a bar to any claims that the CITY may have against the CONSULTANT or to any remedies the CITY may pursue with respect to such claims.

The payment of any billing will not constitute agreement as to the appropriateness of any item and at the time of final audit, all required adjustments will be made and reflected in a final payment. In the event that such final audit reveals an overpayment to the CONSULTANT, the CONSULTANT will refund such overpayment to the CITY within ninety (90) days of notice of the overpayment. Such refund shall not constitute a waiver by the CONSULTANT of any claims relating to the validity of a finding by the CITY of overpayment.

EXHIBIT D-1
CONSULTANT FEE DETERMINATION - SUMMARY SHEET

Project: Preliminary Engineering and Facilities Plan

Please see Exhibit D-3.

Direct Salary Cost (DSC):

Classification	Man Hours	x	Rate	=	Cost
					$
					$
					$
					$
					$
					$
					$
					$
					$
					$
					$
					$
					$

Total DSC = $

Overhead (OH Cost -- including Salary Additives):
OH Rate x DSC of _____ % x $_____ $

Fixed Fee (FF):
FF Rate x DSC of _____ % x $_____ $

Reimbursables:
Itemized $

Subconsultant Costs (See Exhibit "G"): $

Grand Total $

Prepared by_____ Date_____

EXHIBIT D-2
CONSULTANT FEE DETERMINATION - SUMMARY SHEET
(Specific Rates of Pay)

Please see Exhibit D-3.

Fee Schedule

Discipline or Job Title	Hourly Rate	Overhead @____%	Profit @____%	Rate Per Hour

City of Oak Harbor
Wastewater Treatment Plant Preliminary Design and Facilities Plan
June 8, 2011
Changes from Previous Budget

WORK TASKS	Carollo	Subconsultants												Total Cost
		BHC	ESA Adolfson	Triangle Associates	EnviroIssues	Michael Willis Architects	Cosmo. Engineering Group	Geo-Engineers	Bruce Dees and Associates	KI&A	Paragon Research	Certified Land Services	Surveyor	
TASK 100 - PROJECT MANAGEMENT	$1,709	$874	$0	$0	$166	$511	$0	$0	$0	$0	$0	$0	$0	$3,260
TASK 200 - PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING	$0	($0)	$0	$0	$0	$0	$0	$0	$0	$0	($5,135)	($11,004)	$0	($16,139)
TASK 300 - FINAL ALTERNATIVES DEVELOPMENT AND SCREENING	$21,900	$18,985	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	($22,000)	$18,885
TASK 400 - OUTFALL EVALUTION	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 500 - REUSE OPPORTUNITIES	($9,359)	($6,194)	$0	$0	$0	$0	$0	($5,984)	$0	$0	$0	$0	$0	($21,538)
TASK 600 - FACILITIES PLAN	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 700 - ENVIRONMENTAL REVIEW AND DOCUMENTATION	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 800 - PUBLIC PROCESS SUPPORT	$12,503	$2,592	$0	$0	$14,481	$3,835	$0	$0	$0	$0	($1,806)	$0	$0	$31,605
TASK 900 - MANAGEMENT RESERVE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	($14,683)
SUBTOTAL COST	$26,752	$16,257	$0	$0	$14,647	$4,346	$0	($5,984)	$0	$0	($6,941)	($11,004)	($22,000)	$1,390
SUBCONSULTANT MARKUP (5% for all subconsultants except BHC)			$0	$0	$732	$217	$0	($343)	$0	$0	($347)	($550)	($1,100)	($1,390)
TOTAL COST	$26,752	$16,257	$0	$0	$15,440	$4,563	$0	($6,283)	$0	$0	($7,288)	($11,554)	($23,100)	$0

Cost Summary

WORK TASKS	Carollo	Subconsultants												Total Cost
		BHC	ESA Adolfson	Triangle Associates	EnviroIssues	Michael Willis Architects	Cosmo. Engineering Group	Geo-Engineers	Bruce Dees and Associates	KI&A	Paragon Research	Certified Land Services	Surveyor	
TASK 100 - PROJECT MANAGEMENT	$46,496	$18,534	$3,264	$6,963	$1,384	$4,982	$3,222	$866	$520	$2,160	$1,072	$831	$0	$90,295
TASK 200 - PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING	$127,197	$104,211	$9,886	$4,298	$0	$16,141	$0	$7,262	$0	$2,880	$1,195	$4,221	$0	$277,290
TASK 300 - FINAL ALTERNATIVES DEVELOPMENT AND SCREENING	$62,597	$41,590	$0	$1,433	$0	$9,408	$0	$0	$4,420	$0	$0	$0	$0	$119,448
TASK 400 - OUTFALL EVALUTION	$7,740	$0	$0	$0	$0	$0	$94,258	$0	$0	$0	$0	$0	$0	$101,997
TASK 500 - REUSE OPPORTUNITIES	$13,644	$7,298	$3,732	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,674
TASK 600 - FACILITIES PLAN	$64,816	$42,110	$0	$0	$0	$30,393	$0	$0	$0	$15,840	$0	$0	$0	$153,159
TASK 700 - ENVIRONMENTAL REVIEW AND DOCUMENTATION	$5,320	$0	$52,069	$0	$0	$0	$0	$0	$0	$0	$7,292	$0	$0	$64,680
TASK 800 - PUBLIC PROCESS SUPPORT	$74,693	$18,274	$0	$46,364	$46,900	$13,165	$0	$0	$0	$3,360	$0	$0	$0	$202,756
TASK 900 - MANAGEMENT RESERVE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$35,317
SUBTOTAL COST	$402,502	$232,016	$68,951	$59,058	$48,284	$74,089	$97,480	$8,129	$4,940	$24,240	$9,559	$5,052	$0	$1,069,615
SUBCONSULTANT MARKUP (5% for all subconsultants except BHC)			$3,448	$2,953	$2,414	$3,704	$4,874	$363	$247	$1,212	$478	$253	$0	$19,946
TOTAL COST	$402,502	$232,016	$72,398	$62,010	$50,698	$77,794	$102,354	$8,492	$5,187	$25,452	$10,037	$5,305	$0	$1,039,561

carollo
Engineers...Working Wonders With Water™

DATE: May 11, 2012
SUBJECT: Consultant Agreement Amendment No. 2
WO#: 8549A00
COPIES TO: File

1218 THIRD AVENUE, SUITE 1600
SEATTLE, WASHINGTON 98101-3032
FAX: (206) 903-0419
PHONE: (206) 684-6532

received 5/14/12

TRANSMITTAL FORM

ADDRESS: City of Oak Harbor
865 Barrington Drive
Oak Harbor, WA 98277

ATTENTION: Connie Wheeler

THE FOLLOWING ITEMS ARE:

☐ REQUESTED	☐ REPORT	☐ COST ESTIMATE	
☒ ENCLOSED	☐ TEST RESULT	☐ CHECK PRINT	☐ CALCULATIONS
☐ SENT SEPARATELY	☐ SPECIFICATION	☐ PROGRESS EST.	☒ OTHER

VIA: US Mail

NO. OF COPIES	DESCRIPTION
1	Signed, Amendment No.2 Form
1	Exhibit B – Scope of Services

THESE DATA ARE SUBMITTED:

☐ AT YOUR REQUEST	☐ FOR YOUR REVIEW	☒ FOR YOUR FILES
☒ FOR YOUR APPROVAL	☒ FOR YOUR ACTION	☐ FOR YOUR INFORMATION

GENERAL REMARKS: Please sign and return one copy of each.

Sincerely,

CAROLLO ENGINEERS WASHINGTON, P.C.

By: Brian Matson, P.E.

Enclosures

Consultant Agreement Amendment Number 2	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4522	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (ENG 09-07)	Execution Date 09/16/10	Completion Date (Prior) April 2013
Project Title: Preliminary Engineering and Facilities Plan	New Maximum Amount Payable $1,089,561	
Description of Work: This phase of the work includes development of preliminary engineering and facilities plan		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineering
and executed on 09/16/2010 and identified as Preliminary Engineering and Facilities Plan

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:

SCOPE OF WORK is hereby amended to add the following:
Please see attached Scope of Services

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: No Change
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum payable amount of $1,089,561 does not change. The management reserve fund has been reduced by $3,404. This brings the fund's balance to $31,913.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: _____

VICE PRESIDENT
Consultant Signature

By: Scott Dudley

Scott Dudley
Approving Authority Signature

5/8/12
Date

EXHIBIT B - SCOPE OF SERVICES
AMENDMENT NO. 2 – May 7, 2012

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

AMENDMENT 2 PURPOSE

The City has requested to add a site (Crescent Harbor North) to the Triple Bottom Line Plus (TBL+) evaluation, increasing the total number of sites evaluated to ten (10). The purpose of Amendment 2 is to provide the additional scope for the environmental, cultural and geotechnical review of the Crescent Harbor North site.

SCOPE OF SERVICES

TASK 100 – PROJECT MANAGEMENT

No change to Task 100 Scope and Contract Limit

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

Subtask 230 – Preliminary Alternatives Screening

With the addition of the Crescent Harbor North site, additional environmental geotechnical and cultural review will be required. The following scope will be added to Subtasks 231, 232 and 233.

Subtask 231 – Environmental Review
Conduct a one (1) day field investigation and perform an initial environmental assessment of the Crescent Harbor North site. Identify sensitive areas, fish and wildlife impacts, wetlands, streams and shoreline impacts, site soils and sediments, effluent water quality impacts, potential permitting requirements, and other pertinent information that will use used to inform the final site selection decision. Document site visit and environmental impacts in a project memorandum.

Subtask 232 – Preliminary Geotechnical Assessment
Conduct a one (1) day field reconnaissance investigation and perform an initial geotechnical assessment of the Crescent Harbor North site. Base the assessment on available information, including geologic and other publicly available maps that document geotechnical conditions and geo-hazard considerations in the project vicinity.

Include information in a brief project memorandum summarizing the pertinent geotechnical issues that would impact site selection, design, and construction at the Crescent Harbor North site, including: anticipated soil types and groundwater conditions; identified geo-hazards (seismic/ liquefaction, slope stability, etc.); potential mitigation strategies; general foundation types including ground improvement techniques or other appropriate considerations; preliminary construction considerations including shoring and dewatering based on the assumed site conditions; and how the new site rates on a geotechnical perspective compared to the other evaluated sites.

Subtask 233 – Cultural Resources Review

Conduct background research to identify known cultural resources in the project vicinity of the Crescent Harbor North site using state records, historic maps and records, and other available information. Document findings in a project memorandum summarizing the identified cultural resources and the potential risks of encountering cultural resources at the Crescent Harbor North site.

Subtask 230 Assumptions:

The following assumptions were added to the Subtask 230 list of assumptions:

1. Subtask 232 will be performed based on existing and available geotechnical information/reports for the Crescent Harbor North site and vicinity. The Crescent Harbor North site will be evaluated (based on right-of-entry considerations). No geotechnical explorations will be conducted during this phase.
2. Subtask 233 assumes that no subsurface explorations will be conducted during this phase.

The Subtask Limit has been increased by $3,404 to reflect the additional scope.

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

No changes to Task 300 Scope and Contract Limit.

TASK 400 – OUTFALL EVALUATION

No changes to Task 400 Scope and Contract Limit.

TASK 500 – REUSE OPPORTUNITIES

No changes to Task 500 Scope and Contract Limit.

TASK 600 – FACILITIES PLAN

No changes to Task 600 Scope and Contract Limit.

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

No changes to Task 700 Scope and Contract Limit.

TASK 800 – PUBLIC PROCESS SUPPORT

No changes to Task 800 Scope and Contract Limit.

TASK 900 – MANAGEMENT RESERVE

This objective of this task is to provide additional engineering services throughout delivery of the Project (e.g. additional workshops, meetings, evaluations, etc.). Any work performed under this task will require prior written authorization from the City's Project Manager. Authorization will specify the requested scope of services and cost for the work, which will be reviewed,

negotiated, and agreed upon by the Project Manager and Consultant prior to performing the work.

Due to the increased scope for Subtask 230, the management reserve fund will decrease by $3,404. This will bring the fund's balance to $31,913.

DATE:	July 31, 2012
SUBJECT:	Contract Agreement Amendment 3
PROJECT:	ENG-09-07
COPIES TO:	

City of Oak Harbor
ENGINEERING
DIVISION

865 SE BARRINGTON DRIVE
OAK HARBOR, WA 98277
FAX: (360) 679-3902
PHONE: (360) 279-4750

TRANSMITTAL FORM

ADDRESS: City Hall
865 SE Barrington Drive
Oak Harbor, WA 98277

ATTENTION: **Mayor Scott Dudley**

THE FOLLOWING ITEMS ARE:

[ ] REQUESTED [ ] REPORT [ ] COST ESTIMATE

[X] ENCLOSED [ ] TEST RESULT [ ] CHECK PRINT [ ] CALCULATIONS

[ ] SENT SEPARATELY [ ] SPECIFICATION [ ] PROGRESS EST. [ ] OTHER

VIA: US MAIL

NO. OF COPIES	DESCRIPTION
2	Consultant Agreement Amendment Number 3 (Carollo - WWTP project)

THESE DATA ARE SUBMITTED:

[ ] AT YOUR REQUEST [ ] FOR YOUR REVIEW [ ] FOR YOUR FILES

[ ] FOR YOUR APPROVAL [X] FOR YOUR ACTION [ ] FOR YOUR INFORMATION

GENERAL REMARKS: Please sign these original copies.

Sincerely,

CITY OF OAK HARBOR, ENGINEERING DIVISION

By: Eric Johnston, P.E.
City Engineer

Enclosures

Consultant Agreement Amendment Number 3	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4522	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00	Execution Date 9/16/10	Completion Date (Prior) December 2012
Project Title: Preliminary Engineering and Facilities Plan	New Maximum Amount Payable $1,089,561	
Description of Work: This phase of the work includes development of preliminary engineering and a Facilities Plan.		

The City of Oak Harbor desires to supplement the agreement entered into with Carollo Engineers and executed on 9/16/10 and identified as: Preliminary Engineering and Facilities Plan

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:

SCOPE OF WORK is hereby amended to add the following:
Please see the attached scope of work.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: April 2013
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum payable amount of $1,089,561 does not change. The management reserve fund has been reduced by $18,084 for the additional services. The budget for the additional services is attached. The remaining balance of the management reserve fund is $13,829.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: _____

VICE PRESIDENT
Consultant Signature

By: Scott Dudley (MAYOR)

Approving Authority Signature

8/1/12
Date

EXHIBIT B - SCOPE OF SERVICES
AMENDMENT NO. 3 – June 26, 2011

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

BACKGROUND

The City of Oak Harbor (City) currently operates two wastewater facilities: a Rotating Biological Contactor (RBC) plant located near Windjammer Park; and a lagoon plant located on Naval Air Station (NAS) Whidbey Island. The two current facilities serve a population of approximately 23,000 of which approximately 4,000 are housed at the NAS. It is anticipated that future demands will approach the permit limits in approximately 2017 as described in greater detail in the City's Comprehensive Sewer Plan. The City anticipates the need to have a new treatment facility in operation by 2017. The City intends to construct new wastewater treatment facilities to meet initial demands (3 million gallons per day [mgd]), with expansion capacity to meet long-term demand projections (6 mgd). Recognizing that the City of Oak Harbor is connected to the pristine waters of Puget Sound, specifically Oak Harbor and Crescent Harbor Bay, the City's goal is to obtain the highest level of water quality practical while recognizing the limitations of the rate payers of the City of fund improvements. A primary goal of the City is the continued protection of the water quality of the waters in and around Oak Harbor to meet the goals outlined in the Puget Sound Action Plan developed by Puget Sound Partnership for the cleanup and protection of Puget Sound.

This phase of the work includes development of preliminary engineering and a Facilities Plan. Subsequent phases, though not specifically authorized by this contract, may include the following:

- Final Design and Permitting
- Preparation of Construction Documents
- Bid Period Services
- Construction Support Services
- Preparation of Operation and Maintenance Manuals
- Start-up, Training, and Facility Commissioning

Project Objectives

The objectives of the Project are to:

1. Prepare Technical Memoranda (TM) evaluating wastewater treatment process, siting, and discharge options;

2. Identify a proposed alternative for wastewater facilities;

3. Prepare preliminary design information and an approved Facilities Plan in compliance with WAC 173-240-060 and 40 CFR 35.917-1;

4. Prepare the required supporting Environmental Documents; and

5. Provide support for public, agency, and stakeholder involvement.

Project Team

Carollo Engineers, P.C. (Carollo) will serve as the Prime Consultant for the Project, and will be responsible for overall Project management and delivery. In completing the work defined by this Scope of Services, Carollo is authorized to use the following Subconsultants:

Subconsultant	Role
BHC Consultants	Conveyance System Alternatives Analysis Satellite MBR Alternatives Analysis Feasibility of Connecting Non-Sewered Residents Regional Biosolids Alternative Feasibility
ESA Adolfson	Environmental Support and Documentation
Triangle Associates	Public Process Support
EnviroIssues	Public Meeting Facilitation
Michael Willis Architects	Architectural Services
GeoEngineers	Geotechnical Services
Katy Isaksen & Associates	Financial Analysis for Proposed Alternative
Bruce Dees & Associates	Landscape Architectural Services
Cosmopolitan Engineering Group	Outfall Analysis and Alternatives
Certified Land Services	Property Acquisition Support Services
Paragon Research Associates	Cultural Resources Assessment Services

Related Documents

The following documents provide background information for this project:

- Wastewater Treatment Plant Site Evaluation, City of Oak Harbor, October 2007.
- City of Oak Harbor Comprehensive Sewer Plan, TetraTech/KCM, December 2008.

SCOPE OF SERVICES

Carollo (Consultant) will provide engineering and other services for the City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan Project (Project), as defined by this Scope of Services. Work products submitted electronically will be produced using software as defined below:

- Word ProcessingMicrosoft Word
- SpreadsheetsMicrosoft Excel
- SchedulingMicrosoft Project
- DrawingsBentley MicroStation and Portable Document Format (PDF)

This Scope of Services is divided into the following tasks:

Task 100 Project Management
Task 200 Preliminary Alternatives Development and Screening
Task 300 Final Alternatives Development and Screening

Task 400	Outfall Evaluation
Task 500	Reuse Opportunities
Task 600	Facilities Plan
Task 700	Environmental Review and Documentation
Task 800	Public Process Support
Task 900	Management Reserve

PROJECT SCHEDULE

A preliminary schedule for the Project is attached (Attachment 1). The Schedule defines anticipated durations for major tasks, Project milestones, and major deliverable dates, assuming Notice to Proceed (NTP) in August 2010. Throughout this Scope of Services, anticipated delivery dates for major deliverables are established based on this preliminary schedule. The Consultant and City recognize that the preliminary schedule and corresponding delivery dates are subject to change, should NTP be issued after August 2010 and/or for other reasons. Schedule changes may be approved by the City without an amendment to this Scope of Services, provided both Consultant and City staff approve of the change. An amendment modifying the Project schedule and dates for major deliverables will be issued if required by either the City or Consultant.

TASK 100 – PROJECT MANAGEMENT

The objective of this task is to manage and coordinate engineering and related services required for project completion. Except as noted under assumptions, Consultant will provide the following services for Task 100:

Subtask 110 – Project Management Plan

Complete a draft Project Management Plan (PMP) including scope, work plan and products, work breakdown structure, budget, schedule, organization and staffing, communication protocol, and project standards within ten (10) days of Notice to Proceed (NTP). Finalize the PMP following the Startup Workshop and receipt of City comments. Monitor the PMP throughout the project and provide one update of the PMP upon request by the City.

Subtask 111 – Quality Management
Develop and follow a Quality Management Plan (QMP) for the project to be included in the PMP. Review technical memos, documents, drawings, reports, etc. and address review comments addressed prior to submission in accordance with the QMP. For major work products (TM and Facilities Plan) develop a Record of Comment (ROC) to document City comments and Consultant responses.

Subtask 110 Assumptions:

1. A Draft PMP will be reviewed at the Project Startup Meeting.
2. A Final PMP will be issued to incorporate City comments collected following the Project Startup Meeting.
3. The PMP will be updated once during the project.

Subtask 120 – Project Monitoring and Reporting

Manage the project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, time and budget needed to complete this Scope of Services. Prepare monthly project status reports that compare work accomplished with schedule activities and compare expenditures with task budgets, and submit reports to the City's Project Manager with monthly invoices. Document expenditures on a task basis, and show hours by project personnel and other direct expenses related to work. Include a project S-curve developed using Earned Valve Management (EVM) detailing anticipated progress, percent complete and percent billed for each month.

Subtask 120 Assumptions:

1. Total project duration is 32 months.

Subtask 130 – Project Management Meetings

Schedule and conduct Project Management Meetings throughout the project as directed by the City's Project Manager. Meetings will be used to discuss project status, action items, and potential areas of concern. Publish meeting minutes with action items that require a response by team members, City staff, or other agencies identified at the meeting. A draft of the minutes will be submitted to the City within three (3) working days after the meeting. The final version will be submitted within five (5) working days after comments on the draft have been received from the City.

Subtask 130 Assumptions:

1. Up to eight (8) Project Management Meetings will be held.
2. Project Management Meetings will be held via teleconference.
3. Agendas, meeting minutes, and Action Items will be distributed electronically by the Consultant to City's Project Manager.

Subtask 140 – Project Team Website

Develop and maintain a collaborative Web Site accessible through the Internet by all project team members. The Web Site will be maintained from NTP through final approval of the Facilities Plan. Essential project information will be logged, recorded, and made available through this Web Site during the project, including:

- Project team and contact information.
- Calendar of events.
- Document library including agendas, presentation materials, meeting minutes, submittals, and deliverables.
- Updated Action List providing assignments and status.
- Decision Log.

Subtask 140 Assumptions:

1. Project Team Website will only be accessible to members of the project team (i.e. City and Consultant staff). Consultant will develop and maintain a project website for external use under Task 800 – Public Process Support.

Task 100 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) PMP	110	September 2010
(32) Monthly Invoices and Progress Reports	120	Monthly
(8) Project Management Meeting Agendas	130	As Needed
(8) Project Management Meeting Action Items Log	130	As Needed
(1) Project Team Website	140	September 2010

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to develop a matrix of preliminary alternatives (treatment process options and candidate sites) and identify a short list of final alternatives to be evaluated and refined in subsequent phases of work. Except as noted under assumptions, Consultant will provide the following services for Task 200:

Subtask 210 – Basis of Design Documentation

Subtask 211 – Engineering Basis of Design

Review and comment on previous projections developed by the City, and confirm population, flow, and waste load data for the Oak Harbor service area. Establish flow peaking factors (maximum month, maximum day, and peak hour) based on City-provided data. Using these projections and available plant loading data, establish loading estimates and peaking factors for flow, organics (BOD), total suspended solids (TSS), phosphorus and nitrogen loading to the plant.

Evaluate the City's exiting National Pollutant Discharge Elimination System (NPDES) permit, potential future water quality requirements, and establish water quality objectives for conventional effluent parameters, nutrients, fecal coliform bacteria, temperature, and pH. Document basis of design (flows, loads, and effluent requirements) in TM1 – Basis of Design.

Subtask 212 – Decision Making Methodology

Treatment process options and candidate sites will be evaluated in a manner that is consistent with City policy objectives, and to meet basic technical, performance, and environmental requirements. Two (2) process options and up to nine (9) candidate sites will be placed into a matrix of preliminary alternatives. These preliminary alternatives will be screened using Triple Bottom Line Plus Technical (TBL+) methodology, considering financial, social, environmental, and technical criteria and objectives developed by the City and project team. A short list of five (5) alternatives (5 sites with corresponding process options) will be refined for subsequent TBL+ evaluation. A final list of alternatives (3 sites with corresponding process options) will be further refined and used to select the proposed alternative.

Coordinate with City staff to develop a list of basic policy, technical, performance, and environmental requirements that will be used to create the matrix of preliminary alternatives (Wastewater Treatment Plant [WWTP] process options and sites). Develop a list of TBL+ criteria and objectives to be used for preliminary and final alternatives evaluation. Document the basis for decision making in the Facilities Plan.

Subtask 210 Assumptions:

1. Population, flow, and loading data for the Oak Harbor service area will be based on the December 2008 Comprehensive Sewer Plan.

2. Meetings with regulatory stakeholders and City input will be used to establish potential future NPDES permit requirements. Negotiation of permit limits is not included in this Scope of Services.

3. A matrix of preliminary alternatives will be developed based on City policy and basic technical, performance, and environmental requirements.

4. Preliminary and final alternatives will be evaluated using the TBL+ approach.

Subtask 220 – Preliminary Alternatives Development

Subtask 221 – Centralized Treatment Process Evaluation
Develop and evaluate treatment process options to treat all flow from the City and NAS. Identify Washington Department of Ecology (Ecology) requirements for reliability and redundancy, and prepare conceptual design and cost information for processes being considered. Screen potential treatment process options using basic technical and performance requirements established by the project team, and identify up to two (2) process options to be included in the matrix of preliminary alternatives. For these options, develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs). Document the evaluation and recommended options in the Facilities Plan. The following facilities will be evaluated:

- Preliminary/Primary Treatment. Headworks (preliminary treatment) options, including influent pumping, screening grit removal, flow measurement, and influent sampling. Primary treatment options, including clarification and sludge pumping facilities.
- Secondary Treatment. Secondary (biological) treatment process options, including up to four (4) processes capable of meeting identified performance requirements. It is anticipated that more detailed technical and cost information will be developed for up to two (2) process options: activated sludge (AS) and membrane bioreactors (MBR).
- Disinfection. Disinfection options, including chlorination/dechlorination (using bulk or on-site generation of hypochlorite) and ultraviolet (UV) disinfection.
- Solids Handling. Solids handling options, including a range of processes to achieve a Class B biosolids product on-site, as well as continued use of existing solids handling facilities on an interim or permanent basis. The feasibility of providing biosolids stabilization and/or disposal on a regional basis will be evaluated by the Consultant under a separate task.
- Odor Control. Identify potential odor impacts, foul air treatment requirements to meet these impacts, and establish the basis for odor control facilities. Prepare conceptual

design information for odor control system components based on the treatment process options being considered.

- Non-Process Facilities. Evaluate space needs for plant administration, operation, maintenance, and laboratory facilities to support future treatment facilities through Architectural Programming. Develop a programming questionnaire to determine rough but conservative space needs for new non-process facilities. Interview City staff and prepare a brief Programming Narrative outlining preliminary space needs, laboratory requirements, maintenance functions and desired adjacencies to other plant space, and coordinate with process needs, landscaping, and zoning requirements. Integrate non-process facilities into diagrams, including structural footprints, roadways, and landscaping areas for up to two (2) alternative layouts. In addition to the plant non-process facilities, plan the space and accessibility needs for the potential to add education centers, tour group meeting areas, and interior and exterior public spaces to welcome and educate the public.

Subtask 222 – Satellite MBR Facility Evaluation
Develop conceptual level flow schematics, facility footprints, site layouts, and cost information (capital and life-cycle costs) for a satellite MBR facility treating up to 0.5 mgd of flow per Ecology requirements. Document the recommended option in the Facilities Plan.

Subtask 223 – Candidate Site Inventory
Develop a list of potential sites to locate a centralized WWTP and satellite MBR. Coordinate with City staff to identify potential sites for the recommended treatment options, considering factors such as: size (land area); location; ownership and real-estate considerations; conveyance system impacts; environmental impacts; land use restrictions; and adjacency to existing outfalls.

Screen potential sites based on City policy and using basic technical and environmental requirements, and establish a candidate site inventory to be included in the matrix of preliminary alternatives. Document the site development and screening process in the Facilities Plan.

Subtask 220 Assumptions:

1. None.

Subtask 230 – Preliminary Alternatives Screening

Pair recommended process options with candidate sites to develop a matrix of preliminary alternatives. Refine conceptual site layouts based on candidate site requirements and evaluate collection/conveyance system impacts. Integrate the results of Subtask 410 – Preliminary Outfall Assessment and confirm outfall options. Update cost information to reflect preliminary alternative layouts and system-wide impacts.

Develop an initial assessment of potential social impacts, including noise, odor potential, visual aesthetics, construction impacts, and long-term operation impacts. Develop a TBL+ analysis for up to eight (9) preliminary alternatives (9 sites with corresponding process options). Screen preliminary alternatives to a short list of five (5) alternatives (5 sites with corresponding process options), and document results in the Facilities Plan.

Subtask 231 – Environmental Review
Conduct a one day field investigation and perform an initial environmental assessment of candidate sites. Identify sensitive areas, fish and wildlife impacts, wetlands, streams and shoreline impacts, site soils and sediments, effluent water quality impacts, potential permitting requirements, and other pertinent information that will use used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives. Meet with City to finalize environmental documentation approach.

Subtask 232 – Preliminary Geotechnical Assessment
Conduct a one day field reconnaissance and perform an initial geotechnical assessment of the candidate sites. Base the assessment on available information, including geologic and other publicly available maps that document geotechnical conditions and geo-hazard considerations in the project vicinity.

Provide a TM summarizing the pertinent geotechnical issues that would impact site selection, design, and construction at the candidate sites, including: anticipated soil types and groundwater conditions; identified geo-hazards (seismic/ liquefaction, slope stability, etc.); potential mitigation strategies; general foundation types including ground improvement techniques or other appropriate considerations; and preliminary construction considerations including shoring and dewatering based on the assumed site conditions. Information will be used to rate preliminary alternatives on their ability to meet the established TBL+ criteria and objectives.

Subtask 233 – Cultural Resources Review
Conduct background research to identify known cultural resources in the project vicinity using state records, historic maps, and other available information.

Subtask 234 – Zoning/Land Use Review
Identify ownership, confirm code requirements and land use restrictions, and establish a preliminary estimate of property values that will be used to rate preliminary alternatives based on their ability to meet the established TBL+ criteria and objectives.

Subtask 230 Assumptions:

1. Subtask 232 assumes that the City of Oak Harbor will provide available geotechnical information/reports from site and vicinity. Up to five potential sites will be evaluated (based on right-of-entry considerations). No geotechnical explorations will be conducted during this phase.

2. Subtask 233 assumes that up to nine potential sites will be evaluated (based on right-of-entry considerations). No subsurface explorations will be conducted during this phase.

Subtask 240 – Evaluation of the Feasibility of Connecting Non-Sewered Residents

The City is interested in investigating the extension of sewer service beyond those parcels that are currently on sewers. Some of these parcels are within and some outside the current City limits. However, all parcels to be considered are within the Urban Growth Boundary (UGB) limits.

Those parcels outside the City limits fall into three categories: highly and fully developed, underdeveloped and non-conforming parcels. Attachment 2 identifies the eleven distinct areas that are within the UGB but outside the City limits.

Specific tasks associated with this work will include the following:

1. Investigate feasibility of extending sewer service to those parcels within the City limits.
2. Investigate the feasibility of extending sewer service to the eleven areas outside the City limits.
3. Provide a schematic service alternative for these two groupings of parcels.
4. Provide a planning level cost estimate for the proposed service scheme.
5. For the proposed plan to extend sewer service to unsewered areas, develop a financial analysis for three (3) potential funding scenarios; to be selected by the City.
6. Provide public involvement associated with this task. This will specifically include an estimated three public meetings.
7. Prepare a policy statement regarding the extension of sewer service to these two groupings of parcels.
8. Present proposed service scheme, estimated costs, rate impacts, and proposed policy to Staff and City Council.
9. Present findings in a project memorandum.

Subtask 240 Assumptions:

1. None.

Subtask 250 – Staff Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T1 - Project Startup	Review/Finalize Project Management Plan Confirm Basis of Design Establish Decision Making Framework Prepare for Council Meeting No. 1 Prepare for Navy/Stakeholder Workshop No. 1
T2 - Preliminary Alternatives Development	Evaluate Potential Treatment Process Options Select Processes Options for Consideration (2) Confirm Satellite MBR Requirements Establish Non-process Requirements Establish Basis for Site Footprint Develop List of Potential Sites Apply Site Screening to Select Candidate Sites Establish Matrix of Preliminary Alternatives
T3 - Preliminary Alternatives Screening 1	Evaluate Matrix of Preliminary Alternatives (9 sites with corresponding process options) Screen Alternatives to Short List (5 sites with corresponding process options)

Subtask 250 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 200 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) TM1 – Basis of Design	210	September 2010
(1) Architectural Programming Questionnaire and Narrative	220	March 2011
(1) Preliminary Geotechnical Assessment TM	230	March 2011
(1) Unsewered Area Feasibility Memorandum	240	June 2011
(3) Workshop Materials, Agenda, Minutes	250	Per Workshop Schedule

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

The objective of this task is to further refine and evaluate the short list of final alternatives to select a proposed alternative for preliminary design. The proposed alternative will define the recommended liquid and solids stream treatment processes, location for centralized and satellite facilities (if applicable), conveyance and collection system improvements, outfall location and necessary improvements, and potential uses for reclaimed water. Except as noted under assumptions, Consultant will provide the following services for Task 300:

Subtask 310 – Final Alternatives Development and Screening

Further refine the final short listed alternatives, adding technical detail to site layouts based on site mapping and additional geotechnical evaluation. Confirm hydraulics and collection/conveyance system requirements. Integrate the results of Subtask 420 – Final Outfall Analysis, and Subtask 510 – Preliminary Effluent Reuse Assessment. Update cost information and TBL+ evaluations of financial, social, environmental, and technical criteria and objectives. Prepare a final screening of alternatives to select a proposed alternative for preliminary design. Document results of final screening in the Facilities Plan.

Subtask 311 – Site Mapping
Provide background mapping and existing and readily available geographical information system (GIS) data. Mapping will be developed as a basis for site planning at up to five (5) candidate sites. The mapping will show readily available information for property lines, existing structures, significant utilities, site topography, and other significant features.

Subtask 312 – Architectural Development
Conduct a one day field review and provide analysis of sites being considered for the new treatment plant in regards to contextual placement within the surrounding site conditions. Prepare conceptual site plan footprints for recommended facilities, coordinating with process engineers, landscape architects and with zoning requirements that may influence plant layouts on specific available site options. Provide graphic representation of appropriate site organization and utilization plans for three (3) of the five (5) sites recommended following the T3 workshop. Refine graphic layouts and site plans for all three (3) of the final short-listed sites recommended following the T4 workshop. Prepare 3D renderings illustrating up to two (2) facility views for the final site / process option. Develop landscaping options and prepare up two (2) renderings showing site landscaping for the final alternative site. Prepare order of magnitude estimated probable costs of non-process facilities and develop associated landscaping and architectural theme costs.

Subtask 310 Assumptions:

1. The budget for Subtask 311 assumes existing and readily available GIS data are used, and does not include field visits or detailed surveys of sites or collection system/conveyance piping alignments.

Subtask 320 – Regional Biosolids Alternative Feasibility

The purpose of this subtask is to evaluate the feasibility of implementing a solids handling, stabilization, and biosolids disposal alternative on a regional basis, with participation from the following entities:

- City of Oak Harbor
- Navy Seaplane base
- NAS Ault Field
- Penn Cove Water/Sewer District
- City of Coupeville
- Island Septage

Except as noted under assumptions, Consultant will complete the following services for Subtask 320:

Gather and analyze historic solids production, hauling, and disposal records, including quantities and costs, from the regional entities. Estimate future solids production and handling requirements using growth projections provided by the entities.

Evaluate the capacity of the City of Oak Harbor's existing lagoons, and compare that capacity with the current and future solids loadings from the regional entities to determine the feasibility of using the existing lagoons for regional biosolids stabilization and storage. Estimate the capital cost of lagoon modifications and the operational and maintenance (O&M) costs for such a regional facility.

Estimate the size of a new and separate solids handling and stabilization facility to accept solids from the regional entities. Evaluate disposal alternatives for stabilized biosolids, including: composting; thermal drying; and trucking to an offsite location. Estimate the capital cost and annual O&M costs for such a regional facility.

Document the analysis and conclusions into a project memorandum that estimates the life-cycle costs and revenue potential to the City of Oak Harbor as the owner/operator of a regional solids facility.

Subtask 320 Assumptions

1. Consultant will estimate current and future solids loadings for the City of Oak Harbor, and assist the City in obtaining solids loadings for regional entities. Consultant will not perform independent analysis to determine current and future solids loadings from the regional entities.

2. City owned property near the intersection of Highway 20 and Sleeper Road will be considered as the regional biosolids handling site.

Subtask 330 – Technical Workshops

Conduct Technical Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff Workshop	Objectives
T4 – Preliminary Alternatives Screening 2	Evaluate Short Listed Alternative (5 sites with corresponding process options) Refine conveyance, pumping and piping requirements for final alternatives. Screen to Final Alternatives (3 sites with corresponding process options)
T5 – Final Alternatives Screening	Discuss Potential Reuse Opportunities Evaluate Final Short Listed Alternatives (3 sites with corresponding process options) Identify Proposed Alternative (1 site/process option)

Subtask 330 Assumptions:

1. Workshops will be held at City of Oak Harbor facilities.
2. Consultant Project Manager and required team members will attend workshops.
3. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 300 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(4) Updated site utilization plans	310	June 2011
(2) 3D site/facility renderings	310	April 2011
(2) Site landscaping renderings	310	December 2011
(1) Regional Biosolids Management Feasibility Memorandum	320	July 2011
(2) Workshop Materials, Agenda, Minutes	330	Per Workshop Schedule

TASK 400 – OUTFALL EVALUATION

The objective of this task is to develop the criteria for saltwater outfall alternatives based on the preliminary and final alternatives being evaluated. Work performed under Task 400 will satisfy the following requirements of an Engineering Report under WAC 173-240-060:

- Degree of treatment required to meet applicable receiving water quality criteria.
- Document compliance with water quality standard outside authorized mixing zones.
- Detailed outfall and mixing zone analysis.

Except as noted under assumptions, Consultant will provide the following services for Task 400:

Subtask 410 – Discharge Alternatives and Performance Assessment

Due to their condition, the City has determined that neither the existing RBC outfall/diffuser nor the existing lagoon outfall/diffuser will meet future needs. This subtask will develop alternative diffuser sites and configurations, and then evaluate their effluent mixing and water quality impacts. This task will establish discharge alternatives (site location and diffuser configuration) for:

1. Outfall for RBC plant site in Oak Harbor (new or rehabilitated existing).

2. Outfall for an alternative site discharging to Oak Harbor or Crescent Harbor.

Subtask 411 – Outfall Inspections

Conduct visual inspections of the existing outfalls as required in Special Condition S11 of the NPDES permit. Both outfalls will be visually inspected and videotaped by experienced outfall design engineers. Rhodamine WT dye will be injected into the effluents to aid in locating and photographing the outfall and diffusers, and will also be used to detect leaks. The inspection will include the near shore section of the RBC outfall that is being evaluated for a temporary repair. The results of the inspections will be presented in a written report and DVD video.

Subtask 412 – Outfall and Diffuser Alternatives

Establish alternative diffuser sites in both Oak Harbor and Crescent Harbor. For practical purposes related to aquatic land use authorizations, preference will be given to siting diffusers at the existing locations. Additional diffuser locations will be considered if there are cost or performance advantages. Up to three diffuser alternatives (length, number and spacing of diffuser ports) will be established at each site. Due to the history of sedimentation around the RBC diffuser, elastomeric duckbill check valves will be considered.

Develop three outfall alignment and profile options (RBC outfall replacement to Oak Harbor, alternate site to Oak Harbor, alternate site to Crescent Harbor). Existing aerial base mapping and NOAA bathymetry will be used for the base map. Establish head loss ranges for diffuser alternatives. Establish pipeline diameter necessary for peak effluent flows and available discharge head. Perform a preliminary assessment of the utility of the two existing outfalls, based on existing drawings and dive inspection reports/videos. For the RBC outfall, evaluate potential slip lining alternative. Based on hydraulic analysis determine the need for effluent pumping for each alternative.

Subtask 413 – Shellfish Harvesting Areas and Aquatic Land Lease Assessment

Assess shellfish closure zone restrictions and potential geoduck damage payments for existing outfalls based on existing shellfish closure zones that have been established for the City's outfalls by the Washington Department of Health (DOH), and payments that have been pursued by the Department of Natural Resources (DNR) in other areas where outfalls interfere with commercial fishing harvests. Assess potential changes in the closure zones and resource payments as a function of treatment plant flow and treatment technology (e.g. activated sludge versus MBR effluent). Summarize benefits, negative impacts, and potential resource costs of various diffuser siting and treatment technology options. Coordinate analysis and conclusions with DOH shellfish program manager.

Subtask 414 – Mixing Zone Analysis and Water Quality Assessment

Prepare mixing zone studies for up to two (2) combinations of outfall location and design flows, to meet anticipated requirements for development of a future NPDES permit. The analysis will include:

- Determination of acute and chronic mixing zone dilution factors using the existing Ecology/EPA mixing zone models and receiving water data.
- Assessment of the "reasonable potential" to exceed water quality criteria beyond the mixing zone boundaries, which is a statistical test adopted by Ecology to assess the need for effluent limits in the NPDES permit.
- Determination of the potential effluent limitations for toxicants (e.g. ammonia, chlorine, metals) in future NPDES permits.
- Determine compliance with ambient temperature criteria at the mixing zone boundaries.
- Assessment of the potential to impact aquatic sediments using Ecology screening criteria for potential impacts and review of existing sediment data near outfalls.
- Assess potential future Whidbey Basin marine TMDL limitations for nutrient discharge.

Subtask 410 Assumptions:

1. Preliminary effluent flow rates (maximum month, maximum day, and peak instantaneous) and gravity head availability will be used to establish hydraulic capacity of existing outfalls.

2. An objective for Subtask 410 will be to provide outfall information and conclusions to support the wastewater facilities screening conducted in Task 200.

Subtask 420 – Final Outfall Analysis

Subtask 421 – Confirm Mixing, Water Quality, and Shellfish Models

Finalize the mixing zone modeling, water quality assessments, and shellfish closure zone evaluations (updated from the previous subtask) based on the final flow and treatment facility alternatives developed under Task 200.

Subtask 422 – Recommended Outfall Improvements

Develop preliminary recommendations for the upgrade or replacement of the existing outfalls. Data developed in the evaluation will include variations and combinations of design features for up to two (2) outfall options, including:

- Alignment and profile for each outfall option.
- Diffuser criteria for each outfall option (number and size of ports, spacing, and orientation).
- Hydraulic capacity for each outfall option (gravity and pumped as appropriate).
- Recommendations for repair or rehabilitation for existing outfalls (as appropriate).
- Shoreline construction requirements as appropriate for new or repair work.
- Pipeline materials, cathodic protection, anchoring, and construction methods.

- Recommendations for maintenance and prevention of siltation.
- Permitting overview.
- Opinions of probable construction cost.

Summarize the mixing zone analysis and recommended outfall improvements, and document results and recommendations in TM5 – Outfall Evaluation and Recommendations.

Subtask 420 Assumptions:

1. Subtask 420 will be conducted in parallel with the final wastewater treatment alternatives development and screening under Task 300.

Task 400 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
Outfall inspection report and DVD for both existing outfalls	410	November 2010
(1) Preliminary Draft TM5 – Outfall Evaluation and Recommendations	410	November 2010
(1) TM5 – Outfall Evaluation and Recommendations	420	July 2011

TASK 500 – REUSE OPPORTUNITIES

The objective of this task is to evaluate the feasibility of beneficially reusing treated effluent produced by the proposed alternative. Except as noted under assumptions, Consultant will provide the following services under Task 500:

Subtask 510 – Preliminary Effluent Reuse Assessment

Discuss potential alternatives for reuse of treated effluent, including, seasonal irrigation supply (urban and agricultural), wetlands habitat augmentation/creation and in-plant use to meet Ecology requirements for facilities planning. Based on current regulations, identify treatment and facilities requirements, estimate land requirements and permitting restrictions, and prepare capital, operating, and life cycle cost estimates for up to two (2) potential reuse scenarios.

Subtask 510 Assumptions:

1. Budget for subtask 510 is based on requirements for facilities planning as defined in RCW 90.48.112. "The evaluation of any plans submitted under RCW 90.48.110 must include consideration of opportunities for the use of reclaimed water as defined in RCW 90.46.010. Wastewater plans submitted under RCW 90.48.110 must include a statement describing how applicable reclamation and reuse elements will be coordinated as required under RCW 90.46.120."

Subtask 520 – Reuse Alternatives Development

The authorization and scope of this subtask will be developed pending the results of Subtask 510, and the outcome of the final alternatives screening process. If authorized by the City's Project Manager, Budget for this Subtask will be reallocated from Task 900.

Task 500 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Included in Task 600	510	April 2012

TASK 600 – FACILITIES PLAN

The objective of this task is to amend the City's existing Comprehensive Sewer Plan and complete a Facilities Plan that includes all applicable sections outlined by WAC 173-240-060 and 40CFR 35.917-1. The Facilities Plan will be consistent with federal, state, and local regulations and policies, such as the Endangered Species Act (ESA), the Growth Management Act, the City of Oak Harbor Comprehensive Plan, and the amended City of Oak Harbor Comprehensive Sewer Plan. The Facilities Plan will be sufficiently complete so that plans and specifications can be developed without substantial changes. Except as noted under assumptions, Consultant will provide the following services under Task 600:

Subtask 610 – Comprehensive Sewer Plan Amendment

Review and amend the December 2008 Comprehensive Sewer Plan for Ecology approval. Prepare an amendment with new data and recommendations to provide consistency with the Facilities Plan. Deliver Draft Amendment to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Amendment will be provided. Following City review of the Draft Amendment, incorporate comments into an Agency Draft Amendment to be submitted to Ecology for review.

Subtask 610 Assumptions:

1. The December 2008 Comprehensive Sewer Plan has been approved by Ecology. Consultant will prepare a brief amendment reflecting the proposed alternative developed in the Facilities Plan, including: selected liquid/solids treatment process(s); facilities site(s); collection/conveyance improvements; outfall/reuse of treated effluent; project implementation plan; and updated financial plan.

2. The Comprehensive Sewer Plan Amendment will be reviewed with Ecology as a component of the Agency Draft Facilities Plan.

3. Environmental Documentation prepared for the Facilities Plan will satisfy requirements for amending the Comprehensive Sewer Plan.

Subtask 620 – Develop Draft Facilities Plan

Compile the findings and recommendations documented in the previously defined Scope of Services into a Draft Facilities Plan. The expected outline of the Facilities Plan is included as Attachment 3.

Subtask 621 – Final Proposed Alternative Development
Develop the final proposed alternative in sufficient detail to satisfy facilities planning requirements, including:

- Refine the recommended liquid and solid stream treatment alternative to establish preliminary facility layouts and footprints.
- Develop design data, sizing criteria, liquid and solids stream schematics, and an overall WWTP hydraulic profile that reflects the recommended upgrades.
- Estimate plant electrical, instrumentation, and control requirements as a basis for future design.
- Provide a summary of collection, conveyance, and outfall improvements.

Subtask 622 – Architectural Renderings
Providing select architectural drawings of the proposed alternative to establish building envelopes, edge conditions, and the architectural treatments. Refine/update the 3D model generated in Subtask 312 to establish building mass, roof lines, and edge conditions, and provide up to two (2) rendered views of the new facilities on the selected site. Architectural renderings will convey materials and finishes and the general theme of the plant as it relates to local design guidelines and site specific architectural context. Coordinate with process building layouts and refined landscaping plans, and prepare one (1) site plan to illustrate the proposed appearance of the site, showing general land forms, planting, plant entrance, and parking.

Subtask 623 – Implementation Plan
Prepare an implementation plan for the recommended alternative, including a project schedule, phasing plan, anticipated project cost for each phase, and expected cash expenditure for the improvements.

Subtask 624 – Financial Analysis
Evaluate potential capital funding sources to develop funding strategy alternatives for the City. Estimate timing associated with potential funding programs, discuss eligibility, and note anticipated or potential program changes.

Prepare a financial analysis showing the project costs, how the project can be funded, and the how the debt can be repaid over a 20-year period. Reflect anticipated increases in operation and maintenance (O&M) costs and growth in connections in the analysis, including the financial history of the sewer utility and current outstanding debt. Summarize results and prepare the financial analysis chapter of the Facilities Plan.

Subtask 625 – Draft Facilities Plan
Deliver Draft Facilities Plans to the City in electronic (PDF) and hard copy format. Ten (10) hard copies of the Draft Facilities Plan will be provided. Following City review of the Draft Facilities Plan, incorporate comments into an Agency Draft Facilities Plan to be submitted to Ecology for review.

Subtask 620 Assumptions:

1. The output of the City's recent utility rate study will be used as the base for identifying history, policies and comparing funding strategies.

2. Infiltration and inflow (I/I) must be addressed to satisfy Ecology requirements for a Facilities Plan. Consultant will evaluate I/I according to Ecology Publication No. 97-03, using flow data provided by the City. It is assumed that the analysis will conclude with a determination of "Non-Excessive I/I." Field investigation of I/I sources and an evaluation of projects to reduce I/I are not included in this Scope of Services.

3. The financial analysis will be prepared for selected alternative.

Subtask 630 – Respond to Agency Review Comments

Consolidate Agency review comments on the Facilities Plan and Comprehensive Sewer Plan Amendment, and prepare a response to each comment. Review comments and responses with the City and Ecology.

Subtask 630 Assumptions:

1. Ecology review of the Facilities Plan and Comprehensive Sewer Plan Amendment will be conducted concurrently with review and approval of Environmental Documents.

2. Agency review workshops conducted throughout the project are expected to result in a minimal number of comments and changes to the Facilities Plan and Comprehensive Sewer Plan Amendment.

Subtask 640 – Final Facilities Plan Development

Following review of the Agency Draft Facilities Plan and following approval of the Environmental Documents, incorporate Agency comments submit a Final Facilities Plan.

Subtask 640 Assumptions:

1. None.

Subtask 650 – Technical/Agency Review Workshops

Conduct Technical/Agency Review Workshops identified below. Distribute an agenda and supporting information through the City Project Manager to all invited attendees at least five (5) business days in advance of each workshop. Prepare and submit minutes, action items, and decisions to the attendees and other interested parties within five (5) business days after each workshop.

Staff/Agency Review Workshop	Objectives
T5 – Draft Facilities Plan Review	Review Draft Facilities Plan
A1 – Agency Draft Facilities Plan Review	Review Amended Comprehensive Sewer Plan Review Agency Draft Facilities Plan
A2 – Review Comment Responses	Review Responses to Agency Comments

Subtask 650 Assumptions:

1. Technical Workshops will be held at City of Oak Harbor facilities.
2. Agency Review Workshops will be held at Ecology facilities in Bellevue.
3. Consultant Project Manager and required team members will attend workshops.
4. Workshops will be scheduled at least ten (10) business days in advance unless extenuating circumstances require otherwise.

Task 600 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Draft Comprehensive Sewer Plan Amendment (for City review)	610	April 2012
(10) Agency Draft Comprehensive Sewer Plan Amendment	610	April 2012
(1) Rendered Site Plan	620	November 2011
(4) 3D Renderings of Facilities	620	November 2011
(10) Draft Facilities Plan (for City review)	620	April 2012
(10) Agency Draft Facilities Plan	620	April 2012
(1) Potential Capital Funding Sources TM	620	November 2012
(1) Response to Agency Comments Log	630	September 2012
(10) Final Comprehensive Sewer Plan Amendment	640	October 2012
(10) Final Facilities Plan	640	October 2012
(2) Staff Workshop Materials, Agenda, Minutes	650	Per Workshop Schedule
(2) Agency Review Workshop Materials, Agenda	650	Per Workshop Schedule

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

Multiple environmental approvals are required for approval of the wastewater facilities plan and the comprehensive sewer plan amendment. The preferred alternative will have differing documentation requirements, depending upon the facility site, outfall improvements, and conveyance components. The environmental review and documentation task has been developed to encompass as many of these potentially differing requirements within a single document as possible, but will require finalization as the team proceeds through the alternative screening and review process.

Task 700 includes environmental documentation according to the National Environment Policy Act (NEPA), with either the Environmental Protection Agency (EPA) or Department of Defense as the NEPA lead agency. NEPA will be triggered by the need for approvals or permits from the Navy, or a funding request from the US EPA. NEPA compliance would also be triggered by a Corps of Engineers permit. The NEPA document will be adopted by the City for State

Environmental Policy Act (SEPA) compliance, and will be used by the City to meet State Environmental Review Process (SERP) documentation requirements associated with submission of the Facilities Plan. This will also meet requirements for potential State Revolving Fund applications in the future.
The NEPA document will be an Environmental Assessment (EA), and it is assumed that NEPA EA will receive a Finding of No Significant Impact (FONSI). Meeting this determination will require that significant impacts can be identified and mitigated or avoided. The City will adopt the EA to meet their SEPA requirements; at this time, we are assuming this would be a Mitigated DNS, consistent with the FONSI.

The objective of this task is to prepare documentation to evaluate the environmental impacts of the recommended project. Information to be gathered or issues to be addressed includes:

- Soils/erosion, based on Geotechnical Reconnaissance.
- Air quality/odor, based on qualitative odor assessment.
- Water quality, based on anticipated water quality impacts, wetlands delineation and impacts, and ground water impacts.
- Floodplain/flood insurance, based on information from Federal Emergency Management Agency (FEMA) maps.
- Fish and wildlife, based on information on existing animals on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Vegetation, based on information on existing vegetation on the proposed plant site, potential discharge pipe alignments and potential outfall sites.
- Environmental health (biosolids) based on information on the quality of biosolids and potential health impacts.
- Environmental health (reclaimed water), based on information on the quality of reclaimed water and potential health impacts.
- Environmental health (hazardous materials), based on a list of hazardous materials that will be stored or used on the WWTP site.
- Noise, based on a qualitative description of typical noise level at the plant during both construction and operation.
- Compatibility with surrounding land use, based on land use information provided by the City.
- Aesthetics, based on architectural drawings and landscaping plans to illustrate the proposed appearance of the site.
- Historical and archaeological resources.
- Transportation.
- Funding.

Except as noted under assumptions, Consultant will provide the following services under Task 700:

Subtask 710 – Environmental Services / NEPA/SEPA documentation

Prepare an environmental assessment in accordance with the NEPA, conduct the required environmental reviews and studies; and release required notices and documents. Develop text,

figures, and sections required to assemble prepared environmental documents to meet NEPA. This effort will rely heavily on previous documents, including the Facility Plan, prepared for the project with site specific information obtained as part of Tasks 200 and 300. Information will be incorporated from other tasks and outside sources such as public involvement and the cultural/historic resources review. Agency correspondence will be conducted and documented in accordance with NEPA requirements. This document will be used to meet the environmental documentation requirements for the Facilities Plan. This approach will be finalized with the City and the NEPA lead agency during the alternative selection process.

Subtask 710 Assumptions:

1. The Consultant will meet with the City of Oak Harbor to formalize the proposed environmental document approach, based on anticipated funding requests and other requirements. This scope and accompanying budget is based on the assumption that the City will be submitting a Facilities Plan and will prepare a NEPA EA to meet the requirements of SERP documentation.

2. The City will issue the appropriate SEPA review document. It is assumed that document will be a Mitigated DNS, in accordance with a Finding of No Significant Impact (FONSI) from the NEPA process. If significant impacts are identified during the NEPA EA that do not warrant a FONSI, it will be necessary to revisit the SEPA process.

3. SERP documentation will be covered by the NEPA document.

4. The NEPA documentation will incorporate the findings and results of the Public Outreach program.

Subtask 720 – Biological Assessment and Essential Fish Habitat (EFH)

Prepare a biological assessment (BA) for species listed as threatened or endangered under the federal ESA, including Puget Sound Chinook salmon and bull trout, and candidate species, including Coho salmon. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the United States Fish and Wildlife Service (Services) under Section 7 of the ESA. The BA will address the recommended plan identified during Task 300 and described in the Facilities Plan. It is assumed that analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor. The project may result in a "no effect" determination and consultation with the federal services would not be required. This will be determined during the initial steps of the project. Subtasks will include the following:

- Draft BA. Prepare a draft BA for review by the City and Carollo. Included activities involved in preparation of the BA are:
  - Communications with the National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS), and Washington Department of Fish and Wildlife (WDFW), to obtain habitat and species information.
  - Review of the literature and published information for each Listed, Proposed, and Candidate species identified by USFWS and NMFS occurring within the project area. This task also includes a site visit and a review of reports that have already been prepared for this project or similar projects in the vicinity.

  - Preparation of an internal review draft document.
- Final BA. Prepare a final BA document incorporating the City's and Carollo's comments on the draft report for submittal by the City to the Department of Ecology.
- Consultation assistance. Following submittal of the BA, provide responses to comments on the document by the federal action agency) and the federal services (if appropriate) up to the hours indicated. It is assumed that Ecology will be serving as representative for EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required. Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.
  - Attend at up to two meetings with Ecology and liaisons for both NMFS and USFWS during consultation.

Subtask 720 Assumptions:

1. Analysis of direct and indirect effects of development within the service area will largely utilize land area development projections developed by the City of Oak Harbor.

2. ESA consultation is typically coordinated through the federal action agency, anticipated in this case to be Ecology on behalf of the Environmental Protection Agency (EPA), as outlined in the SERP guidelines. The existing wetland report and geotechnical study are assumed to be sufficient for the purposes of the BA.

3. The BA will be conducted for the recommended alternative, with appropriate level of design detail provided by Carollo.

4. An Essential Fish Habitat Assessment (EFH) will be submitted and reviewed as a component of the BA.

5. The project action area includes all locations at which the proposed project could potentially impact ESA listed species or their critical habitat including locations distant from the project site.

6. The BA will be submitted to the federal action agency, which will in turn confer and consult with the National Marine Fisheries Service and the Services under Section 7 of the ESA.

7. Conclusion of the BA consultation process will be dictated by the timelines of the federal agency responses. Consultant will respond promptly to agency requests during the consultation process.

8. Ecology will be serving as representative for EPA as the federal action agency for this project, in accordance with SERP it is assumed that Ecology will coordinate consultation with the federal services if required. Formal consultation will not be required if there is a "No Effect" determination and EPA agrees with the determination.

Subtask 730 – Section 106 Compliance

Using Subtask 233 as a starting point, prepare a memorandum regarding historical and archaeological resources for inclusion in the Environmental Assessment. Prepare Section 106 consultation correspondence for signature of Federal lead agency.

Task 700 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Draft and Final NEPA EA	710	October 2012
(1) Draft and Final BA or No Affect Letter (electronic and 6 hard copies)	720	October 2012
Draft and Final responses (electronic) to federal agency comments	720	October 2012

TASK 800 – PUBLIC PROCESS SUPPORT

The objective of this task is to support successful project implementation by proactively identifying and addressing public and stakeholder issues. As defined below, the City will lead public process activities for the Project, with significant support from the Consultant. Except as noted under assumptions, Consultant will provide the following services for Task 800:

Subtask 810 – Public Process Planning

Participate in two (2) meetings with the City to develop a project-specific public/stakeholder involvement plan (PIP) that meets NEPA, SERP, and SEPA requirements and that identifies the following:

- Target audiences and issues;
- Anticipated schedule of activities;
- Interrelationships and responsibilities; and
- Public involvement tools for each phase of the project.

Prepare a Draft PIP, review with the City, make revisions, and produce a final PIP. Participate in coordinating phone calls with City of Oak Harbor staff to provide strategic advice on public involvement and communications issues as they arise throughout the Project.

Subtask 810 Assumptions:

1. Consultant will update the PIP once during the project.

Subtask 820 – Stakeholder Workshop Facilitation

Assist the City in planning and conducting Stakeholder Workshop No. 1. Participate in a preparation session for the workshop. Prepare a workshop plan in advance that identifies goals, objectives, agenda, roles and responsibilities, and materials. Produce presentation materials, and develop draft and final agendas. Facilitate the Stakeholder Workshop and produce one (1) draft and one (1) final summary (minutes).

Assist the City in planning and conducting up to five (5) meetings with the U.S. Navy to communicate project status and obtain feedback. For each meeting, provide technical, financial, and environmental information to assist discussions facilitated by the City.

Subtask 820 Assumptions:

1. Stakeholder Workshop No. 1 will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for Stakeholder Workshop No. 1 and deliver workshop materials to attendees.
3. In addition to City staff, it is anticipated that Stakeholder Workshop No. 1 attendees will include representatives of NASWI Public Works, local community members, local Tribes, and permitting agencies (Ecology, DOH, DNR, and the Army Corps of Engineers).
4. Consultant Project Manager will attend Navy meetings and provide technical information. City staff will facilitate discussion and summarize action items.

Subtask 830 – Public Meeting Facilitation

Assist the City in planning and conducting Public Meetings, defined below. Participate in up one (1) preparation session for each meeting. Facilitate the Public Meetings and produce one (1) draft and one (1) final summary (minutes). For each meeting: arrange for suitable meeting locations; prepare meeting plans; produce presentation materials; develop sign in sheets and public comment forms; develop draft and final agendas; and develop draft and final meeting announcements/save the date notices.

Throughout the Project, develop and maintain a contact list of stakeholders and interested parties. Maintain a log of public comments received outside of the public meetings (via the website, emails to project team staff, phone calls, etc.), and responses to public inquiries as requested by the City.

Public Meeting	Objectives
P1 – Public Meeting No. 1	Communicate Project Purpose and Objectives Report Project Plan and Schedule Obtain Input on Decision Making Methodology Communicate Future Opportunities for Input
P2 – Public Meeting No. 2	Report Results of Alternatives Screening Obtain Input on Short Listed Alternatives (5 sites with corresponding process options)
P3 – Public Meeting No. 3	Report Results of Secondary Alternatives Screening Obtain Input on Final Short Listed Alternatives (3 sites with corresponding process options)
Charettes	Provide a forum for community members and stakeholders to develop ideas related to how a new WWTP may fit within the two (2) short-listed sites.

Public Meeting	Objectives
P4 – Public Meeting No. 4	Obtain Input to Refine Proposed Alternative (1)

Subtask 830 Assumptions:

1. The City will arrange for meeting locations and facilities.
2. The City will publish announcements in the local paper and include notices of meetings on their website.
3. The City will pay for all costs related to mailings, including printing and postage.
4. Charrettes will be facilitated by a third-party (not included in this Scope of Services). Consultant's responsibility during charrette process will be to provide technical support and information to assist the process.

Subtask 840 – Council/Committee Meeting Participation

Assist the City in planning and conducting Council/Committee Meetings, defined below. Prepare meeting objectives, agendas, roles and responsibilities, and presentation materials in advance of the meetings. Participate in up to one (1) preparation session for each meeting.

Council/Committee Meeting	Objectives
C1 – Council Committee Meeting No. 1	Report Progress Report Project Challenges and Opportunities
C2 – Council Workshop No. 1	Report Feedback from Stakeholders and Public Establish Decision Making Criteria Process (basic technical and environmental) Sites (policy considerations) Alternatives (TBL+ objectives)
C3 – Council Workshop No. 2	Report Results of Alternative Screening 1 Report Feedback from Stakeholders and Public Confirm Short Listed Alternatives (5 sites with corresponding process options)
C4 – Council Meeting No. 1	Provide information to City for Council resolution.
C5 – Council Workshop No. 3	Report Results of Alternative Screening 2 Confirm Short Listed Alternatives (3 sites with corresponding process options)
C6 – Council Meeting No. 2	Provide information to City for Council resolution
C7 – Council Workshop No. 4	Report Results of Proposed Alternatives Workshop
C8 – Council Meeting No. 3	

Council/Committee Meeting	Objectives
	Provide information to City for Council resolution
C9 – Council Workshop No. 5	Report results of charrette process
C10 – Council Workshop No. 6	Report updated site layouts based on charrettes, updated costs, and rate information
C11 – Council Meeting No. 4	Confirm Proposed Alternative (1)
C12 – Council Workshop No. 7	Provide Overview of Draft Facilities Plan Confirm Draft Facilities Plan Submission to Ecology
C13 – Council Meeting No. 5	Provide information to City for Council resolution

Subtask 840 Assumptions:

1. Council/Committee Meetings will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for meetings and deliver meeting materials to attendees.
3. Consultant staff will lead/facilitate and provide information for discussion at Council Workshops.
4. Consultant Project Manager will attend City Council Committee Meetings/City Council Meetings, and assist City staff in presenting technical information.

Subtask 850 – Public/Stakeholder Involvement Product Development

In consultation with City of Oak Harbor staff, develop a project website and periodically update the website content. Prepare one (1) draft and one (1) final project brochure for informing the public about the background, goals, and specifics of the project.

Other options for products and activities, subject to Oak Harbor authorization and decisions from the Public Involvement Plan include:

- One additional or updated brochure, likely focused on the range of alternatives.
- In consultation with City of Oak Harbor staff, the Consultant may produce a segment for the City of Oak Harbor public access channel. It is intended that the Consultant will prepare a script and be involved in organizing and producing these segments, but assumed that the City will do the actual filming and production. Assume City staff would appear in the video segment.
- Consultant will assist with strategy and development of presentations for local community groups that City staff would make.

Task 850 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City of Oak Harbor staff/consultants.
2. The City will print and send materials to the public.

3. Public Access TV facilities and costs are paid by the City.

Task 800 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(10) Stakeholder Interviews	810	October 2010
(1) Draft PIP	810	June 2011
(1) Final PIP	810	June 2011
(1) Stakeholder Workshop Plan, Agenda, Materials	820	November 2010
(4) Public Meeting Plan, Agenda, Materials	830	Per Public Meeting Schedule
(1) Council Workshop Plan, Agenda, Materials	840	December 2010
(10) Technical information/documents/presentations for City Council Committee/City Council Meetings	840	Per Council Committee/Council Meeting Schedule
(1) Project Website	850	November 2010
(12) Updates to Project Website	850	As Needed
(1) Project Brochure	850	April 2011
(1) Public Access TV Production Plan	850	As Needed

TASK 900 – MANAGEMENT RESERVE

This objective of this task is to provide additional engineering services throughout delivery of the Project (e.g. additional workshops, meetings, evaluations, etc.). Any work performed under this task will require prior written authorization from the City's Project Manager. Authorization will specify the requested scope of services and cost for the work, which will be reviewed, negotiated, and agreed upon by the Project Manager and Consultant prior to performing the work.

City of Oak Harbor
Wastewater Treatment Plant Preliminary Design and Facilities Plan
Carollo Level of Effort Estimate - Charrette Participation, Additional Council Workshops/Meetings
June 12, 2012

WORK TASKS	Project Manager	QA/QC Team	Engineering Manager	Senior Engineer/ Process Analyst	Staff Engineer	CAD/ Graphics Technician	WP/ Admin. Support	Carollo Hours	Carollo DL Cost
Direct Labor (DL) Rates	$67	$77	$77	$55	$46	$31	$29		
TASK 100 - PROJECT MANAGEMENT									
Subtask 110 - Project Management Plan	0	0	0	0	0	0	0	0	$0
Subtask 120 - Project Monitoring and Reporting	6	0	0	0	4	0	2	12	$646
Subtask 130 - Project Management Meetings	0	0	0	0	0	0	0	0	$0
Subtask 140 - Project Team Website	0	0	0	0	0	0	0	0	$0
Task 100 Subtotal	6	0	0	0	4	0	2	12	$646
TASK 200 PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING									
Subtask 210 - Basis of Design Documentation	0	0	0	0	0	0	0	0	$0
Subtask 220 - Preliminary Alternatives Development	0	0	0	0	0	0	0	0	$0
Subtask 230 - Preliminary Alternatives Screening	0	0	0	0	0	0	0	0	$0
Subtask 240 - Evaluation of the Feasibility of Connecting Non-Sewered Residents	0	0	0	0	0	0	0	0	$0
Subtask 250 - Technical Workshops	0	0	0	0	0	0	0	0	$0
Task 200 Subtotal	0	0	0	0	0	0	0	0	$0
TASK 300 - FINAL ALTERNATIVES DEVELOPMENT AND SCREENING									
Subtask 310 - Final Alternatives Development and Screening	0	0	0	0	0	0	0	0	$0
Subtask 320 - Regional Biosolids Alternative Feasibility	0	0	0	0	0	0	0	0	$0
Subtask 330 - Technical Workshops	0	0	0	0	0	0	0	0	$0
Task 300 Subtotal	0	0	0	0	0	0	0	0	$0
TASK 400 - OUTFALL EVALUTION									
Subtask 410 - Preliminary Outfall Assessment	0	0	0	0	0	0	0	0	$0
Subtask 420 - Final Outfall Assessment	0	0	0	0	0	0	0	0	$0
Task 400 Subtotal	0	0	0	0	0	0	0	0	$0
TASK 500 - REUSE OPPORTUNITIES									
Subtask 510 - Preliminary Effluent Reuse Assessment	0	0	0	0	0	0	0	0	$0
Subtask 520 - Reuse Alternatives Development	0	0	0	0	0	0	0	0	$0
Task 500 Subtotal	0	0	0	0	0	0	0	0	$0
TASK 600 - FACILITIES PLAN									
Subtask 610 - Comprehensive Sewer Plan Amendment	0	0	0	0	0	0	0	0	$0
Subtask 620 - Develop Draft Facilities Plan	0	0	0	0	0	0	0	0	$0
Subtask 630 - Respond to Agency Review Comments	0	0	0	0	0	0	0	0	$0
Subtask 640 - Final Facilities Plan Development	0	0	0	0	0	0	0	0	$0
Subtask 650 - Technical/Agency Review Workshops	0	0	0	0	0	0	0	0	$0
Task 600 Subtotal	0	0	0	0	0	0	0	0	$0
TASK 700 - ENVIRONMENTAL REVIEW AND DOCUMENTATION									
Subtask 710 - Environmental Services / NEPA/SEPA documentation	0	0	0	0	0	0	0	0	$0
Subtask 720 - Biological Assessment and Essential Fish Habitat (EFH)	0	0	0	0	0	0	0	0	$0
Subtask 730 - Section 106 Compliance	0	0	0	0	0	0	0	0	$0
Task 700 Subtotal	0	0	0	0	0	0	0	0	$0
TASK 800 - PUBLIC PROCESS SUPPORT									
Subtask 810 - Public Process Planning	4	0	0	0	0	0	0	4	$269
Subtask 820 - Stakeholder Workshop Facilitation	0	0	0	0	0	0	0	0	$0
Subtask 830 - Public Meeting Facilitation	20	0	0	0	16	8	0	44	$2,327
Subtask 840 - Council/Committee Meeting Facilitation	12	4	0	0	14	6	4	40	$2,058
Subtask 850 - Public/Stakeholder Involvement Product Development	0	0	0	0	0	0	0	0	$0
Task 800 Subtotal	36	4	0	0	30	14	4	88	$4,655
TASK 900 - MANAGEMENT RESERVE	0	0	0	0	0	0	0	0	$0
Task 900 Subtotal	0	0	0	0	0	0	0	0	$0
TOTAL LABOR HOURS	42	4	0	0	34	14	6	100	
TOTAL DL COST	$2,829	$307	$0	$0	$1,560	$430	$174		$5,300

CAROLLO BASIS OF ESTIMATED COST	
LABOR AND FEE	
Direct Labor (DL)	$5,300
Indirect Costs (ID) at 1.85	$9,806
Fixed Fee	$1,813
SUBTOTAL LABOR AND FEE	$16,918
OTHER EXPENSES	
Other Direct Costs (Estimated at 5% of DL) (1)	$265
Project Equipment and Communications ($9/hr)	$900
SUBTOTAL OTHER EXPENSES	$1,165
TOTAL ESTIMATED COST	$18,084
(1) Other Direct Costs include:	
Travel and Subsistence	At Cost
Mileage Charge per Mile	IRS Rate
Reproduction Materials and Expenses	At Cost

Consultant Agreement Amendment Number 10	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4500	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amendments 1-5) 8549A.10 (Amendment 6,7,8,9,10)	Execution Date 09/16/10	Completion Date (Prior) December 2014
Project Title: Engineering, Facilities Plan and Preliminary Design	New Maximum Amount Payable $7,907,388	
Description of Work: This Amendment authorizes services to complete final design documents and assist the City in negotiating a Maximum Allowable Construction Cost (MACC) with the General Contractor/Construction Manager (GC/CM).		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers, Inc.
and executed on 09/16/10 and identified as Preliminary Engineering and Facilities Plan.

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:

SCOPE OF WORK is hereby amended to add the following:
The existing Scope of Services will remain open and will be completed for the authorized budget. Please see the attached Scope of Services (Exhibit B) for additional phases of work.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: January 2016
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum total contract value is increased from $3,320,429 to $7,907,388. This maximum upper limit includes a Management Reserve of $218,427that must be authorized in writing by the City prior to use. Exhibit D-3 summarizes the level of effort associated with Amendment 10 services.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian R. Matson, Senior Vice President

Consultant Signature

By: Scott Dudley, Mayor

Approving Authority Signature

12/3/14
Date

By: Karl W. Hadler, Associate Vice President

Consultant Signature

EXHIBIT B – SCOPE OF SERVICES

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
FINAL DESIGN PHASE

BACKGROUND

The City of Oak Harbor (City) has completed Preliminary Design documents and Value Engineering (VE) for a new wastewater treatment plant (WWTP) and marine outfall constructed in the "Windjammer Vicinity" on approximately 2.5 acres. The new membrane bioreactor (MBR) treatment facility will treat 3.2 mgd, maximum month basis by the year 2030, and is expandable to treat projected Year 2060 flows generated within the City's service area (5.3 mgd, maximum month basis). The project will be completed in several phases using the general contractor/construction manager (GC/CM) "heavy civil" method of delivery, with Hoffman, Inc. serving as the City's GC/CM.

This Scope of Services is authorized as an amendment to an existing contract between the City and Carollo Engineers, Inc. (Carollo), and includes the following activities:

- Coordinating procurement of process equipment (e.g. MBR, ultraviolet (UV) disinfection, solids processing) by the GC/CM.
- Developing final engineering documents for negotiating a Maximum Allowable Construction Cost (MACC) and final bidding of the following project elements, which may be constructed in multiple packages:
  - Early sitework, including clearing, demolition, shoring installation, and excavation;
  - WWTP construction (liquid and solids stream process and non-process [administration, laboratory, and maintenance] facilities);
  - A 200-seat training facility integrated with the new administration building; and
  - Surrounding sitework and landscaping as shown on Attachment 1, including the extension of Bayshore Drive along the southern boundary of the new WWTP and parking for the WWTP and training facility.
- Assisting the City in obtaining permits for the work, as defined herein.
- For the work packages described above, assisting the City in negotiating a MACC with the GC/CM at the 90 Percent level of design.

Subsequent phases are anticipated to include:

- Bid period services to support GC/CM bidding of work packages outside of self-performed work.
- Construction Support Services for the WWTP and Outfall Projects.
- Preparation of Operation and Maintenance (O&M) Manuals.
- Start-up, Training, and Facility Commissioning.
- Assistance with securing NPDES Discharge and Biosolids Permits.

Project Team

Carollo will serve as the Prime Consultant for the Project, and will be responsible for overall Project management and delivery. In completing the work defined by this Scope of Services, Carollo is authorized to use the following Subconsultants:

Subconsultant	Role
ESA	Environmental/Cultural Resources Permitting Support
EnviroIssues (EI)	Public Meeting Facilitation and/or Support
MWA Architects (MWA)	Architectural Design Services
GeoEngineers (Geo)	Geotechnical Design Services
Greenworks P.C. (GW)	Landscape Architectural Design Services
Webster Environmental (WE)	Odor Control Design Services
Harmsen Associates, Inc. (HAI)	Topographical Surveying, Stormwater

Notes:

1) Structural, mechanical, electrical, and plumbing (S, MEP) subconsultants performing under MWA will be used for non-process building design. Specific budgets and deliverables for these activities are included in this Scope of Services.
2) Specialty subconsultants for air quality permitting and noise abatement will be added as needed. Not-to-exceed budget allowances for these activities are included in this Scope of Services.

Related Documents

The following documents provide background information for this project:

- Wastewater Treatment Plant Site Evaluation, City of Oak Harbor, October 2007.
- City of Oak Harbor Comprehensive Sewer Plan, TetraTech/KCM, December 2008.
- City of Oak Harbor Draft Facilities Plan, Carollo, March 2013.
- Preliminary Design Documents, Carollo, November 2013.

SCOPE OF SERVICES

Carollo (Consultant) will provide engineering and other services for the City of Oak Harbor Wastewater Treatment Plant Final Design Phase (Project), as defined by this Scope of Services. Work products submitted electronically will be produced using software as defined below:

- Word Processing — Microsoft Word
- Spreadsheets — Microsoft Excel
- Scheduling — Microsoft Project
- Drawings — Bentley MicroStation and Portable Document Format (PDF)

This Scope of Services is divided into the following tasks:

- Task 100 — Project Management.
- Task 200 — Not Used.
- Task 300 — Public Process Support.
- Task 400 — WWTP Final Design and Permitting.

- Task 500 Project Delivery (GC/CM) Coordination.
- Task 600 Not Used.
- Task 700 Management Reserve.

PROJECT SCHEDULE

A preliminary schedule for the Project is attached (Attachment 2). The Schedule defines anticipated durations for major tasks, Project milestones, and major deliverable dates, assuming Notice to Proceed (NTP) in December 2014. Throughout this Scope of Services, anticipated delivery dates for major deliverables are established based on this preliminary schedule. The Consultant and City recognize that the preliminary schedule and corresponding delivery dates are subject to change, should NTP be issued after December 2014 and/or for other reasons. Schedule changes may be approved by the City without an amendment to this Scope of Services, provided both Consultant and City staff approve of the change. An amendment modifying the Project schedule and dates for major deliverables will be issued if required by either the City or Consultant.

TASK 100 – PROJECT MANAGEMENT

The objective of this task is to manage and coordinate engineering and related services required for Project completion. Consultant will provide the following services for Task 100:

Subtask 110 – Project Management Plan

Update the existing Project Management Plan (PMP) including scope, work plan and products, work breakdown structure, budget, schedule, organization and staffing, communication protocol, and project standards within ten (10) days of NTP. Monitor the PMP throughout the project and provide one update of the PMP upon request by the City.

Subtask 111 – Quality Management

Develop and follow a Quality Management Plan (QMP) for the Project to be included in the PMP. Review technical memos, documents, drawings, reports, and address review comments addressed prior to submission in accordance with the QMP. For major work products develop a Record of Comment (ROC) to document City comments and Consultant responses.

Subtask 110 Assumptions:

1. The PMP will be updated once during the project.
2. Budget for Consultant's QA/QC activities is included in Task 400.

Subtask 120 – Project Monitoring and Reporting

Manage the Project team to track time and budget, work elements accomplished, work items planned for the next period, manpower, scope changes, and time and budget needed to complete this Scope of Services. Prepare monthly project status reports that compare work accomplished with schedule activities and compare expenditures with task budgets, and submit reports to the City's Project Manager with monthly invoices. Document expenditures on a task basis, and show hours by project personnel and other direct expenses related to work. Include a

project S-curve developed using Earned Valve Management (EVM) detailing anticipated progress, percent complete, and percent billed for each month.

Subtask 120 Assumptions:

1. Total Project duration for this phase is 12 months.

Subtask 130 – Project Management Meetings

Schedule and conduct Project Management Meetings throughout the project as directed by the City's Project Manager. Meetings will be used to discuss project status, action items, and potential areas of concern. Publish meeting minutes with Action Items that require a response by team members, City staff, or other agencies identified at the meeting. A draft of the minutes will be submitted to the City within three (3) working days after the meeting. The final version will be submitted within five (5) working days after comments on the draft have been received from the City.

Subtask 130 Assumptions:

1. Up to six (6) Project Management Meetings will be held.
2. Agendas, meeting minutes, and Action Items will be distributed electronically by the Consultant to City's Project Manager.

Task 100 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Updated PMP	110	January 2015
(12) Monthly Invoices and Progress Reports	120	Monthly
(6) Project Management Meeting Agendas	130	As Needed
(6) Project Management Meeting Action Items Log	130	As Needed

TASK 200 – (NOT USED)

TASK 300 – PUBLIC PROCESS SUPPORT

The objective of this task is to continue supporting the City's public process efforts for the project. As defined below, the City will lead public process activities for the Project, with significant support from the Consultant. Consultant will provide services for Task 300 as defined by the following Subtasks.

Subtask 310 – (Not Used)

Subtask 320 – (Not Used)

Subtask 330 – (Not Used)

Subtask 340 – Public Meetings/City Council Workshops

Assist in planning for and delivering joint Public Meetings/City Council Workshops, defined below. Participate in up one (1) preparation session for each meeting. Coordinate with City staff to direct Public Meetings/Workshops and produce one (1) draft and one (1) final summary (minutes). For each meeting: assist City to arrange for suitable meeting locations; prepare meeting plans; produce presentation materials; develop sign-in sheets and public comment forms; develop draft and final agendas; and develop draft and final meeting announcements/save the date notices.

Public Meeting/Council Workshop	Objectives
P1 – Public Meeting No. 1, Q1 2015 (Input on Final Design Progress)	Report Project Status Obtain Input to Assist With Final Design Decisions Communicate Future Opportunities for Input
P2 – Public Meeting No. 2, Q2 2015 (Input on Final Design Progress)	Report Project Status Obtain Input to Assist With Final Design Decisions Communicate Future Opportunities for Input
P3 – Public Meeting No. 3, Q4 2015 (Input on MACC and Next Steps)	Report Project MACC and Next Steps Communicate Future Opportunities for Input

Subtask 340 Assumptions:

1. Public Meetings will be held in conjunction with City Council Workshops to enhance efficiency for sharing information.
2. The City will arrange and pay for meeting locations and facilities.
3. The City will publish announcements in the local paper and include notices of meetings on their website.
4. The City will pay for all costs related to meeting notifications, including printing and postage.

Subtask 350 – Working Group Meetings

Working Group Meetings will be used to inform design decisions related to project features, architecture, public spaces, landscaping, etc. Assist City in planning for and conducting two (2) Working Group Meetings during the final design process. Coordinate with City staff to prepare information necessary to communicate design layouts, facility and landscaping renderings, and to obtain input. Document input and issue meeting minutes with decisions to City.

Subtask 350 Assumptions:

1. Working Group Meetings will held at City of Oak Harbor facilities
2. City staff will select community participants, schedule meetings, and communicate with participants as needed to maximize participation.
3. Working Group Meetings will be attended by approximately six (6) to twelve (12) members of the community, in addition to Consultant and City staff.

4. Consultant Project Manager, Design Manager, Lead Architect, and Lead Landscape Architect will attend Working Group Meetings.
5. Deliverables include two (2) renderings to communicate facility architecture and landscaping concepts.

Subtask 360 – Council Meeting/Workshop Participation

Assist the City in planning and conducting up to six (6) Council Meetings or Workshops during the final design phase, to cover information as needed and directed by the City. Prepare meeting objectives, agendas, roles and responsibilities, and presentation materials in advance of the meetings. Participate in up to one (1) preparation session for each meeting.

Subtask 360 Assumptions:

1. Council Meetings/Workshops will be held at City of Oak Harbor facilities.
2. The City will coordinate announcements for meetings and deliver meeting materials to attendees.
3. Consultant Project Manager will attend City Council Meetings/Workshops, and assist City staff in presenting technical information as requested.

Subtask 370 – Public/Stakeholder Involvement Product Development

In consultation with City staff, develop a project website and periodically update the website content. Other options for products and activities, subject to Oak Harbor authorization and decisions from the PIP include:

- Project brochures/mailers.
- In consultation with City staff, the Consultant may produce a segment for the City of Oak Harbor public access channel. As directed, Consultant will prepare a script and be involved in organizing productions that are filmed and produced by the City.
- Consultant will assist with strategy and development of presentations for local community groups made by City staff.

Task 370 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City staff/consultants.
2. City will print and send materials to the public.
3. Costs for production of materials and Public Access TV productions are paid by the City outside of this contract.

Task 300 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(4) Public Meeting/Council Workshop Materials	340	Per Schedule
(2) Working Group Meeting Materials and Minutes	350	Per Schedule
(6) Presentations for Council/Committee Meetings	360	Per Schedule

Deliverable	Subtask	Anticipated Delivery Date
(1) Project Website	370	As Needed
(12) Updates to Project Website	370	As Needed
(6) Project Brochure/Public Information Materials	370	As Needed
(1) Public Access TV Production Plan	370	As Needed

TASK 400 – WWTP FINAL DESIGN AND PERMITTING

The objective of this task is to complete a Final Design of the recommended WWTP (as defined in the Preliminary Design Documents) to 100 percent level of completion, and assist the City in obtaining permits as defined by Attachment 3. The Final Design will consist of Final Design Drawings and Specifications. The expected project elements list for the WWTP is included as Attachment 4.

Final Design documents will be submitted in electronic (PDF) and hard copy format for City and GC/CM review. Five (5) hard copies of will be provided. City and GC/CM review comments will be documented using the Record of Comment (ROC) log. Comments, modifications, and revisions to the Design documents will be incorporated during subsequent development of design documents.

Subtask 410 – (Not Used)

Subtask 420 – (Not Used)

Subtask 430 – (Not Used)

Subtask 450 – Technical Team Meetings

The objective of this task is to collect information from City staff, enhance communication with the design team, and to present design concepts. Plan for and conduct up to (10) Technical Team Meetings during the final design process, to review and discuss design information and to review 60 and 90 percent design documents. Prepare information necessary to communicate with City staff and obtain input. Document input and issue meeting minutes with decisions to City.

Subtask 450 Assumptions:

1. Technical Team Meetings will held at City of Oak Harbor facilities
2. Technical Team Meetings will be approximately four (4) hours in duration.
3. Approximately three (3) members of Consultant design team will attend each meeting, including Design Manager and other necessary staff/discipline engineers.
4. Meeting materials and minutes will be distributed electronically.

Subtask 460 – (Not Used)

Subtask 470 – Final Design

Perform engineering work to develop a final set of contract documents (drawings and technical specifications) for construction of the WWTP based on the Preliminary Design Submittal (November 2014), and incorporated review comments received from the City. The Detailed Design will be documented with three submittals as defined by the following subtasks.

Subtask 471 – 60 Percent Design

The 60 Percent Submittal will advance the project design from 30 percent status to approximately a 60 percent level of completion, including the incorporation of City and GC/CM comments (as approved by City). Some drawings will be more complete than others; overall the level of completion for this submission will be approximately 60 percent and will include the following elements:

- Written response log to City comments on the Preliminary Design Submittal.
- Five (5) half-sized (11" x 17") hard copy sets of the following 2D drawings:
  - General Drawings.
  - Paving and Grading Drawings.
  - Yard Piping Drawings.
  - Preliminary Landscaping Plans.
  - Architectural Plans and Elevations.
  - Structural Plans and Sections of major structures.
  - Mechanical Plans and Sections of major process areas.
  - Preliminary Odor Control Plans.
  - Electrical One Line Diagrams and MCC Elevations.
  - Electrical Site Plans.
  - Preliminary Electrical Power and Control Plans.
  - Preliminary Electrical Lighting Plans.
  - Preliminary Electrical Grounding Plans.
  - Tagging System.
  - Control Block Diagram.
  - P&IDs.
- Five (5) hard copy sets of select 3D renderings based on the 60 percent model.
- Five (5) hard copy sets of the following specifications:
  - Work Restrictions/Construction Sequencing.
  - Draft Structural Specifications.
  - Major Equipment Specifications.
  - Piping Schedule.
  - Electrical Equipment Specifications.
  - Control Strategies.
- 60 Percent Construction Cost Estimate (Budget included under Subtask 477).

Subtask 472 – 90 Percent Design

The 90 Percent Submittal will incorporate City and GC/CM comments (as approved by the City) to the 60 Percent Submittal. The engineering design will be substantially complete, and the plans will show all sections and details. The 90 Percent Submittal will be made when the drawings and specifications have been checked by Consultant's independent multidisciplinary review team, and the check comments have been incorporated, as defined by Subtask 474.

- Written response log to City comments on the 60 Percent Design Submittal.
- Five (5) half-size (11"x17") hard copy sets of drawings.
- Five (5) hard copy sets of select 3D renderings based on the 90 percent model.
- Five (5) hard copy sets of the final specifications.

Subtask 473 – Final Design

The Final Design Submittal will be made when the project is 100 percent complete, including incorporation of City and GC/CM comments (as approved by the City) to the 90 Percent Submittal. All plans and specifications will be stamped and signed by an engineer registered in the State of Washington. The anticipated Final Design Submittal drawing list is included in Attachment 5. The anticipated Final Design Submittal specification list is included in Attachment 6.

Subtask 474 – Quality Assurance/Quality Control

The objective of this task is to prepare a Quality Management Plan (QPM) for the project and administer Quality Assurance/Quality Control (QA/QC) procedures in accordance with the QMP. All documents will be subject to Consultant's standard quality management procedures for planning, coordination, checking, reviewing, and scheduling the work. Signatures of the respective checkers will be included where appropriate.

Administer detailed quality control procedures to provide plans and specifications that meet the standard of care for public works construction. Develop a quality management approach that includes work from the Preliminary Design through the preparation of the Final Contract Documents. Specific quality management tasks include:

- Prepare a Quality Management Plan for the project that addresses Project Communications; File Management/Document Control; Format and Standards for Documents; Quality Assurance Procedures; and Project Review Team (consisting of qualified individuals not directly involved in the design or supervision of the work).
- Complete 60 Percent Design Review, including:
  - Detailed review of the 60 Percent Design Submittal by the project design team.
  - Discipline checks on all design calculations, drawings, specifications, cost estimates, and reports.

- Complete 90 Percent Design Review, consisting of:
  - A multidisciplinary design review (check) by the Project Review Team, prior to submitting 90 Percent Design to the City, to provide a final quality check and design/discipline coordination.

Subtask 475 – Early Site Preparation Package

The objective of this task is to prepare a separate and early set of design documents for completing site preparation for the new WWTP. Site preparation is expected to include: demolition of existing WWTP facilities; site clearing and contractor staging area preparation; site security and contractor's temporary facilities; installation of shoring and dewatering systems; excavation; and stockpiling of excavated material.

Prepare a set of stand-alone design documents, including select site and demolition plans (approximately 20 drawings), and technical specifications needed for the Early Site Preparation Package. The stand-alone set of documents will be suitable for bidding or negotiated self-performance by the GC/CM.

Subtask 476 – Solids Dryer Equipment Procurement

The objective of this task is to assist the City in selecting a manufacturer for solids drying equipment using a competitive bidding or GC/CM negotiated procurement process. Final design information prepared under Task 400 will be developed around the selected equipment manufacturer based on the specific details of the selected solids drying equipment manufacturer.

Prepare documents for solids drying equipment procurement, including: preliminary layout drawings for each manufacturer; general ancillary facility requirements; and required technical specifications. Coordinate with City and GC/CM staff to include terms, conditions, and contract times (submittal dates and delivery dates) into procurement documents. Meet with City and GC/CM staff to review draft documents, incorporate comments, and issue final documents.

Assist the City during the equipment procurement period by answering questions from the solids drying equipment manufacturers and preparing addenda. Assist the City and GC/CM in evaluating all bids/proposals and in selecting equipment manufacturer.

Subtask 476 Assumptions:

1. Bid documents will be prepared and bids solicited for up to three (3) solids drying equipment manufacturers.
2. The contract for the selected manufacturer will include assistance with design phase. Contracts for production and delivery of process equipment will be the responsibility of the City's GC/CM.
3. Consultant standard procurement documents will be used for technical and front-end documents, in coordination with the GC/CM.
4. One (1) addendum will be prepared during the equipment procurement period.
5. The City will cover reproduction costs for bid sets as required.

Subtask 477 – Cost Estimate Development

The objective of this task is to revise and update the Engineer's Opinion of Probable Construction Costs (cost estimate) developed at the conceptual design level as part of preliminary design. Revise, update and submit cost estimates at the following levels of design development:

- 30 Percent Cost Estimate, based on preliminary design documents developed during the preliminary design phase.
- 60 Percent Cost Estimate, based on 60 percent design documents developed during the final design phase.

Subtask 470 – Architectural Design and Associated Subconsultants

Architectural Design will be led by MWA Architects (MWA). General Architecture will include the following (in addition to supporting Task 300 activities as defined):

- Design of site elements and landscaping as shown in Attachment 1.
- Overall design of facility aesthetics and composition.
- Complete architectural design of non-process building including Admin, Maintenance, Interpretive Lobby, and Training Facility, including:
  - Management of and coordination with MWA sub-consultants for non-process building structure, plumbing, HVAC, electrical, lighting, and fire protection.
  - Interior design.
  - Water Quality Laboratory design.
  - Fixture, Furniture, and Equipment selection, design, placement – assume coordination with a local furniture rep to help specify modular furniture.
  - Building signage design – interior room and exterior building signage.
- Design support for Process Buildings, including:
  - Architectural building enclosures; walls, roofs, floor plans showing exiting, doors, windows, relites, and canopies.
  - Space planning assistance.
  - Operational considerations.
  - Code analysis and diagrams.
  - Building signage.
- QA/QC process for each milestone deliverable.
- Cost estimating assistance.
- Coordination with GC/CM.

MWA will retain three (3) sub-consultants to assist in development and documentation of the architectural portion of the design, including:

Greenworks, P.C. (GW) will provide the following design services (in addition to supporting Task 300 activities as defined):

- Hardscape and landscape design from edge of building to property line or ROW curb, including a public plaza.
- Irrigation design.
- Input and advice on site lighting.
- Leadership for initial site stormwater design and grading at workshop with Consultant, who will then complete the technical drawings and specifications.
- QA/QC process for each milestone deliverable.
- Cost estimating assistance.
- Coordination with GC/CM.

WRK Engineers (WRK) will provide structural engineering for non-process buildings, and limited assistance with architectural elements within process buildings, including:

- Full structural design and coordination of non-process building (maintenance, admin, lab, interpretive lobby, training facility).
- Engineering design assist for process facility wall and roof design.
- QA/QC process for each milestone deliverable.
- Cost estimating assistance.
- Coordination with GC/CM.

Interface Engineers (IA) will provide HVAC, Plumbing, and Electrical design for non-process buildings, and plant-wide Fire Protection (performance specification for Design Build delivery of this element), including:

- Full service design for mechanical, plumbing, electrical, and lighting of non-process building.
- Low voltage raceway design for non-process building.
- Performance based specification for fire sprinkler and fire alarm systems for entire facility.
- Note that energy modeling for LEED certification or other sustainability benchmarks, energy consulting, envelope design, and alternative energy systems design are excluded from this authorized Scope of Services.

Subtask 470 Assumptions

1. Consultant will continue work on all aspects of the project while City staff reviews prior design submittals. The City and GC/CM will provide a comment log in electronic format to document comments for each submittal. City and GC/CM comments will be combined and coordinated, and conflicting comments resolved, before forwarding to Consultant. Consultant will respond to each comment on a response log, and City comments (and GC/CM comments approved by City) will be incorporated as appropriate and submitted with the next project submittal.
2. Plans and specifications will be prepared in accordance with the standard of care for public works construction. The facilities will be designed in accordance with the latest editions of the pertinent codes and regulations, as adopted by the City or as agreed to

by the City and Consultant. Specifications will be based on the Construction Specifications Institute MasterFormat 95 numbering standard.

3. Construction contract front end documents will be provided by the City or GC/CM. Consultant will provide project-specific edits to the front end documents for coordination with the technical specifications and project design requirements.
4. WWTP improvements will be modeled using three-dimensional (3D) software (Microstation format) to facilitate design reviews. The model may be used by the GC/CM for convenience.
5. The Final Contract Plans will be two-dimensional (2D) drawings that are extracted from the 3D model. The final 2D drawings will be delivered in Microstation format.
6. For the 60 Percent and 90 Percent submittals, Typical Details will be submitted in 8-1/2" x 11" format, similar to the specifications. As part of the Final Submittal, Typical Details will be incorporated into the Drawings.
7. The budget is based on preparing two (2) packages of Final Design documents for construction of the project, including: Early Site Preparation and WWTP Construction. For each of these two packages, Consultant will provide comprehensive final design drawings, technical specifications, and contract documents for construction. Parsing of the design for subcontractor bid packages for particular portions of the work into subcontractor bid packages will be completed by the GC/CM using the Final Design Submittal packages prepared by Consultant.
8. A Geotechnical Basis of Design Report will be submitted with the 30 Percent Documents. The budget for Final Design includes an allowance for Geotechnical coordination (up to 120 hours) plus associated Technical Memoranda and/or Letter Reports to document recommendations. No further geotechnical exploration, sampling or analysis is planned.
9. The City will complete a comment log in electronic format and Consultant will respond to each comment on a response log. City comments will be incorporated into the subsequent Submittal. Comments that are not incorporated will be logged with a description as to why they were not incorporated for City review.
10. Detailed construction schedules will be prepared by the GC/CM. Consultant will coordinate with the GC/CM for overall project duration, major schedule milestones, and schedule constraints. Consultant will also provide a review of GC/CM schedules for general conformance with the project design requirements and submit review comments to the City and GC/CM.
11. Significant changes to the Consultant's design based on GC/CM input for value engineering, constructability, and risk management will be authorized by the City. Budget to incorporate authorized changes will be covered through Task 700 – Management Reserve.

Subtask 470 Deliverables

Deliverable	Subtask	Anticipated Delivery Date
(10) Technical Team Meeting Materials and Notes	450	Per Schedule
(5) 60 Percent Design Submittal (WWTP)	471	Per Schedule
(5) 90 Percent Design Submittal (WWTP)	472	Per Schedule
(5) Final Design Submittal (WWTP)	473	Per Schedule
(5) QA/QC Materials	474	Per Schedule
(5) Final Design Submittal (Early Site Prep)	475	Per Schedule
(5) Draft and Final Procurement Documents	476	Per Schedule
(5) 30 Percent Cost Estimate	477	Per Schedule
(5) 60 Percent Cost Estimate	477	Per Schedule

Subtask 480 – Permitting Support

The objective of this task is to support the City with permitting activities and applications required to construct the WWTP improvements. This task is based on the permits identified by the Consultant during the preliminary design phase of the project as documented in Attachment 3. Consultant's level of effort associated with this Subtask, as further defined by assumptions and deliverables below, is estimated at 300 hours plus $30,000 for support by a specialty subconsultant (ESA). Additional effort authorized by the City will be covered by Task 700 – Management Reserve.

Subtask 480 Assumptions:

1. The City has separately contracted technical services to support the Section 106 consultation documentation (cultural resources). The results of the studies may be used by Consultant as a technical basis to support other permits. Consultant will provide up to 40 hours of services to review and coordinate associated documentation.
2. The developed design will not overlap with the delineated Class III wetland immediately west of the WWTP site but will impact the associated buffer. Consultant will develop a Conceptual Wetland Buffer Mitigation Plan based on the guidelines presented in the Interagency guidance on Wetland Mitigation in Washington State issued by the Corps, Ecology, and the EPA in 2006.
3. The justification provided to abandon the existing outfall in place is acceptable to the Department of Natural Resources (DNR) to receive the aquatic land lease permit for the proposed outfall. No additional data collection is required.
4. Endangered Species Act (ESA) consultation with EPA and the Services has been completed for the WWTP project. No further action for ESA consultation is required.
5. Lead and analyze results from up to six (6) forage fish sampling events immediately prior to on-site construction efforts for the outfall.
6. The Stormwater Pollution Prevention Plan (SWPPP) will be developed by the GC/CM.

7. Consultant will attend and participate in up to three (3) pre-application meetings with City staff. Up to 40 hours is allocated for preparation and participation of permit coordination and pre-app meetings.
8. The Grading and Site Plan Review Permit Applications will be submitted in two (2) parts to support the early sitework and WWTP construction phases of work.
9. All applications will be transmitted to the City for final review and submittal to the lead agency. Consultant will provide up to 40 hours for technical support and responses to agency comments.
10. All permit application fees will be paid directly by the City.
11. The City will lead public/hearing examiner effort and determination on whether the WWTP site will undergo a zoning code change or conditional use application. Consultant will provide technical support documents, as requested.
12. Consultant will quantify air quality pollutant emissions based on modeling of proposed systems and evaluation against the pollutant threshold levels. The level of effort assumes that the air treatment and dissipation strategy proposed in the preliminary design results in an agency exemption from new source review based on a "de minimus impact" (below the acceptable threshold impact level that is assumed to be protective of health and safety in compliance with Chapter 173-460 WAC).
13. The following potential activities are excluded from Consultant's authorized scope, and may be authorized by the City out of Task 700 – Management Reserve on an as needed basis:
    a. Wetland buffer mitigation design for elements that extend beyond areas shown in Attachment 1.
    b. Transportation impact study following confirmation of parking needs, and associated traffic engineering calculations and support.

Subtask 480 Deliverables:

1. Draft and Final Agendas, supporting information, and meeting minutes with Decisions and Action Items for three (3) pre-app meetings.
2. Draft permit applications transmitted electronically for City review.
3. Final applications incorporating one consolidated set of client comments (electronic files and up to seven (7) hard copies) for submission to the lead agency.
4. Up to six (6) brief reports presenting findings from results of forage fish survey (1 per sampling event) for submittal to WDFW.
5. The following Environmental Permit Applications:
    a. Addendum to SEPA Checklist.
    b. Update to SERP documentation.
    c. Shoreline Substantial Development.
    d. Conceptual wetland buffer mitigation plan.
    e. Review comments for Section 106 documentation.
    f. Critical area ordinance package with brief reports (CARA, geo-hazard, frequently flooded).

g. Notice of Construction with air quality exemption justification.

6. The following WWTP Development Permit Applications:
   a. Site Plan Review Type II (2 parts).
   b. Grading permit (2 parts).
   c. Demolition.
   d. Building Occupancy (mechanical, plumbing, electrical).
   e. Fire – Construction Plan review.
   f. Air quality – minor source review.
   g. Right of Way.
   h. Floodplain development.

Subtask 490 – Biosolids Management Plan

The objective of this task is to prepare a biosolids management plan to document conformance of the City's plan to reuse and/or dispose of biosolids consistent with the requirements of the Washington Administrative Code (WAC) 173-308 and the Biosolids Management Guidelines for Washington State (Ecology, 2000).

Determine the expected quantity of waste activated sludge (WAS), and thermally dried biosolids to be produced on an annual and monthly basis at milestones throughout the design life of the facility. Develop and evaluate alternatives for disposal of and beneficial use of biosolids produced at the WWTP, including liquid and dewatered WAS (disposal), and thermally dried biosolids (disposal or reuse).

For each alternative, summarize regulatory requirements, life-cycle costs, and other non-cost factors that should be considered in selecting the preferred alternative(s). Assist the City in identifying potential locations for land application or other beneficial reuse, and in determining an overall strategy to incorporate these sources into an overall biosolids management strategy. Review and evaluate potential phasing scenarios that could be used to implement the recommended alternative(s).

Summarize results of the analysis and recommend next steps that will likely include permitting, monitoring, and reporting requirements, public outreach activities, or other marketing activities needed for successful plan implementation. Participate in up to two (2) meetings with the Washington Department of Ecology (Ecology) to review potential alternatives, phasing scenarios, and recommended plan.

Subtask 490 Assumptions

1. WAS and biosolids production rates will be determined at startup (Year 2017), midpoint (Year 2022), and Year 2030 using biological models developed during Facilities Planning.
2. Alternatives for beneficial reuse of thermally dried biosolids will include: local bulk land application, local distribution as a soil amendment, hauling to Eastern Washington, and biofuel sources. Alternatives for disposal are expected to include landfilling of dewatered WAS or dried biosolids, and/or interim pumping of liquid WAS to the existing lagoon at Crescent Harbor.

3. Preparation of and application for permits, public outreach activities, and marketing plans that may be required to implement the recommended alternative(s) are not included in this Scope of Services.

Subtask 490 Deliverables

1. Draft and Final Biosolids Management Plan.
2. Ecology meeting materials and minutes.

TASK 500 – PROJECT DELIVERY (GC/CM) COORDINATION

Subtask 510 – GC/CM Coordination

The objective of this task is to coordinate with the GC/CM in developing and validating cost estimates for the project, including:

- Review/comment on GC/CM Cost Estimating Methodology.
- Review/validate 30 Percent Cost Estimate: Participate in two (2) half-day meetings with the GC/CM to assist in developing and reconciling the 30 Percent Cost Estimate.
- Review/validate 60 Percent Cost Estimate: Participate in two (2) half-day meetings with the GC/CM to assist in developing and reconciling the 30 Percent Cost Estimate.

Subtask 510 Assumptions:

1. Two (2) individuals from the Consultant's design team will attend the 30 and 60 Percent cost development coordination meetings.
2. Additional meetings and coordination efforts with the GC/CM (outside of those defined under Tasks 400 and 500) will be authorized by the City. Budget for authorized efforts will come from Task 700 – Management Reserve.

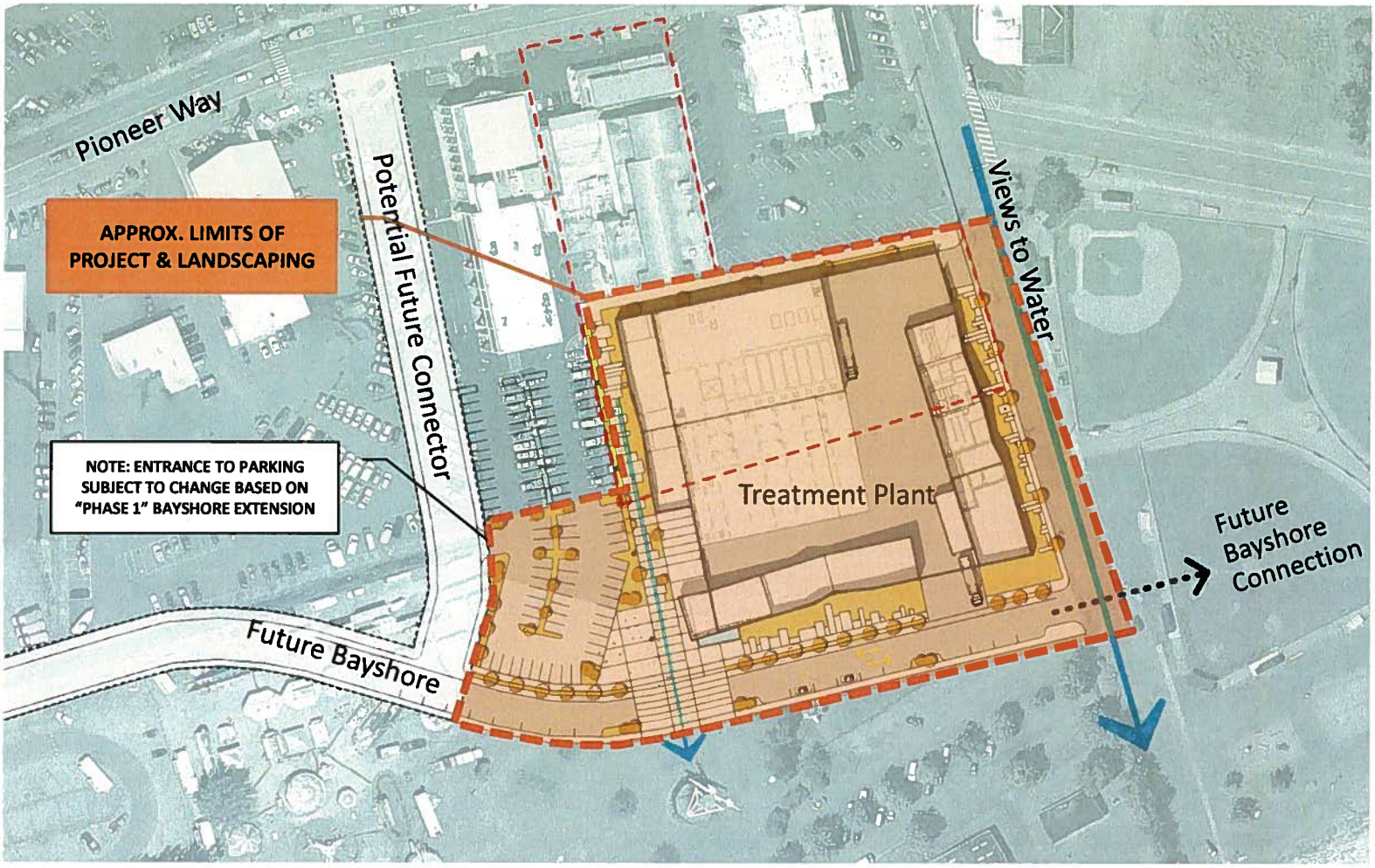
Subtask 510 Deliverables:

1. Written comments to GC/CM Estimating Methodology Report.
2. Written comments to 30 and 60 Percent Construction Cost Estimates.

TASK 600 – (NOT USED)

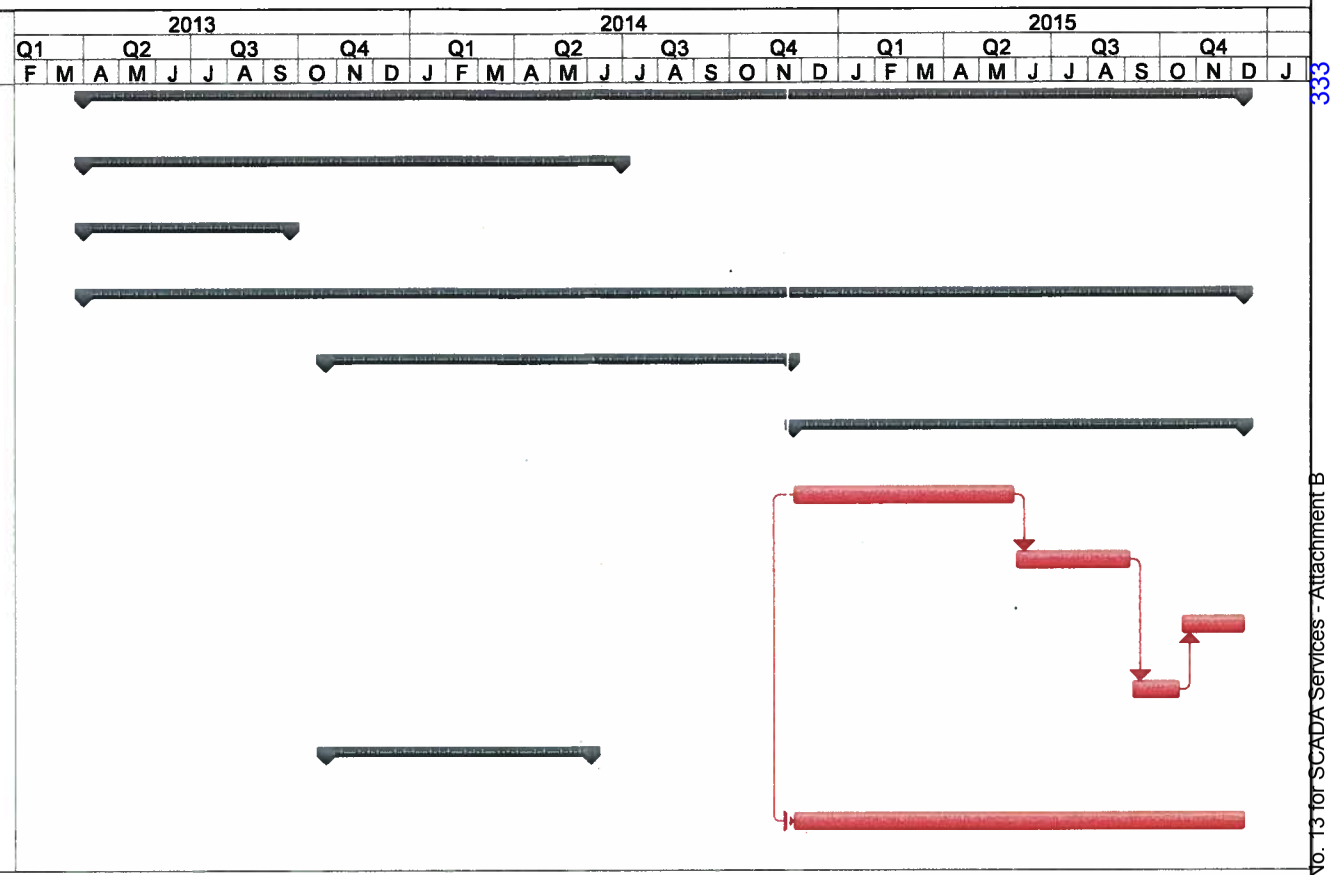
Attachment 1

Approximate Limits of Project and Landscaping



ATTACHMENT 2 - PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Predecessors
1	**DESIGN PHASE**	**705 days**	**Mon 4/1/13**	**Fri 12/11/15**	
2	**TASK 100 - PROJECT MANAGEMENT**	**325 days**	**Mon 4/1/13**	**Mon 6/30/14**	
6	**TASK 200 - VALUE ENGINEERING SUPPORT**	**126 days**	**Mon 4/1/13**	**Mon 9/23/13**	
22	**TASK 300 - PUBLIC PROCESS SUPPORT**	**705 days**	**Mon 4/1/13**	**Fri 12/11/15**	
57	**TASK 400 - PRELIMINARY DESIGN**	**283 days**	**Wed 10/23/13**	**Fri 11/21/14**	
101	**Subtask 470 - Final Design**	**275 days**	**Mon 11/24/14**	**Fri 12/11/15**	
102	Subtask 471 - 60% Design	135 days	Mon 11/24/14	Fri 5/29/15	96
103	Subtask 472 - 90% Design	70 days	Mon 6/1/15	Fri 9/4/15	102
104	Subtask 473 - Final Design	40 days	Mon 10/19/15	Fri 12/11/15	105
105	Subtask 474 - QA/QC	30 days	Mon 9/7/15	Fri 10/16/15	103
106	**TASK 500 - PROJECT DELIVERY OPTIONS/COORDINATION**	**160 days**	**Wed 10/23/13**	**Tue 6/3/14**	
125	Subtask 510 - GC/CM Coordination	275 days	Mon 11/24/14	Fri 12/11/15	102SS

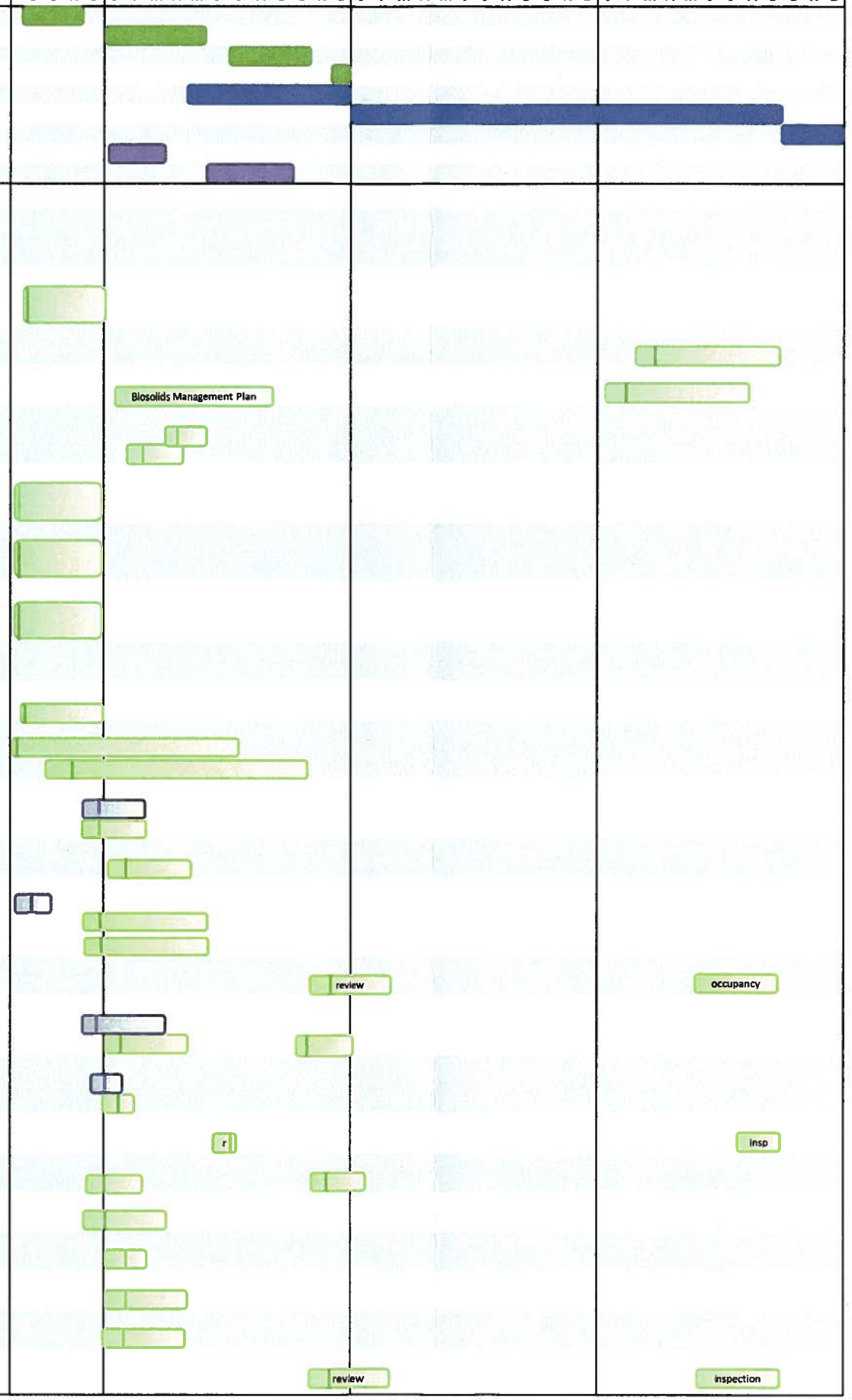


Project: DRAFT Predesign Schedule_1
Date: Wed 11/19/14

Task	Rolled Up Critical Task	Project Summary	Manual Task	Finish-only
Critical Task	Rolled Up Milestone	Group By Summary	Duration-only	Progress
Milestone	Rolled Up Progress	Inactive Task	Manual Summary Rollup	Deadline
Summary	Split	Inactive Milestone	Manual Summary	
Rolled Up Task	External Tasks	Inactive Summary	Start-only	

Attachment 3 - Oak Harbor WWTP and Outfall Projects - Permit Matrix with no impacts to wetland and the CORPs permits outfall for continuous use with NMFS concurrence

	Design/Construction Activity	Antic. Applic. Preparer	Antic. Prep.	Lead Agency	Antic. Review/ Approval	Package Ref.	Status
1	WWTP 30% Design Development						
2	WWTP 60% Design Development						
3	WWTP 90% Design Development						
4	WWTP Final Design						
5	Early WWTP Sitework Construction						
6	WWTP Construction						
7	WWTP Commissioning						
8	Outfall 100% Design/Bid						
9	Outfall Construction						
	Permitting Activity						
10	**SEPA Environmental Checklist**						
	outfall treatment plant	ESA	6 mo.	Ecology	2 mo.	SERP	MDNS Issued 9/11/13. Addendum to MDNSw/ updated TP description.
11	**SERP**						
	outfall treatment plant	ESA	6 mo.	Ecology	2 mo.		Outfall and TP selected for FY2015. Currently finalizing cross-cutter review prior to fund issuance. Updates required (w/o Navy) for project description & sole source aquifer checklist.
12	**NPDES Discharge Permit**						
	treatment plant	CE	2-4 wk.	Ecology	3-6 mo.		Not started
13	**Biosolids Disposal Application (coverage under general permit)**						
	treatment plant	CE	4 wk.	Ecology	3-6 mo.		Not started. Prepare Biosolids Management Plan first.
14	**NPDES Construction Stormwater General Permit**						
	outfall	Hoff.	2 wk.	Ecology	1-2 mo.		Not started
	treatment plant	Hoff.	1 mo.	Ecology	1-2 mo.		Not started
15	**Section 404**						
	outfall - NWP 12 treatment plant	ESA	1 mo.	Corps	6-12 mo.	JARPA	Submitted 2013. Pending w/ CORPs - Mtg needed?
16	**Section 401**						
	outfall treatment plant	ESA	1 mo.	Ecology	6-12 mo.	JARPA	Submitted 2013. Concurrent with Section 404.
17	**CZM Concurrency**						
	outfall treatment plant	ESA	1 mo.	Ecology	6-12 mo.	JARPA	Submitted 2013. Concurrent with Section 404.
18	**Hydraulic Project Approval**						
	outfall	ESA	2-4 wk.	WDFW	1-2 mo.	JARPA	Issued 10/31/13. May need to be revised to reflect outfall removal (see DNR).
19	**Aquatic Land Lease**						
	outfall	ESA	---	DNR	3-6 mo.		Justification provided
20	**Section 106 Review - NHPA**						
	outfall	ERCI	1 mo.	DAHP	6-12 mo.		Submitted 7/14/14. Under review. Timing?
	treatment plant	ERCI	1 mo.	DAHP	6-12 mo., 18?		Conducting field investigations. Timing?
21	**Archaeological Excavation Permit**						
	outfall	ERCI	2-4 wk.	DAHP	2 mo.		Not started?
	treatment plant	ERCI	2-4 wk.	DAHP	2 mo.		Not started?
22	**Air Quality - notice of construction (permit needed?)**						
	treatment plant	CE	2-4 wk.	NWCAA	2-3 mo.		Not started
23	**Shoreline Substantial Development**						
	outfall	ESA	2-4 wk.	OHDS/Ecology	2-6 mo.		Ecology reviewing draft
	treatment plant	ESA	2-4 wk.	OHDS/Ecology	2-6 mo.		Not started
	Critical Areas ID (CARA, geo haz, freq flooded)	CE/Geo	2-4 wk.	OHDS	2-6 mo.		Not started
24	**Building Permit Review/Occupancy Permit**						
	treatment plant (mechanical, plumbing, electrical)	CE/Hoff.	1 mo.	OHDS	1-3 mo.		Not started
25	**Grading Permit**						
	outfall	CE	2-4 wk.	OHDS	2-3 mo.		Not started?
	treatment plant	CE	2-4 wk.	OHDS	2-3 mo.		Not started
26	**Floodplain Development Permit**						
	outfall	CE	2-4 wk.	OHDS	2-4 wk.		Not started
	treatment plant	CE	2-4 wk.	OHDS	2-4 wk.		Not started, need wetland delineation
27	**Right-of-Way Permit/ Street Opening Inspection Permit**						
	treatment plant	CE	2-4 wk.	OHDS	1 wk.		Not started
28	**Site Plan Review Type II**						
	treatment plant (landscape, heavy civil, stormwater)	CE	2-4 wk.	OHDS	4 mo.		Not started
29	**C-3 Zoning Use**						
	treatment plant	OHDS	2-4 wk.	OHDS	1-3 mo.?		Not started. Code change or conditional use?
30	**Boundary Line Adjustment**						
	treatment plant	OHDS	2-4 wk.	OHDS	2-4 wk.?		Not started.
31	**Demolition Permit**						
	treatment plant	CE	1 mo.	OHDS	1-3 mo.		Not started.
32	**Transportation Concurrency/Impact**						
	treatment plant	CE	2-4 wk.	OHDS	2-4 wk.		Not started
33	**Fire Marshal - Construction Plan Review Permit/Inspection**						
	treatment plant (fire alarm, sprinkler, standpipe, chem.)	CE	1 mo.	OHDS	1-3 mo.		Not started. Submitted with Building Permit review?



ATTACHMENT 4
MAJOR PROJECT ELEMENTS LIST

The Scope of Services for the Oak Harbor WWTP Final Design Project will result in a full set of contract plans and specifications for the recommended Phase 1 improvements without substantial changes as required by the State of Washington Administrative Code (WAC) 173-240-060. The Scope of Services for Preliminary Design Documents is based on the major elements identified in the following Project Elements List:

Facility Area	Name
0X	**General**
1X	**Yard Site Systems**
2X	**Preliminary Treatment**
3X	**Aeration/Equalization Basin**
4X	**Membrane System**
5X	**UV Disinfection/Effluent Equalization**
6X	**Solids Handling**
7X	**Ancillary Systems**
	Gallery (mechanical equipment)
	Chemical System
	Odor Control
	Standby Generator
8X	**Non-Process Facilities**
	Administration Building
	Maintenance Building
	Electrical Building
	Landscaping
	Public Areas

Facility Area 0X – General

General information for the overall project such vicinity and location maps, design data/schematics, existing site/utilities, and explanation for symbols and abbreviations. Area includes:

Design Criteria.

Process Flow Diagrams.

Hydraulic Profile.

Notes, Schedules, and Abbreviations.

Building Analysis.

Facility Area 1X – Yard Site Systems

Plans depicting new structure footprints, locations, and orientation onsite/offsite.

1. Existing Facility Demolition.
2. Site Preparation.
3. Anticipated ground improvements such as stone columns.
4. Off-site Yard Utilities:
    1. Influent Diversion Structure from collection system and piping to site.
    2. Piping to effluent outfall connection.
5. Electrical site service.
6. Paving and Grading.
7. On site Stormwater System.
8. Routing of general process piping.
9. Routing of Small Diameter Piping Utilities (during final design):
    a. Potable Water.
    b. Non-Potable Water (potable with air gap).
    c. Plant Water (low pressure).
    d. Plant Water (high pressure).
    e. Natural Gas.
    f. Service/Instrument Air.
    g. Plant Building/Process Drains.
    h. Fire Flow Water.
10. Routing of Other Utilities (during final design):
    a. Electrical distribution system.
    b. Communication Devices.
    c. Site Lighting.
    d. Site Security.
    e. Telephone/Fiber Optic System.

Facility Area 2X – Preliminary Treatment

Plans depicting specific preliminary treatment components:

1. First-stage coarse screening.
2. Screenings washer/compactor.
3. Influent pump station.
4. Influent flow measurement and sampling.
5. Grit removal system and grit handling.
6. Flow splitting to flow equalization basin.
7. Second-stage fine screening.

Facility Area 3X – Aeration/Equalization Basins

Plans depicting specific secondary components:

1. Flow distribution structure.
2. 2-below grade aeration basins (4 stages) in MLE configuration (2 anoxic zones, 2 aerobic zones).
3. 1-below grade flow equalization basin with provisions to convert to aeration basin in the future.
4. Associated mechanical equipment.
5. Fine bubble diffusers in each aerobic zone.
6. Flow equalization pump system.
7. Scum handling (spray and removal), flushing systems, etc.

Facility Area 4X – Membrane System

Initial design will be capable of accommodating footprint needs of proven manufacturers to assist in early procurement. Final design will be based on specific requirements of selected manufacturer. General components include:

1. 5 –MBR trains/tanks.
2. Membrane cassettes and ancillary instrumentation.
3. Provisions for 1 future MBR train.

Facility Area 5X – UV Disinfection/Effluent Equalization

Initial design for UV Disinfection and effluent system will be capable of accommodating footprint needs of proven manufacturers to assist in early procurement. Final design will be based on specific requirements of selected manufacturer. General components include:

1. 3-trains of ultraviolet (UV) disinfection reactor units, cleaning system, power distribution, and control.
2. Flow measurement per train.
3. Single Effluent equalization/storage tank.

Facility Area 6X – Solids Handling

Solids handling will produce Class B solids for components include:

1. Aerated WAS storage tank.
2. Dewatering systems and equipment.
3. Thermal drying facilities.
4. Truck loadout facilities.

Facility Area 7X – Ancillary Systems

Ancillary facility areas support the main process units. Specific components include:

1. Mechanical Gallery below-grade.
   a. Aeration basin blowers.
   b. Membrane blowers.
   c. Membrane feed pumps (mixed liquor pump station).
   d. Membrane permeate pumps and flow measurement per train.

e. Plant water pump system.

2. Chemical Systems:
   a. Sodium hydroxide (NaOH) feed for alkalinity content.
   b. Sodium hypochlorite (NaOCl) feed for membrane cleaning and potentially to support odor control and/or introduction of chlorine residual.
   c. Citric acid or phosphoric acid feed for membrane cleaning and potentially UV cleaning
   d. Lime feed for solids stabilization.
3. Odor Control System – odor scrubbing technology to treat foul air streams. Areas scrubbed are anticipated to include:
   a. Headworks.
   b. Aeration Basins.
   c. Pump wetwells/open channels.
   d. Solids handling area (to extent necessary)
4. Standby Generator – a single diesel unit capable of providing continuous operation for the entire facility in the event of a loss of utility power. The unit will be housed in the mechanical building and sound dampening devices will be employed to decrease the noise level while in operation.

Facility Area 8X – Non-Process Buildings

Process support buildings and areas highly visible/accessed by the public:

1. Administration Building meeting ADA standards to support plant control, meeting/training, break areas, restroom/lockers, building mechanical systems, office(s), and laboratory.
2. Maintenance Building for plant maintenance activities such as disassembling pumps, working on instrumentation, and in-house fabrication. The building will include a parking stall /loading dock.
3. Electrical Building for housing electrical equipment such as main switch gear, motor control centers, variable frequency drives, programmable logic controllers, and other control panels.

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
	GENERAL	
1	00 G 01	COVER SHEET
2	00 G 02	DRAWING INDEX - 1
3	00 G 03	DRAWING INDEX - 2
4	00 G 04	DESIGN CRITERIA
5	00 G 05	PROCESS FLOW DIAGRAM
6	00 G 06	HYDRAULIC PROFILE
7	00 G 07	OVERALL SITE PLAN
8	00 G 08	ABBREVIATIONS
9	00 G 09	PIPING SYMBOLS AND GENERAL MECHANICAL NOTES
10	00 G 10	HVAC SYMBOLS AND NOTES
11	00 G 11	GENERAL STRUCTURAL NOTES - 1
12	01 G 12	GENERAL STRUCTURAL NOTES - 2
13	00 G 13	ARCHITECTURAL SYMBOLS AND CODE ANALYSIS
14	00 G 15	CODE PLAN - HEADWORKS AND SOLIDS
15	00 G 16	CODE PLAN - SECONDARY TREATMENT
16	00 G 17	CODE PLAN - ADMIN AREA
17	00 G 18	CODE PLAN - MAINTENANCE AREA
18	00 G 19	CODE PLAN - COMMUNITY AREA
19	00 G 20	CODE PLAN - ELECTRICAL/GEN/BLOWERS BUILDING
20	00 G 21	EQUIPMENT SCHEDULE
21	00 G 22	STAGING PLAN
	CIVIL	
22	10 C 01	VICINITY PLAN AND GENERAL CIVIL NOTES
23	10 C 02	SITE DEMOLITION KEY PLAN
24	10 C 03	SITE DEMOLITION PLAN - 1
25	11 C 04	SITE DEMOLITION PLAN - 2
26	12 C 05	SUB-GRADE PREPARATION AT STRUCTURES - 1
27	13 C 06	SUB-GRADE PREPARATION AT STRUCTURES - 2
28	14 C 07	SUB-GRADE PREPARATION AT STRUCTURES - 3
29	10 C 08	SUB-GRADE PREPARATION AT STRUCTURES - 4
30	10 C 09	TEMP UTILITY RELOCATION
31	10 C 10	UTILITY RELOCATION DETAILS
32	10 C 11	EARLY CIVIL PACKAGE NOTES, STAGING AND SPECIAL DETAILS
33	10 C 12	EARLY CIVIL SHEET PILE PLAN -1
34	10 C 13	EARLY CIVIL SHEET PILE PLAN - 2
35	10 C 14	EARLY CIVIL SHEET PILE TIE-BACK AND DETAILS
36	10 C 15	EARLY CIVIL DETWATERING PLAN AND DETAILS
37	10 C 16	TRAFFIC CONTROL PLAN AND DETAILS
38	10 C 17	PAVING AND GRADING COORDINATE CONTROL DATA
39	10 C 18	SITE PAVING AND GRADING - 1
40	10 C 19	SITE PAVING AND GRADING - 2
41	10 C 20	SITE PAVING AND GRADING - 3
42	10 C 21	SITE PAVING AND GRADING - 4
43	10 C 22	YARD PIPING - 1
44	10 C 23	YARD PIPING - 2
45	10 C 24	YARD PIPING - 3
46	10 C 25	YARD PIPING - 4
47	10 C 26	PLANT DRAIN AND STORM DRAIN SCHEMATICS
48	10 C 27	MISCELLANEOUS YARD SECTIONS AND DETAILS - 1
49	10 C 28	MISCELLANEOUS YARD SECTIONS AND DETAILS - 2
50	10 C 29	MISCELLANEOUS YARD SECTIONS AND DETAILS - 3
51	10 C 30	MISCELLANEOUS YARD SECTIONS AND DETAILS - 3
52	10 C 31	ENTRANCE GATES PLANS AND ELEVATIONS
53	10 C 32	ENTRANCE GATES SECTIONS AND DETAILS
54	10 C 33	TEMPORARY EROSION & SEDIMENT CONTROL PLAN
55	10 C 34	TEMPORARY EROSION & SEDIMENT CONTROL DETAILS - 1

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
56	10 C 35	TEMPORARY EROSION & SEDIMENT CONTROL DETAILS - 2
57	10 C 36	MISCELLANEOUS CIVIL DETAILS - 1
58	10 C 37	MISCELLANEOUS CIVIL DETAILS - 2
		SUPPORT FACILITIES STRUCTURAL
59	01 S 01	GENERAL NOTES
60	01 S 02	SCHEDULES
61	01 S 03	ADMIN/MNT/TRAINING - FRAMING PLANS - 1
62	01 S 04	ADMIN/MNT/TRAINING - FRAMING PLANS - 2
63	01 S 05	ADMIN/MNT/TRAINING - FRAMING PLANS - 3
64	01 S 06	ADMIN/MNT/TRAINING - FRAMING PLANS - 4
65	01 S 07	ADMIN/MNT/TRAINING - FRAMING PLANS - 5
66	01 S 08	ADMIN/MNT/TRAINING - FRAMING PLANS - 6
67	01 S 09	ADMIN/MNT/TRAINING - FRAMING PLANS - 7
68	01 S 10	ADMIN/MNT/TRAINING - FRAMING PLANS - 8
69	01 S 11	ADMIN/MNT/TRAINING - FRAMING PLANS - 9
70	01 S 12	ADMIN/MNT/TRAINING - FRAMING PLANS - 10
71	01 S 13	ELEVATIONS - 1
72	01 S 14	ELEVATIONS - 2
73	01 S 15	ELEVATIONS - 3
74	01 S 16	ELEVATIONS - 4
75	01 S 17	ELEVATIONS - 5
76	01 S 18	DETAILS - 1
77	01 S 19	DETAILS - 2
78	01 S 20	DETAILS - 3
79	01 S 21	DETAILS - 4
80	01 S 22	DETAILS - 5
81	01 S 23	DETAILS - 6
82	01 S 24	DETAILS - 7
83	01 S 25	DETAILS - 8
84	01 S 26	DETAILS - 9
85	01 S 27	DETAILS - 10
86	01 S 28	DETAILS - 11
		PROCESS STRUCTURAL
87	20 S 01	HEADWORKS BUILDING - BOTTOM PLAN
88	20 S 02	HEADWORKS BUILDING - TOP PLAN
89	20 S 03	HEADWORKS BUILDING - ROOF FRAMING PLAN
90	20 S 04	HEADWORKS BUILDING - SECTIONS - 1
91	20 S 05	HEADWORKS BUILDING - SECTIONS - 2
92	20 S 06	HEADWORKS BUILDING - SECTIONS AND DETAILS - 1
93	20 S 07	HEADWORKS BUILDING - SECTIONS AND DETAILS - 2
94	20 S 08	HEADWORKS BUILDING - SECTIONS AND DETAILS - 3
95	20 S 09	HEADWORKS BUILDING - SECTIONS AND DETAILS - 4
96	20 S 10	HEADWORKS BUILDING - SECTIONS AND DETAILS - 5
97	20 S 11	HEADWORKS BUILDING - SECTIONS AND DETAILS - 6
98	30 S 01	SECONDARY TREATMENT - BUILDING OVERVIEW PLAN
99	30 S 02	SECONDARY TREATMENT - BOTTOM PLAN - 1
100	30 S 03	SECONDARY TREATMENT - BOTTOM PLAN - 2
101	30 S 04	SECONDARY TREATMENT - BOTTOM PLAN - 3
102	30 S 05	SECONDARY TREATMENT - BOTTOM PLAN - 4
103	30 S 06	SECONDARY TREATMENT - TOP PLAN - 1
104	30 S 07	SECONDARY TREATMENT- TOP PLAN - 2
105	30 S 08	SECONDARY TREATMENT - TOP PLAN - 3
106	30 S 09	SECONDARY TREATMENT - TOP PLAN - 4
107	30 S 10	SECONDARY TREATMENT - ROOF FRAMING PLAN - 1
108	30 S 11	SECONDARY TREATMENT - ROOF FRAMING PLAN - 2
109	30 S 12	SECONDARY TREATMENT - ROOF FRAMING PLAN - 3 (AERATION BLOWER BLDG)

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
110	30 S 13	SECONDARY TREATMENT - SECTIONS - 1
111	30 S 14	SECONDARY TREATMENT - SECTIONS - 2
112	30 S 15	SECONDARY TREATMENT - SECTIONS - 3
113	30 S 16	SECONDARY TREATMENT - SECTIONS - 4
114	30 S 17	SECONDARY TREATMENT - SECTIONS - 5
115	30 S 18	SECONDARY TREATMENT - SECTIONS AND DETAILS (BASINS) - 1
116	30 S 19	SECONDARY TREATMENT - SECTIONS AND DETAILS (BASINS) - 2
117	30 S 20	SECONDARY TREATMENT - SECTIONS AND DETAILS (BASINS) - 3
118	30 S 21	SECONDARY TREATMENT - SECTIONS AND DETAILS (BASINS) - 1
119	30 S 22	SECONDARY TREATMENT - SECTIONS AND DETAILS (BASINS) - 2
120	30 S 23	SECONDARY TREATMENT - SECTIONS AND DETAILS (BASINS) - 3
121	30 S 24	SECONDARY TREATMENT - SECTIONS AND DETAILS (PROCESS BLDG) - 1
122	30 S 25	SECONDARY TREATMENT - SECTIONS AND DETAILS (PROCESS BLDG) - 2
123	30 S 26	SECONDARY TREATMENT - SECTIONS AND DETAILS (PROCESS BLDG) - 3
124	30 S 27	SECONDARY TREATMENT - SECTIONS AND DETAILS (PROCESS BLDG) - 4
125	30 S 28	SECONDARY TREATMENT - SECTIONS AND DETAILS (BLOWER BLDG) - 1
126	30 S 29	SECONDARY TREATMENT - SECTIONS AND DETAILS (BLOWER BLDG) - 2
127	30 S 30	SECONDARY TREATMENT - SECTIONS AND DETAILS (MISC) - 1
128	30 S 31	SECONDARY TREATMENT - SECTIONS AND DETAILS (MISC) - 2
129	50 S 01	SOLIDS HANDLING BUILDING - PLAN
130	50 S 02	SOLIDS HANDLING BUILDING - ROOF FRAMING PLAN
131	50 S 03	SOLIDS HANDLING BUILDING - SECTIONS
132	50 S 04	SOLIDS HANDLING BUILDING - DETAILS - 1
133	50 S 05	SOLIDS HANDLING BUILDING - DETAILS - 2
134	50 S 06	SOLIDS HANDLING BUILDING - DETAILS - 3
135	60 S 01	ODOR CONTROL FACILITY - BOTTOM PLAN
136	60 S 02	ODOR CONTROL FACILITY - TOP PLAN
137	60 S 03	ODOR CONTROL FACILITY - SECTIONS - 1
138	60 S 04	ODOR CONTROL FACILITY - SECTIONS - 2
139	60 S 05	ODOR CONTROL FACILITY - DETAILS - 1
140	60 S 06	ODOR CONTROL FACILITY - DETAILS - 2
141	70 S 01	ELECTRICAL/GENERATOR BUILDING - PLANS
142	70 S 02	ELECTRICAL/GENERATOR BUILDING - SECTIONS
143	70 S 03	ELECTRICAL/GENERATOR BUILDING - SECTIONS AND DETAILS
144	70 S 04	ELECTRICAL/GENERATOR BUILDING - DETAILS - 1
145	70 S 05	ELECTRICAL/GENERATOR BUILDING - DETAILS - 2
146	70 S 06	ELECTRICAL/GENERATOR BUILDING - DETAILS - 3
147	90 S 07	PERIMETER ROOF - PLANS
148	90 S 08	PERIMETER ROOF - SECTIONS
149	90 S 09	PERIMETER ROOF - SECTIONS AND DETAILS
150	90 S 10	PERIMETER ROOF - DETAILS
	SUPPORT FACILITIES MECHANICAL	
151	01 M 01	ADMIN/MNT/TRAINING - SCHEDULES
152	01 M 02	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - EAST (MAINTENANCE)
153	01 M 03	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - SOUTHWEST (ADMIN)
154	01 M 04	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - NORTH (LOBBY)
155	01 M 05	ADMIN/MNT/TRAINING - UPPER FLOOR PLAN - NORTH (TRAINING)
156	01 M 06	ADMIN/MNT/TRAINING - DETAILS - 1
157	01 M 07	ADMIN/MNT/TRAINING - DETAILS - 2
158	01 M 08	ADMIN/MNT/TRAINING - DETAILS - 3
	SUPPORT FACILITIES FIRE PROTECTION	
159	01 FP 01	ADMIN/MNT/TRAINING - SCHEDULES
160	01 FP 02	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - EAST (MAINTENANCE)
161	01 FP 03	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - SOUTHWEST (ADMIN)
162	01 FP 04	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - NORTH (LOBBY)
163	01 FP 05	ADMIN/MNT/TRAINING - UPPER FLOOR PLAN - NORTH (TRAINING)

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
164	01 FP 06	ADMIN/MNT/TRAINING - DETAILS - 1
165	01 FP 07	ADMIN/MNT/TRAINING - DETAILS - 2
166	01 FP 08	ADMIN/MNT/TRAINING - DETAILS - 3
	SUPPORT FACILITIES FIRE PLUMBING	
167	01 P 01	ADMIN/MNT/TRAINING - SCHEDULES
168	01 P 02	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - EAST (MAINTENANCE)
169	01 P 03	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - SOUTHWEST (ADMIN)
170	01 P 04	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - NORTH (LOBBY)
171	01 P 05	ADMIN/MNT/TRAINING - UPPER FLOOR PLAN - NORTH (TRAINING)
172	01 P 06	ADMIN/MNT/TRAINING - DETAILS - 1
173	01 P 07	ADMIN/MNT/TRAINING - DETAILS - 2
174	01 P 08	ADMIN/MNT/TRAINING - DETAILS - 3
	PROCESS MECHANICAL	
175	20 M 01	HEADWORKS BUILDING - BOTTOM PLAN
176	20 M 02	HEADWORKS BUILDING - TOP PLAN
177	20 M 03	HEADWORKS BUILDING - BOTTOM PARTIAL PLAN - 1
178	20 M 04	HEADWORKS BUILDING - BOTTOM PARTIAL PLAN - 2
179	20 M 05	HEADWORKS BUILDING - TOP PARTIAL PLAN - 1
180	20 M 06	HEADWORKS BUILDING - TOP PARTIAL PLAN - 2
181	20 M 07	HEADWORKS BUILDING - TOP PARTIAL PLAN - 3
182	20 M 08	HEADWORKS BUILDING - DRAINAGE PLAN
183	20 M 09	HEADWORKS BUILDING - VENTILATION PLAN
184	20 M 10	HEADWORKS BUILDING - SECTIONS AND DETAILS - 1
185	20 M 11	HEADWORKS BUILDING - SECTIONS AND DETAILS - 2
186	20 M 12	HEADWORKS BUILDING - SECTIONS AND DETAILS - 3
187	20 M 13	HEADWORKS BUILDING - SECTIONS AND DETAILS - 4
188	20 M 14	HEADWORKS BUILDING - SECTIONS AND DETAILS - 5
189	20 M 15	HEADWORKS BUILDING - SECTIONS AND DETAILS - 6
190	30 M 01	SECONDARY TREATMENT BUILDING - BOTTOM PLAN
191	30 M 02	SECONDARY TREATMENT BUILDING - TOP PLAN
192	30 M 03	SECONDARY TREATMENT BUILDING - SECTIONS
193	31 M 01	AERATION BASIN 1 - BOTTOM PLAN
194	31 M 02	AERATION BASIN 1 - TOP PLAN
195	31 M 03	AERATION BASIN 2 - BOTTOM PLAN
196	31 M 04	AERATION BASIN 2 - TOP PLAN
197	31 M 05	EQUALIZATION BASIN - BOTTOM PLAN
198	31 M 06	EQUALIZATION BASIN 1 - TOP PLAN
199	31 M 07	AERATION BASIN - SECTIONS AND DETAILS - 1
200	31 M 08	AERATION BASIN - SECTIONS AND DETAILS - 2
201	31 M 09	AERATION BASIN - SECTIONS AND DETAILS - 3
202	31 M 10	AERATION BASIN - SECTIONS AND DETAILS - 4
203	32 S 01	AERATION BLOWER BUILDING PLAN
204	32 S 02	AERATION BLOWER BUILDING SECTIONS - 1
205	32 S 03	AERATION BLOWER BUILDING SECTIONS - 2
206	32 S 04	AERATION BLOWER BUILDING DETAILS - 1
207	32 S 05	AERATION BLOWER BUILDING DETAILS - 2
208	32 S 06	AERATION BLOWER BUILDING DETAILS - 3
209	33 S 01	WAS STORAGE BOTTOM PLAN
210	33 S 02	WAS STORAGE TOP PLAN
211	33 S 03	WAS STORAGE SECTIONS AND DETAILS
212	34 M 01	MEMBRANE BIO-REACTOR - BOTTOM PLAN
213	34 M 02	MEMBRANE BIO-REACTOR - TOP PLAN
214	34 M 03	MEMBRANE BIO-REACTOR - SECTIONS AND DETAILS - 1
215	34 M 04	MEMBRANE BIO-REACTOR - SECTIONS AND DETAILS - 2
216	34 M 05	MEMBRANE BIO-REACTOR - SECTIONS AND DETAILS - 3
217	34 M 06	MEMBRANE BIO-REACTOR - DETAILS - 1

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
218	34 M 07	MEMBRANE BIO-REACTOR - DETAILS - 2
219	34 M 08	MEMBRANE BIO-REACTOR - DETAILS - 3
220	35 M 01	RAS/WAS PUMPING - PLAN
221	35 M 02	RAS/WAS PUMPING - SECTIONS
222	35 M 03	RAS/WAS PUMPING - DETAILS
223	36 M 01	UV DISINFECTION - PLAN
224	36 M 02	UV DISINFECTION - SECTIONS
225	36 M 03	UV DISINFECTION - DETAILS
226	37 M 01	CHEMICAL FACILITY - PLAN
227	37 M 02	CHEMICAL FACILITY - SECTIONS AND DETAILS - 1
228	37 M 03	CHEMICAL FACILITY - SECTIONS AND DETAILS - 2
234	37 M 04	CHEMICAL FACILITY - SECTIONS AND DETAILS - 3
230	38 M 01	UTILITY WATER SYSTEM - PLAN
231	38 M 02	UTILITY WATER SYSTEM - SECTIONS AND DETAILS - 1
232	38 M 03	UTILITY WATER SYSTEM - SECTIONS AND DETAILS - 2
233	40 M 01	PLANT DRAIN PUMP STATION - PLAN
234	40 M 02	PLANT DRAIN PUMP STATION - SECTIONS AND DETAILS
235	50 M 01	SOLIDS HANDLING BUILDING - BOTTOM PLAN
236	50 M 02	SOLIDS HANDLING BUILDING - TOP PLAN
237	51 M 03	TRUCK LOADOUT - PLANS
238	50 M 04	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS - 1
239	50 M 05	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS - 2
240	50 M 06	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS - 3
241	51 M 07	SOLIDS HANDLING BUILDING - SECTIONS AND DETAILS - 4
242	50 M 08	TRUCK LOADOUT - SECTION AND DETAILS
243	60 M 01	ODOR CONTROL FACILITY - PLAN
244	60 M 02	ODOR CONTROL FACILITY - SECTIONS AND DETAILS - 1
245	60 M 03	ODOR CONTROL FACILITY - SECTIONS AND DETAILS - 2
246	60 M 04	ODOR CONTROL FACILITY - SECTIONS AND DETAILS - 3
247	70 M 01	ELECTRICAL/GENERATOR BUILDING PLAN
248	70 M 02	ELECTRICAL/GENERATOR BUILDING SECTIONS
249	70 M 03	ELECTRICAL/GENERATOR BUILDING DETAILS - 2
250	70 M 04	ELECTRICAL/GENERATOR BUILDING DETAILS - 1
	ARCHITECTURAL	
251	00 A 01	OVERALL ARCHITECTURAL SITE PLAN/KEY PLAN
252	00 A 02	OVERALL ROOF PLAN
253	00 A 03	OVERALL ELEVATIONS
254	00 A 04	PERSPECTIVE RENDERING FROM SW
255	00 A 05	PERSPECTIVE RENDERING FROM WIB BUILDING
256	00 A 06	PERSPECTIVE RENDERING TO SOUTH ALONG CITY BEACH
257	00 A 07	OVERALL ROOF PLAN
258	00 A 08	OVERALL ELEVATIONS - 1
259	00 A 09	OVERALL ELEVATIONS - 2
260	00 A 10	RENDERED ELEVATION + WALL SECTION - Non Process #1
261	00 A 11	RENDERED ELEVATION + WALL SECTION - Non Process #2
262	00 A 12	RENDERED ELEVATION + WALL SECTION - West
263	00 A 13	RENDERED ELEVATION + WALL SECTION - North
264	00 A 14	RENDERED ELEVATION + WALL SECTION - East
265	00 A 15	RENDERED ELEVATION + WALL SECTION - South
266	00 A 16	RENDERED ELEVATION + WALL SECTION - Gate
267	00 A 17	OVERALL SECTIONS
268	00 A 18	VERTICAL ASSEMBLIES - 1
269	00 A 19	VERTICAL ASSEMBLIES - 2
270	00 A 20	HORIZONTAL ASSEMBLIES - 1
271	00 A 21	HORIZONTAL ASSEMBLIES - 2
272	00 A 22	WINDOW SCHEDULES
273	00 A 23	WINDOW TYPES

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
274	00 A 24	DOOR AND LOUVER SCHEDULES
275	00 A 25	DOOR AND LOUVER TYPES
276	00 A 26	F,F, & E AND FINISH SCHEDULES
277	00 A 27	ARCHITECTURAL DETAILS - DOORS
278	00 A 28	ARCHITECTURAL DETAILS - WINDOWS
279	00 A 29	ARCHITECTURAL DETAILS - LOUVERS AND OTHER PENETRATIONS
280	00 A 30	ARCHITECTURAL DETAILS - EXTERIOR - 1
281	00 A 31	ARCHITECTURAL DETAILS - EXTERIOR - 2
317	00 A 32	ARCHITECTURAL DETAILS - EXTERIOR - 3
283	00 A 33	ARCHITECTURAL DETAILS - EXTERIOR - 4
284	00 A 34	ARCHITECTURAL DETAILS - INTERIOR - 1
285	00 A 35	ARCHITECTURAL DETAILS - INTERIOR - 2
286	00 A 36	ARCHITECTURAL DETAILS - INTERIOR - 3
287	00 A 37	ARCHITECTURAL DETAILS - INTERIOR - 4
288	00 A 38	ARCHITECTURAL DETAILS - GATES AND SCREENING - ELEVATIONS - 1
289	00 A 39	ARCHITECTURAL DETAILS - GATES AND SCREENING - ELEVATIONS - 2
290	00 A 40	ARCHITECTURAL DETAILS - GATES AND SCREENING - DETAILS - 1
291	00 A 41	ARCHITECTURAL DETAILS - GATES AND SCREENING - DETAILS - 2
292	00 A 42	ARCHITECTURAL DETAILS - SIGNAGE
293	00 A 43	ARCHITECTURAL DETAILS - MISC - 1
313	00 A 44	ARCHITECTURAL DETAILS - MISC - 2
295	00 A 45	ARCHITECTURAL DETAILS - MISC - 3
296	00 A 46	ARCHITECTURAL DETAILS - MISC - 4
313	00 A 47	ARCHITECTURAL DETAILS - MISC - 5
298	00 A 48	ARCHITECTURAL DETAILS - MISC - 6
299	00 A 49	ARCHITECTURAL DETAILS - MISC - 7
300	00 A 50	ARCHITECTURAL DETAILS - MISC - 8
301	01 A 01	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - OVERALL/KEY PLAN
302	01 A 02	ADMIN/MNT/TRAINING - UPPER FLOOR PLAN - OVERALL/KEY PLAN
303	01 A 03	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - EAST (MAINTENANCE)
304	01 A 04	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - MEZZANINE (MAINTENANCE)
305	01 A 05	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - SOUTHWEST (ADMIN)
306	01 A 06	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - NORTH (LOBBY AND STAIR)
307	01 A 07	ADMIN/MNT/TRAINING - UPPER FLOOR PLAN - NORTH (TRAINING FACILITY)
308	01 A 08	ADMIN/MNT/TRAINING - RCOF PLAN
309	01 A 09	ADMIN/MNT/TRAINING - LOWER RCP - EAST (MAINTENANCE)
310	01 A 10	ADMIN/MNT/TRAINING - LOWER RCP - SOUTHWEST (ADMIN)
311	01 A 11	ADMIN/MNT/TRAINING - LOWER RCP - NORTH (LOBBY AND STAIR)
312	01 A 12	ADMIN/MNT/TRAINING - UPPER RCP - NORTH (TRAINING FACILITY)
313	01 A 13	ADMIN/MNT/TRAINING - LOWER FF&E PLAN - EAST (MAINTENANCE)
314	01 A 14	ADMIN/MNT/TRAINING - LOWER FF&E PLAN - SOUTHWEST (ADMIN)
315	01 A 15	ADMIN/MNT/TRAINING - LOWER FF&E PLAN - NORTH (LOBBY AND STAIR)
316	01 A 16	ADMIN/MNT/TRAINING - UPPER FF&E PLAN - NORTH (TRAINING FACILITY)
317	01 A 17	ADMIN/MNT/TRAINING - ELEVATIONS - SOUTH X 2 (@ 1/4" SCALE)
318	01 A 18	ADMIN/MNT/TRAINING - ELEVATIONS - WEST X 2 (@ 1/4" SCALE)
319	01 A 19	ADMIN/MNT/TRAINING - ELEVATIONS - NORTH X 2 (@ 1/4" SCALE)
320	01 A 20	ADMIN/MNT/TRAINING - ELEVATIONS - EAST X 2 (@ 1/4" SCALE)
321	01 A 21	ADMIN/MNT/TRAINING - BUILDING SECTIONS - 1
322	01 A 22	ADMIN/MNT/TRAINING - BUILDING SECTIONS - 2
323	01 A 23	ADMIN/MNT/TRAINING - BUILDING SECTIONS - 3
324	01 A 24	ADMIN/MNT/TRAINING - BUILDING SECTIONS - 4
325	01 A 25	ADMIN/MNT/TRAINING - STAIR SECTIONS - 1
326	01 A 26	ADMIN/MNT/TRAINING - STAIR SECTIONS - 2
327	01 A 27	ADMIN/MNT/TRAINING - WALL SECTIONS - 3
328	01 A 28	ADMIN/MNT/TRAINING - WALL SECTIONS - 4
329	01 A 29	ADMIN/MNT/TRAINING - ENLARGED PLANS - LAB, BREAK ROOM, CONFERENCE ROOM
330	01 A 30	ADMIN/MNT/TRAINING - ENLARGED PLANS - LOCKER ROOMS, RESTROOMS
331	01 A 31	ADMIN/MNT/TRAINING - ENLARGED PLANS - TRAINING FACILITY SUPPORT AREAS - KITCHEN, ETC

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
332	01 A 32	ADMIN/MNT/TRAINING - INTERIOR ELEVATIONS - 1
333	01 A 33	ADMIN/MNT/TRAINING - INTERIOR ELEVATIONS - 2
334	01 A 34	ADMIN/MNT/TRAINING - INTERIOR ELEVATIONS - 3
335	20 A 01	HEADWORKS BUILDING - FLOOR PLAN
336	20 A 02	HEADWORKS BUILDING - ROOF PLAN
337	20 A 03	HEADWORKS BUILDING - RCP
338	20 A 04	HEADWORKS BUILDING - ELEVATIONS - 1
339	20 A 05	HEADWORKS BUILDING - ELEVATIONS - 2
340	20 A 06	HEADWORKS BUILDING - BUILDING SECTIONS
341	30 A 01	SECONDARY TREATMENT BUILDING - LOWER FLOOR PLAN
342	30 A 02	SECONDARY TREATMENT BUILDING - UPPER FLOOR PLAN
343	30 A 03	SECONDARY TREATMENT BUILDING - ROOF PLAN
344	30 A 04	SECONDARY TREATMENT BUILDING - LOWER FLOOR RCP
345	30 A 05	SECONDARY TREATMENT BUILDING - UPPER FLOOR RCP
346	30 A 06	SECONDARY TREATMENT BUILDING - ELEVATIONS - 1
347	30 A 07	SECONDARY TREATMENT BUILDING - ELEVATIONS - 2
348	30 A 08	SECONDARY TREATMENT BUILDING - BUILDING SECTIONS - 1
349	30 A 09	SECONDARY TREATMENT BUILDING - BUILDING SECTIONS - 2
350	32 A 01	AERATION BLOWER BUILDING - FLOOR PLAN
351	32 A 02	AERATION BLOWER BUILDING - ROOF PLAN
352	32 A 03	AERATION BLOWER BUILDING - RCP
353	32 A 04	AERATION BLOWER BUILDING - ELEVATIONS
354	32 A 05	AERATION BLOWER BUILDING - BUILDING SECTIONS
355	50 A 01	SOLIDS HANDLING - LOWER FLOOR PLAN
356	50 A 02	SOLIDS HANDLING - UPPER FLOOR PLAN
357	50 A 03	SOLIDS HANDLING - LOWER FLOOR RCP
358	50 A 04	SOLIDS HANDLING - UPPER FLOOR RCP
359	50 A 05	SOLIDS HANDLING - ROOF PLAN
360	50 A 06	SOLIDS HANDLING - ELEVATIONS - 1
361	50 A 07	SOLIDS HANDLING - ELEVATIONS - 2
362	50 A 08	SOLIDS HANDLING - SECTIONS
363	50 A 09	SOLIDS HANDLING - ENLARGED VIEWS/STAIR SECTION
364	70 A 01	ELECTRICAL BUILDING - FLOOR PLAN
365	70 A 02	ELECTRICAL BUILDING - ROOF PLAN
366	70 A 03	ELECTRICAL BUILDING - RCP
367	70 A 04	ELECTRICAL BUILDING - ELEVATIONS - 1
368	70 A 05	ELECTRICAL BUILDING - ELEVATIONS - 2
369	70 A 06	ELECTRICAL BUILDING - BUILDING SECTIONS
	LANDSCAPING	
370	05 L 01	MATERIALS PLAN FOR SITE HARDSCAPE AND PLANT SIDE ROW
371	05 L 02	LAYOUT PLAN FOR SITE HARDSCAPE AND PLANT SIDE ROW
372	05 L 03	PLANTING PLAN
373	05 L 04	IRRIGATION PLAN
374	05 L 05	SITE DETAILS - 1
375	05 L 06	SITE DETAILS - 2
376	05 L 07	SITE DETAILS - 3
377	05 L 08	SITE DETAILS - 4
378	05 L 09	SITE DETAILS - 5
379	05 L 10	SITE DETAILS - 6
380	06 L 11	PLANTING DETAILS - 1
381	07 L 12	PLANTING DETAILS - 2
382	08 L 13	IRRIGATION DETAILS - 1
383	09 L 14	IRRIGATION DETAILS - 2

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
	SUPPORT FACILITIES LIGHTING	
384	01 E 01	ADMIN/MNT/TRAINING - SCHEDULES
385	01 E 02	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - EAST (MAINTENANCE)
386	01 E 03	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - SOUTHWEST (ADMIN)
387	01 E 04	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - NORTH (LOBBY)
388	01 E 05	ADMIN/MNT/TRAINING - UPPER FLOOR PLAN - NORTH (TRAINING)
389	01 E 06	ADMIN/MNT/TRAINING - DETAILS - 1
390	01 E 07	ADMIN/MNT/TRAINING - DETAILS - 2
391	01 E 08	ADMIN/MNT/TRAINING - DETAILS - 3
	SUPPORT FACILITIES ELECTRICAL (POWER)	
392	01 E 09	ADMIN/MNT/TRAINING - SCHEDULES
393	01 E 10	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - EAST (MAINTENANCE)
394	01 E 11	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - SOUTHWEST (ADMIN)
395	01 E 12	ADMIN/MNT/TRAINING - LOWER FLOOR PLAN - NORTH (LOBBY)
396	01 E 13	ADMIN/MNT/TRAINING - UPPER FLOOR PLAN - NORTH (TRAINING)
397	01 E 14	ADMIN/MNT/TRAINING - DETAILS - 1
398	01 E 15	ADMIN/MNT/TRAINING - DETAILS - 2
399	01 E 16	ADMIN/MNT/TRAINING - DETAILS - 3
	PROCESS ELECTRICAL	
400	00 GE 01	LEGENDS
401	00 GE 02	ABBREVIATIONS
402	00 E 01	OVERALL SITE PLAN
403	00 E 02	SITE PLAN DETAIL - 1
404	00 E 03	SITE PLAN DETAIL - 2
405	00 E 04	SITE PLAN DETAIL - 3
406	00 E 05	SITE PLAN DETAIL - 4
407	00 E 10	DUCT BANK SECTIONS - 1
408	00 E 11	DUCT BANK SECTIONS - 2
409	00 E 20	OVERALL ONE-LINE
410	00 E 21	SWGR-MAIN ELEVATION
411	00 E 22	SWGR-MAIN ONE-LINE - 1
412	00 E 23	SWGR-MAIN ONE-LINE - 2
413	00 E 30	SWGR-HWSH ELEVATION
414	00 E 31	SWGR-HWSH ONE-LINE
415	00 E 32	MCC-HW ELEVATION
416	00 E 33	MCC-HW ONE-LINE - 1
417	00 E 34	MCC-HW ONE-LINE - 2
418	00 E 35	MCC-SH ELEVATION
419	00 E 36	MCC-SH ONE-LINE
420	00 E 40	SWGR-ABRW ELEVATION
421	00 E 41	SWGR-ABRW ONE-LINE
422	00 E 42	MCC-AB ELEVATION
423	00 E 43	MCC-AB ONE-LINE
424	00 E 44	MCC-RW ELEVATION
425	00 E 45	MCC-RW ONE-LINE
426	00 E 50	SWGR-MUE ELEVATION
427	00 E 51	SWGR-MUE ONE-LINE
428	00 E 52	MCC-MBRUV ELEVATION
429	00 E 53	MCC-MBRUV ONE-LINE - 1
430	00 E 54	MCC-MBRUV ONE-LINE - 2
431	00 E 55	MCC-EB ELEVATION
432	00 E 56	MCC-EB ONE-LINE
433	00 E 60	MCC-HW PANELBOARD SCHEDULES
434	00 E 61	MCC-SH PANELBOARD SCHEDULES
435	00 E 62	MCC-AB PANELBOARD SCHEDULES
436	00 E 63	MSS-RW PANELBOARD SCHEDULES

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
437	00 E 64	MCC-MBUV PANELBOARD SCHEDULES
438	00 E 65	MCC-EB PANELBOARD SCHEDULES
439	00 E 66	MAINTENANCE PANELBOARD SCHEDULES
440	00 E 67	ADMINISTRATION PANELBOARD SCHEDULES
441	00 E 70	LUMINAIRE SCHEDULE
442	00 E 71	MANHOLE & HANDHOLE SCHEDULE
449	00 E 72	DISCONNECT SCHEDULE
444	01 E 10	ADMINISTRATION BUILDING - BOTTOM PLAN
445	01 E 11	ADMINISTRATION BUILDING - TOP PLAN
446	01 E 30	ADMINISTRATION BUILDING - GROUNDING PLAN
448	01 E 31	MAINTENANCE BUILDING - ELECTRICAL & GROUNDING PLAN
448	01 E 40	ADMINISTRATION BUILDING - HVAC
449	01 E 41	MAINTENANCE BUILDING - HVAC
450	20 E 10	HEADWORKS BUILDING - BOTTOM PLAN
451	20 E 11	HEADWORKS BUILDING - TOP PLAN
452	20 E 12	HEADWORKS BUILDING - ELECTRICAL AND CONTROL ROOM PLAN
453	20 E 20	HEADWORKS BUILDING - LIGHTING & RECEPTACLE BOTTOM PLAN
454	20 E 21	HEADWORKS BUILDING - LIGHTING & RECEPTACLE TOP PLAN
455	20 E 30	HEADWORKS BUILDING - GROUNDING PLAN
456	20 E 40	HEADWORKS BUILDING - HVAC PLAN
457	30 E 01	SECONDARY TREATMENT BUILDING - OVERALL BOTTOM PLAN
458	30 E 02	SECONDARY TREATMENT BUILDING - OVERALL TOP PLAN
459	30 E 10	SECONDARY TREATMENT BUILDING - ELECTRICAL BOTTOM PLAN - I
460	30 E 11	SECONDARY TREATMENT BUILDING - BOTTOM PARTIAL PLAN - 1
461	30 E 12	SECONDARY TREATMENT BUILDING - BOTTOM PARTIAL PLAN - 2
462	30 E 13	SECONDARY TREATMENT BUILDING - BOTTOM PARTIAL PLAN - 3
463	30 E 15	SECONDARY TREATMENT BUILDING - TOP PARTIAL PLAN - 1
464	30 E 16	SECONDARY TREATMENT BUILDING - TOP PARTIAL PLAN - 2
465	30 E 17	SECONDARY TREATMENT BUILDING - TOP PARTIAL PLAN - 3
466	30 E 18	SECONDARY TREATMENT BUILDING - TOP PARTIAL PLAN - 4
467	30 E 20	SECONDARY TREATMENT BUILDING - LIGHTING & RECEPTACLE BOTTOM PLAN
468	30 E 21	SECONDARY TREATMENT BUILDING - LIGHTING & RECEPTACLE TOP PLAN
469	30 E 30	SECONDARY TREATMENT BUILDING - GROUNDING BOTTOM PLAN
470	30 E 31	SECONDARY TREATMENT BUILDING - GROUNDING TOP PLAN
471	30 E 40	SECONDARY TREATMENT BUILDING - HVAC BOTTOM PLAN
472	30 E 41	SECONDARY TREATMENT BUILDING - HVAC TOP PLAN
473	31 E 01	AERATION BASIN - OVERALL PLAN
474	31 E 10	AERATION BASIN - BASIN 1 PLAN - 1
475	31 E 11	AERATION BASIN - BASIN 1 PLAN - 2
476	31 E 20	AERATION BASIN - BASIN 2 PLAN - 1
477	31 E 21	AERATION BASIN - BASIN 2 PLAN - 2
478	31 E 30	AERATION BASIN - BASIN 3 PLAN - 1
479	31 E 31	AERATION BASIN BASIN 3 - PLAN - 2
480	32 E 01	BLOWER BUILDING - OVERALL PLAN
481	32 E 10	BLOWER BUILDING - PLAN - 1
482	32 E 11	BLOWER BUILDING - PLAN - 2
483	32 E 20	BLOWER BUILDING - LIGHTING & RECEPTACLE PLAN
484	32 E 30	BLOWER BUILDING - GROUNDING PLAN
485	32 E 40	BLOWER BUILDING - HVAC PLAN
486	40 E 10	PLANT DRAIN PUMP STATION - PLAN
487	40 E 20	PLANT DRAIN PUMP STATION - LIGHTING, RECEPTACLE, AND GROUNDING PLAN
488	50 E 01	SOLIDS HANDLING BUILDING - OVERALL PLAN
489	50 E 10	SOLIDS HANDLING BUILDING - PLAN - 1
490	50 E 11	SOLIDS HANDLING BUILDING - PLAN - 2
491	50 E 12	SOLIDS HANDLING BUILDING - ELECTRICAL AND CONTROL ROOM PLAN

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
492	50 E 20	SOLIDS HANDLING BUILDING - LIGHTING & RECEPTACLE PLAN
493	50 E 30	SOLIDS HANDLING BUILDING - GROUNDING PLAN
494	50 E 40	SOLIDS HANDLING BUILDING - HVAC PLAN
495	60 E 10	ODOR CONTROL - PLAN
496	60 E 20	ODOR CONTROL - LIGHTING, RECEPTACLE, & GROUNDING PLAN
497	70 E 01	MAIN ELECTRICAL BUILDING - OVERALL PLAN
498	70 E 10	MAIN ELECTRICAL BUILDING - CONTROL ROOM PLAN
499	70 E 11	MAIN ELECTRICAL BUILDING - ELECTRICAL ROOM PLAN - 1
500	70 E 12	MAIN ELECTRICAL BUILDING - ELECTRICAL ROOM PLAN - 2
501	70 E 13	MAIN ELECTRICAL BUILDING - GENERATOR AND TRANSFORMER PLAN
502	70 E 20	MAIN ELECTRICAL BUILDING - LIGHTING & RECEPTACLE PLAN - 1
503	70 E 21	MAIN ELECTRICAL BUILDING - LIGHTING AND RECEPTACLE PLAN - 2
504	70 E 30	MAIN ELECTRICAL BUILDING - GROUNDING PLAN - 1
505	70 E 31	MAIN ELECTRICAL BUILDING - GROUNDING PLAN - 2
506	70 E 40	MAIN ELECTRICAL BUILDING - HVAC PLAN
	INSTRUMENTATION	
507	00 GN 01	SYMBOLS AND ABBREVIATIONS - 1
508	00 GN 02	SYMBOLS AND ABBREVIATIONS - 2
509	00 GN 03	SYMBOLS AND ABBREVIATIONS - 3
510	00 GN 04	SYMBOLS AND ABBREVIATIONS - 4
511	00 GN 05	SCHEMATIC SYMBOLS
512	00 GN 06	EQUIPMENT TAGGING
513	00 N 20	PCM PANEL TYPE 1 TYPICAL ELEVATION
514	00 N 21	PCM PANEL TYPE 2 TYPICAL ELEVATION
530	00 N 22	NETWORK PANEL TYPICAL ELEVATION
516	00 N 23	SCADA NETWORK RACK TYPICAL ELEVATION
521	00 N 24	PCM AND NP PANEL TYPICAL WIRING DIAGRAM
518	00 N 30	CONTROL SYSTEM BLOCK DIAGRAM - 1
519	00 N 31	CONTROL SYSTEM BLOCK DIAGRAM - 2
520	00 N 40	CONTROL SYSTEM NETWORK ROUTING DIAGRAM - 1
521	00 N 41	CONTROL SYSTEM NETWORK ROUTING DIAGRAM - 2
522	00 N 60	INSTRUMENTATION CONTROL SCHEMATIC SYMBOLS
523	00 N 61	CONTROL SCHEMATICS - 1
524	00 N 62	CONTROL SCHEMATICS - 2
525	00 N 63	CONTROL SCHEMATICS - 3
526	00 N 64	CONTROL SCHEMATICS -4
527	00 N 65	CONTROL SCHEMATICS - 5
528	00 N 66	CONTROL SCHEMATICS - 6
529	00 N 67	CONTROL SCHEMATICS - 7
530	00 N 68	CONTROL SCHEMATICS - 8
531	00 N 69	CONTROL SCHEMATICS - 9
532	00 N 70	CONTROL SCHEMATICS - 10
537	01 N 01	ADMINISTRATION BUILDING - HVAC - 1
534	01 N 02	ADMINISTRATION BUILDING - HVAC - 2
535	01 N 03	MAINTENANCE BUILDING - HVAC - 1
536	20 N 01	COARSE SCREENING P&ID
537	20 N 02	INFLUENT PUMP STATION - 1
538	20 N 03	INFLUENT PUMP STATION - 2
539	20 N 04	GRIT REMOVAL - 1
540	20 N 05	GRIT REMOVAL - 2
541	20 N 06	GRIT REMOVAL - 3
542	20 N 07	FINE SCREENING - 1
543	20 N 08	FINE SCREENING - 2
544	20 N 09	PCM-HW CABINET AND NETWORK PANEL
545	20 N 10	HEADWORKS BUILDING HVAC - 1
546	20 N 11	HEADWORKS BUILDING HVAC - II

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
547	30 N 01	PCM-ST CABINET AND NETWORK PANEL
548	30 N 02	SECONDARY TREATMENT BUILDING - HVAC - 1
549	30 N 03	SECONDARY TREATMENT BUILDING - HVAC - 2
550	31 N 01	AERATION BASIN NO. 1 - 1
551	31 N 02	AERATION BASIN NO. 1 - 2
552	31 N 03	AERATION BASIN NO. 2 - 1
553	31 N 04	AERATION BASIN NO. 2 - 2
554	31 N 05	FLOW EQUALIZATION TANK - 1
555	31 N 06	FLOW EQUALIZATION TANK - 2
556	31 N 07	MIXED LIQUOR DISTRIBUTION CHANNEL
557	32 N 01	AERATION BLOWERS NOS. 1 AND 2
558	32 N 02	AERATION BLOWER NO. 3
559	33 N 01	WAS STORAGE
560	33 N 02	WAS BLOWER NO. 1
561	33 N 03	WAS BLOWER NO. 2
562	33 N 04	WAS TRANSFER PUMPS
563	34 N 01	MEMBRANE TRAIN 1 TANK
564	34 N 02	MEMBRANE TRAIN 2 TANK
565	34 N 03	MEMBRANE TRAIN 3 TANK
566	34 N 04	MEMBRANE TRAIN 4 TANK
567	34 N 05	MEMBRANE TRAIN 1 PERMEATE PUMP
568	34 N 06	MEMBRANE TRAIN 2 PERMEATE PUMP
569	34 N 07	MEMBRANE TRAIN 3 PERMEATE PUMP
570	34 N 08	MEMBRANE TRAIN 4 PERMEATE PUMP
571	34 N 09	MEMBRANE BLOWER 1
572	34 N 10	MEMBRANE BLOWER 2
573	34 N 11	MEMBRANE BLOWER 3
574	34 N 12	MEMBRANE BLOWER 4
575	34 N 13	MEMBRANE SYSTEM AIR COMPRESSORS
576	34 N 14	MEMBRANE SYSTEM TANK DRAIN PUMP STATION
577	34 N 15	MEMBRANE SYSTEM CITRIC ACID SYSTEM - 1
578	34 N 16	MEMBRANE SYSTEM CITRIC ACID SYSTEM - 2
579	34 N 17	MEMBRANE SYSTEM SODIUM HYPOCHLORITE SYSTEM - 1
580	34 N 18	MEMBRANE SYSTEM SODIUM HYPOCHLORITE SYSTEM - 2
581	34 N 19	PCM-TT CABINET AND NETWORK PANEL
582	35 N 01	WAS PUMPING
583	35 N 02	RAS PUMPING
584	36 N 01	UV TRAIN 1
585	36 N 02	UV TRAIN 2
586	36 N 03	UV TRAIN 3
587	38 N 01	EFFLUENT SYSTEM
588	38 N 02	UW PUMP STATION
589	40 N 01	PLANT DRAIN PUMP STATION
590	50 N 01	CENTRIFUGE NO. 1
591	50 N 02	CENTRIFUGE NO. 2
592	50 N 03	FEED HOPPER
593	50 N 04	BIOSOLIDS DRYER
594	50 N 05	CONVEYORS
595	50 N 06	THERMAL FLUID HEATER
596	50 N 07	VAPOR CONDENSER
597	50 N 08	POLYMER SYSTEM - 1
598	50 N 09	POLYMER SYSTEM - 2
599	50 N 10	PCM-SH CABINET AND NETWORK PANEL
600	50 N 11	SOLIDS HANDLING BUILDING HVAC - 1
601	60 N 01	ODOR TREATMENT SYSTEM NO. 1 - 1
602	60 N 02	ODOR TREATMENT SYSTEM NO. 1 - 2
603	60 N 03	ODOR TREATMENT SYSTEM NO. 2 - 1
604	60 N 04	ODOR TREATMENT SYSTEM CITRIC ACID SYSTEM

ATTACHMENT 5
OAK HARBOR WWTP
Final Design Drawing List

ANTICIPATED DESIGN DRAWING LIST

SHEET NO	DWG NO.	DRAWING
605	60 N 05	ODOR TREATMENT SYSTEM SODIUM HYPOCHLORITE SYSTEM
606	70 N 01	SWGR-MAIN MONITORING AND CONTROL
607	70 N 02	SWGR-HES MONITORING AND CONTROL
608	70 N 03	SWGR-ST MONITORING AND CONTROL
609	70 N 04	SWGR-TT MONITORING AND CONTROL
610	70 N 05	GENERATOR MONITORING AND CONTROL
611	70 N 06	LOAD BANK MONITORING AND CONTROL
612	80 N 01	FACILITY FIRE ALARM MONITORING
	TYPICAL DETAILS	
613	00 CT 01	CIVIL TYPICAL DETAILS
614	00 CT 02	CIVIL TYPICAL DETAILS
615	00 DT 01	CORROSION PROTECTION TYPICAL DETAILS
616	00 DT 02	CORROSION PROTECTION TYPICAL DETAILS
617	00 ET 01	ELECTRICAL TYPICAL DETAIL GROUNDING - EG
618	00 ET 02	ELECTRICALTYPICAL DETAIL GROUNDING - EG
619	00 ET 03	ELECTRICAL TYPICAL DETAIL LIGHTING - EL
620	00 ET 04	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
621	00 ET 05	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
622	00 ET 06	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
623	00 ET 07	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
624	00 ET 08	ELECTRICAL TYPICAL DETAIL MOUNTING - EM
625	00 ET 09	ELECTRICAL TYPICAL DETAIL NAMEPLATES - EN
626	00 ET 10	ELECTRICALTYPICAL DETAIL OPERATORS - EO
627	00 HT 01	HVAC TYPICAL DETAILS - 1
628	00 HT 02	HVAC TYPICAL DETAILS - 2
629	00 NT 01	INSTRUMENTATION TYPICAL DETAILS - 1
630	00 NT 02	INSTRUMENTATION TYPICAL DETAILS - 2
631	00 NT 03	INSTRUMENTATION TYPICAL DETAILS - 3
632	00 NT 04	INSTRUMENTATION TYPICAL DETAILS - 4
633	00 NT 05	INSTRUMENTATION TYPICAL DETAILS - 5
634	00 NT 06	INSTRUMENTATION TYPICAL DETAILS - 6
635	00 NT 07	INSTRUMENTATION TYPICAL DETAILS - 7
636	00 MT 01	MECHANICAL TYPICAL DETAILS - 1
637	00 MT 02	MECHANICAL TYPICAL DETAILS - 2
638	00 MT 03	MECHANICAL TYPICAL DETAILS - 3
639	00 PT 02	PIPING TYPICAL DETAILS - 1
640	00 PT 03	PIPING TYPICAL DETAILS - 2
641	00 PT 04	PIPING TYPICAL DETAILS - 3
642	00 PT 05	PIPING TYPICAL DETAILS - 4
643	00 PT 06	PIPING TYPICAL DETAILS - 5
644	00 PT 07	PIPING TYPICAL DETAILS - 6
645	00 PT 08	PIPING TYPICAL DETAILS - 7
646	00 PT 09	PIPING TYPICAL DETAILS - 8
647	00 PT 10	PIPING TYPICAL DETAILS - 9
648	00 ST 01	STRUCTURAL TYPICAL DETAILS - 1
649	00 ST 02	STRUCTURAL TYPICAL DETAILS - 2
650	00 ST 03	STRUCTURAL TYPICAL DETAILS - 3
651	00 ST 04	STRUCTURAL TYPICAL DETAILS - 4
652	00 ST 05	STRUCTURAL TYPICAL DETAILS - 5
653	00 ST 06	STRUCTURAL TYPICAL DETAILS - 6
654	00 ST 07	STRUCTURAL TYPICAL DETAILS - 7
655	00 ST 08	STRUCTURAL TYPICAL DETAILS - 8

Attachment 6
Oak Harbor Wastewater Treatment Plant
Technical Specifications

Name	Description
Division 1 - General Requirements	
01001	Introduction
01010	Summary of Work
01046	Control of Work
01060	Regulatory Agency and Utility Requirements
01101	Safety, Health and Emergency Response
01110.	Disputes Review Board
01115	Escrow Bid Documents
01116	Contract Document Language
01120	Project Partnering
01140	Work Restrictions
01201	Payment Procedures
01210	Allowances
01292	Schedule of Values
01312	Project Meetings
01322	Web Based Construction Document Management (EADOC)
01324A	Progress Schedules and Reports
01330	Submittal Procedures
01340	Photographic and Videographic Documentation
01350	Special Procedures
01410	Code Requirements
01424	Abbreviations
01450	Quality Control
01455	Special Tests and Inspections
01460	Contractor Quality Control Plan
01500	Temporary Facilities and Controls
01561	Biological and Cultural Resources Environmental Controls
01562	Dust Control
01570	Stormwater Pollution Prevention Plan
01571	Traffic Control
01600	Product Requirements
01610	Project Design Criteria
01612	Seismic Design Criteria
01614	Wind Design Criteria
01660	Testing, Training, and Commissioning
01710	Cleaning
01722	Field Engineering
01732	Cutting and Patching
01734	Work Within Public Right-of-Way
01740	Warranties and Bonds
01757	Disinfection
01759	Water Leakage Test for Concrete Structures
01770	Closeout Procedures
01782	Operation and Maintenance Data

Attachment 6
Oak Harbor Wastewater Treatment Plant
Technical Specifications

Name	Description
Division 2 - Site Construction	
02050	Soils and Aggregates for Earthwork
02084	Utility Structures
02200	Site Clearing
02222	Building Demolition
02240	Dewatering
02251	Stone Column Densification
02260	Excavation Support and Protection
02280	Subsurface Utility Engineering
02300	Earthwork
02312	Controlled Low Strength Material (CLSM)
02318	Trenching
02352	Geogrid Reinforcement for Interlocking Block Retaining Wall
02353	Geogrid Reinforcement For Pavement Subgrade
02372	Stone Slope Protection (Rip Rap)
02467A	Drilled Concrete Piers
02553	In Plant Temporary Bypass Pumping
02581	Precast Electrical Handholes and Electrical Manholes
02620	Filter Fabric
02621	Stabilization Fabric
02666	High Density Polyethylene Geomembrane Liners
02742A	Asphaltic Concrete Paving
02762	Pavement Markings
02772	Concrete Curbs, Gutters, and Sidewalks
02776	Precast Concrete Curbs
02820	Fences and Gates
02836	Interlocking Block Retaining Wall
02939	Seeding
Division 3 - Concrete	
03055	Epoxy Bonding Reinforcing Bars and All Thread Rods in Concrete
03071	Epoxies
03072	Epoxy Resin/Portland Cement Bonding Agent
03102	Concrete Formwork
03142	Bridge Falsework
03150	Concrete Accessories
03154	Hydrophilic Rubber Waterstop
03200	Concrete Reinforcing
03212	Reinforcing Bar Couplers
03214	Reinforcing Bar End Anchors
03300	Cast-In-Place Concrete
03302	Mass Concrete
03366	Tooled Concrete Finishes
03565	Basin Bottom Grout
03600	Grouting
03926	Structural Concrete Repair
03931	Epoxy Injection System

Attachment 6
Oak Harbor Wastewater Treatment Plant
Technical Specifications

Name	Description
Division 4 - Masonry	
04055	Epoxy Bonding Reinforcing Bars and All Thread Rods in Masonry
04090	Masonry Accessories
04100	Mortar and Masonry Grout
04220	Concrete Unit Masonry
Division 5 - Metals	
05120	Structural Steel
05140	Structural Aluminum
05216	Open Web Steel Joist Framing
05310	Steel Decking
05500	Metal Fabrications
Division 6 - Wood and Plastics	
06072	Preservative Pressure Treated Wood
06074	Fire Retardant Treated Wood
06076	Laminated Veneer Lumber
06100	Rough Carpentry
06174	Shop-Fabricated Wood Trusses
06200	Finish Carpentry
06400	Architectural Woodwork
06608	Fiberglass Reinforced Plastic
06611	Fiberglass Reinforced Plastic Fabrications
06616	Fiberglass Reinforced Plastic Handrail and Guardrail
Division 7 - Thermal and Moisture Protection	
07110	Dampproofing
07190	Water Repellents
07214	Batt Insulation
07220	Roof and Deck Insulation
07414	Metal Siding
07415	Standing Seam Sheet Metal Roofing
07600	Flashing and Sheet Metal
07840	Firestopping
07900	Joint Sealants
Division 8 - Doors and Windows	
08110	Hollow Metal Doors and Frames
08212	Flush Wood Doors
08332	Overhead Coiling Doors
08412	Aluminum Entrances and Storefronts
08550	Wood Windows
08710	Door Hardware
08800	Glazing

Attachment 6
Oak Harbor Wastewater Treatment Plant
Technical Specifications

Name	Description
Division 9 - Finishes	
09250	Gypsum Board
09310	Ceramic Tiling
09652	Resilient Base and Accessories
09656	Resilient Sheet Flooring
09714	Metal Faced Acoustical Panels
09910	Painting
09960	High-Performance Coatings
09974	Coating for Welded Steel Water Storage Tanks
Division 10 - Specialties	
10155	Metal Toilet Compartments
10290	Plastic Spike Bird Deterrent
10400	Signage
10500	Lockers
10520	Fire Protection Specialties
10810	Toilet Accessories
Division 11 - Equipment	
11212	Potable Water Storage and Booster System
11223A	Submerged Turbine Mixers
11242	Diaphragm-Type Metering Pumps
11245	Peristaltic Tube Metering Pumps
11246	Polymer Blending and Feed Equipment - Liquid
11287	Low-Pressure/High Output Ultraviolet Disinfection Systems
11293	Slide Gates
11294B	Heavy-Duty Fabricated Stainless Steel Slide Gates
11298B	Stop Plates
11312C	Horizontal Recessed Impeller Centrifugal Pumps
11312G	Submersible Large Capacity Centrifugal Pumps
11312I	Progressing Cavity Pumps
11312J	Submersible Sump Pumps
11312K	Medium Capacity Submersible Pumps
11312L	Horizontal Axial Flow Centrifugal Pumps
11317B	Submersible Mixers: Slow Speed
11322	Mechanically-Induced Vortex Grit Removal Equipment
11324	Free Vortex Grit System
11332A	Mechanical Bar Screens
11332C	Band Screens
11333A	Screenings Washer Compactor
11376A	Rotary-Lobe Aeration Blowers
11378A	Membrane Disk Fine Bubble Diffused Aeration System
11378B	Coarse Bubble Aeration System
11452	Residential Appliances
11510	Safety Equipment
11610	Fixed Laboratory Equipment
11620	Laboratory Fume Hoods
11635	Automatic Samplers

Attachment 6
Oak Harbor Wastewater Treatment Plant
Technical Specifications

Name	Description
Division 12 - Furnishings	
12346	Laboratory Work Surfaces
12349	Laboratory Service Fittings
12352	Laboratory Wood Casework
Division 13 - Special Construction	
13110	Water Storage Tank Cathodic Protection System
13112	Pipeline Corrosion Monitoring Facilities
13122	Metal Building System
13206A	Fiberglass Reinforced Plastic Aboveground Storage Tanks
13206F	Hydropneumatic Bladder Tank
13209A	Pressure Filter Vessel
13210	Welded Steel Tanks
13217	Plastic Liner for Concrete Structures
13446	Manual Actuators
13447	Electric Motorized Actuators
13920	Packaged Electric-Drive, Centrifugal Fire Pump System
13930	Wet Pipe Fire Extinguishing Systems
Division 14 - Conveying Systems	
14555	Shaftless Screw Conveyor System
14612	Davit Cranes
14624	Monorail Crane System
Division 15 - Mechanical	
15050	Common Work Results for Mechanical Equipment
15052	Common Work Results for General Piping
15053	Seismic Restraints for Piping
15054	Expansion Control for Piping
15061	Pipe Supports
15062	Preformed Channel Pipe Support System
15063	Non-Metallic Pipe Support System
15075	Equipment Identification
15076	Pipe Identification
15082	Piping Insulation
15084	Ductwork Insulation
15110	Common Work Results for Valves
15111	Ball Valves
15112	Butterfly Valves
15114	Check Valves
15115	Gate, Globe, and Angle Valves
15116	Plug Valves
15117	Specialty Valves
15118	Pressure Reducing and Pressure Relief Valves
15119	Air and Vacuum Relief Valves
15120	Piping Specialties
15121	Pipe Couplings
15122	Fire Hydrants
15125	Strainers and Filters

Name	Description
15128	Force Balanced Ductile Iron Ball-Type Flexible Expansion Joints
15130	Station Monitors
15210	Cast Iron Soil Pipe, ASTM A 74
15211	Ductile Iron Pipe, AWWA C151
15230	Plastic Piping and Tubing
15270	Steel Pipe-Galvanized and Black, ASTM A 53
15274	Plastic Tape Wrap For Pipe
15281	Copper Water Tube-Seamless, ASTM B 88
15286	Stainless Steel Pipe and Tubing
15293	Double Containment Piping
15400	Plumbing Fixtures and Equipment
15430	Emergency Eye/Face Wash and Shower Equipment
15732	Air Conditioning Units
15762	Heating Units
15812	Metal Ductwork
15814	Fiberglass Reinforced Plastic Ductwork
15815	Flexible Ductwork
15816	Duct for Corrosive Fume Exhaust
15820	Ductwork Accessories
15830	Fans
15852	Louvers
15936	Heating, Ventilating, and Air Conditioning Controls
15954	HVAC Systems Testing, Adjusting, and Balancing
15956	Piping Systems Testing
15958	Mechanical Equipment Testing
Division 16 - Electrical	
16050	Common Work Results for Electrical
16052	Hazardous Classified Area Construction
16060	Grounding and Bonding
16070	Hangers and Supports
16075	Electrical Identification
16123	600 Volt or Less Wires and Cables
16125	Fiber Optic Cable and Appurtenances
16130	Conduits
16133	Duct Banks
16134	Boxes
16136	Wireway
16140	Wiring Devices
16150	Low Voltage Wire Connections
16210	Utility Coordination
16222	Low Voltage Motors up to 500 Horsepower
16232	Single Diesel Fueled Engine Generator Above 200 KW
16240	Battery Systems
16245	Load Bank - Stationary Resistive
16262	Variable Frequency Drives 0.50 - 50 Horsepower
16264	Variable Frequency Drives 60 - 500 Horsepower
16272	Dry Type Transformers

Name	Description
16285	Surge Protective Devices
16290	Power Meters
16295	Protective Relays
16305	Electrical System Studies
16411	Disconnect Switches
16412	Low Voltage Molded Case Circuit Breakers
16414	Low Voltage Power Circuit Breakers
16422	Motor Starters
16430	Low Voltage Switchgear
16433	Service Entrance Automatic Transfer Switchgear
16444	Low Voltage Motor Control Centers
16445	Panelboards
16452	Busway
16494	Low Voltage Fuses
16500	Lighting
16670	Lightning Protection
16710	Fire Sprinkler Monitoring and Alarm System
16950	Field Electrical Acceptance Tests
16970	Lighting Acceptance Testing
Division 17 - Instrumentation and Control System	
17050	Common Work Results for Process Control and Instrumentation Systems
17100	Control Strategies
17101-03A	Specific Control Strategies - REW Storage Ponds
17101-04A	Specific Control Strategies - Plant Drain Pump Station
17101-04B	Specific Control Strategies - Storm Water Pump Station
17101-10	Specific Control Strategies - Headworks/Septage Receiving
17101-11	Specific Control Strategies - Odor Control Facility
17101-20	Specific Control Strategies - Oxidation Ditch
17101-21	Specific Control Strategies - Secondary Clarifiers
17101-23	Specific Control Strategies - Scum Pump Station
17101-28	Specific Control Strategies - Filter Influent Pump Station
17101-30	Specific Control Strategies - Tertiary Filters
17101-31	Specific Control Strategies - UV Facility
17101-32	Specific Control Strategies - Chemical Facility
17101-40	Specific Control Strategies - Effluent Pump Station
17101-50	Specific Control Strategies - Solids Storage Tanks, RAS/WAS
17101-51	Specific Control Strategies - Dewatering
17101-60	Specific Control Strategies - Potable Water
17201	Level Measurement - Switches
17206	Level Measurement - Ultrasonic
17208	Level Measurement - Radar Pulse Time of Flight (PTOF)
17301	Flow Measurement - Switches
17302	Flow Measurement - Magnetic Flowmeters
17316	Flow Measurement - Rotameters (Variable Area Flowmeters)
17401	Pressure/Vacuum Measurement - Diaphragm and Annular Seals
17402	Pressure/Vacuum Measurement - Instrument Valves
17403	Pressure/Vacuum Measurement - Switches

Attachment 6
Oak Harbor Wastewater Treatment Plant
Technical Specifications

Name	Description
17404	Pressure/Vacuum Measurement - Gauges
17405	Pressure/Vacuum Measurement - Direct
17406	Pressure/Vacuum Measurement - Differential
17407	Pressure Measurement - Submersible
17505	Analyzers - Residual Chlorine
17506	Analyzers - Dissolved Oxygen (DO)
17509	Analyzers - Turbidity
17515	Ultraviolet Intensity Meters
17516	Ultraviolet Transmittance Monitors
17601	Temperature Measurement - Temperature Switch
17602	Temperature Measurement - Temperature Gauge
17622	Weight Measurement - Strain Gauge
17710	Control Systems - Panels, Enclosures, and Panel Components
17712	Control Systems - Uninterruptible Power Supplies 10 kVA and Below
17713	Control Systems - SCADA Consoles
17720	Control Systems - Programmable Logic Controllers Hardware
17721	Control Systems - Human Machine Interface Hardware
17730	Control Systems - SCADA Computer Equipment
17733	Control Systems - Network Materials and Equipment
17740	Process Cameras Closed Television
17761	Control Systems - PLC Programming Software
17762	Control Systems - SCADA Software
17765	Control Systems - Human Machine Interface Software
17901	Schedules - Field Instruments
17903	Schedules - I/O List
17905	Schedules - SCADA List
17950	Testing, Calibration, and Commissioning

EXHIBIT D-3

City of Oak Harbor
Wastewater Treatment Plant Final Design & Permitting
Level of Effort Estimate
November 19, 2014

TASK 100 - PROJECT MANAGEMENT	$132,986
TASK 200 - NOT USED	$0
TASK 300 - PUBLIC PROCESS SUPPORT	$113,413
TASK 400 - WWTP FINAL DESIGN & PERMITTING	$3,701,276
TASK 500 - PROJECT DELIVERY COORDINATION	$25,425
TASK 600 - NOT USED	$0
CAROLLO FEE (12% of Carollo Cost)	$337,332
SUBCONSULTANT MARKUP (5% of Subconsultant Cost)	$58,100
TOTAL AUTHORIZED BUDGET	**$4,368,533**
TASK 700 - MANAGEMENT RESERVE (5% of Authorized Budget)	$218,427
TOTAL CONTRACT AMOUNT	**$4,586,959**

City of Oak Harbor
Wastewater Treatment Plant Final Design & Permitting
Level of Effort Estimate
November 19, 2014

WORK TASKS	Project Manager	QA/QC Team	Design Manager	Design Lead	Senior Engineer	Staff Engineer	Sr. CAD/ Graphics Tech.	CAD/ Graphics Tech.	WP/ Admin. Support	Carollo Hours	Carollo DL Cost	Carollo Indirect Cost	Carollo Expenses	Subtotal Carollo Cost	Subconsultant Cost								Total Cost
															ESA	EI	MWA + SMEP	Geo	GW	WE	Air Quality & Sound	HAI	
Direct Labor (DL) Rates	$88	$85	$74	$62	$58	$42	$40	$27	$27														
TASK 100 - PROJECT MANAGEMENT																							
Subtask 110 - Project Management Plan	16	0	8	0	0	0	0	0	8	32	$2,209	$4,198	$480	$6,887									$6,887
Subtask 120 - Project Monitoring and Reporting	312	0	48	0	0	0	0	0	48	408	$32,264	$61,302	$6,419	$99,985									$99,985
Subtask 130 - Project Management Meetings	72	0	24	0	0	0	0	0	12	108	$8,422	$16,001	$1,691	$26,114									$26,114
Task 100 Subtotal	400	0	80	0	0	0	0	0	68	548	$42,895	$81,501	$8,590	$132,986	$0	$0	$0	$0	$0	$0	$0	$0	$132,986
TASK 200 NOT USED																							
Task 200 Subtotal	0	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 300 - PUBLIC PROCESS SUPPORT																							
Subtask 340 - Public Meetings/Council Workshops	18	0	18	0	0	0	12	0	8	56	$3,606	$6,851	$821	$11,278									$11,278
Subtask 350 - Working Group Meetings	12	0	12	0	0	8	8	0	4	44	$2,708	$5,145	$636	$8,489		$6,500	$32,000		$25,000				$71,989
Subtask 360 - Council/Committee Meetings	16	0	0	0	0	0	0	0	8	24	$1,620	$3,078	$357	$5,056		$6,500							$11,556
Subtask 370 - Public/Stakeholder Product Development	14	0	0	0	0	0	16	0	8	38	$2,089	$3,969	$531	$6,590		$12,000							$18,590
Task 300 Subtotal	60	0	30	0	0	8	36	0	28	162	$10,023	$19,043	$2,347	$31,413	$0	$25,000	$32,000	$0	$25,000	$0	$0	$0	$113,413
TASK 400 - WWTP FINAL DESIGN & PERMITTING																							
Subtask 450 - Technical Team Meetings	3	0	73	87	0	132	0	0	0	295	$16,593	$31,527	$4,151	$52,271									$52,271
Subtask 471 - 60% Design	6	0	257	1,521	0	2,303	1,003	718	203	6,010	$275,600	$523,641	$80,086	$879,327			$296,500		$34,000		$10,000	$15,000	$1,234,827
Subtask 472 - 90% Design	6	0	257	1,521	0	2,303	1,129	807	407	6,429	$288,429	$548,015	$85,201	$921,644			$284,500	$35,000	$34,000		$10,000	$10,000	$1,295,144
Subtask 473 - Final Design	3	0	110	174	0	263	376	269	68	1,263	$54,333	$103,232	$16,571	$174,136			$210,000		$30,000		$10,000	$5,000	$429,136
Subtask 474 - QA/QC	12	1,260	37	174	0	263	0	0	0	1,745	$132,688	$252,107	$27,073	$411,868			$25,000		$10,000	$25,000			$471,868
Subtask 475 - Early Site Prep Package	8	12	16	0	0	60	0	24	12	132	$6,403	$12,166	$1,784	$20,354									$20,354
Subtask 476 - Solids Equipment Procurement	8	12	24	40	0	60	30	0	26	200	$10,398	$19,756	$2,754	$32,908									$32,908
Subtask 477 - Cost Estimate Development	8	16	16	40	0	160	0	0	8	248	$12,706	$24,141	$3,401	$40,247									$40,247
Subtask 480 - Permit Coordination	12	0	20	0	160	72	0	20	16	300	$15,794	$30,008	$4,145	$49,946	$34,500			$1,500					$85,946
Subtask 490 - Biosolids Management Plan	18	6	0	0	120	52	0	12	24	232	$12,196	$23,173	$3,204	$38,574									$38,574
Task 400 Subtotal	83	1,306	810	3,556	280	5,667	2,539	1,850	764	16,855	$825,140	$1,567,766	$228,370	$2,621,276	$34,500	$0	$816,000	$36,500	$108,000	$25,000	$30,000	$30,000	$3,701,276
TASK 500 - PROJECT DELIVERY COORDINATION																							
Subtask 510 - GC/CM Coordination	16	0	16	32	32	32	0	0	12	140	$8,083	$15,357	$1,986	$25,425									$25,425
Task 500 Subtotal	16	0	16	32	32	32	0	0	12	140	$8,083	$15,357	$1,986	$25,425	$0	$0	$0	$0	$0	$0	$0	$0	$25,425
TASK 600 - NOT USED																							
Task 600 Subtotal	0	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
SUBTOTAL AUTHORIZED BUDGET	559	1,306	936	3,588	312	5,707	2,575	1,850	872	17,705	$886,141	$1,683,668	$241,292	$2,811,101	$34,500	$25,000	$848,000	$36,500	$133,000	$25,000	$30,000	$30,000	$3,973,101
CAROLLO FEE (12% of Carollo Cost)																							$337,332
SUBCONSULTANT MARKUP (5% of Subconsultant Cost)															$1,725	$1,250	$42,400	$1,825	$6,650	$1,250	$1,500	$1,500	$58,100
TOTAL AUTHORIZED BUDGET																							$4,368,533
TASK 700 - MANAGEMENT RESERVE (5% of Authorized Budget)																							
Task 700 Subtotal																							$218,427
TOTAL CONTRACT AMOUNT																							$4,586,959

Consultant Agreement Amendment Number 9	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4500	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amendments 1-5) 8549A.10 (Amendment 6,7,8,9)	Execution Date 09/16/10	Completion Date (Prior) December 2014
Project Title: Engineering, Facilities Plan and Preliminary Design	New Maximum Amount Payable $ 3,320,429	
Description of Work: This Amendment re-allocates remaining budget between existing and new tasks, and authorizes Management Reserve budget to allow the Design Team to revise facilities for City-only flows (no Navy), and to work with the City's GC/CM during preliminary design of the revised facilities.		

The City of Oak Harbor desires to supplement the agreement entered into with Carollo Engineers and executed on 09/16/10 and identified as Preliminary Engineering and Facilities Plan.

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:

SCOPE OF WORK is hereby amended to add the following:
The existing authorized Scope of Services will remain open and will be completed for the authorized budget. Line item budgets will be re-allocated between new and existing tasks, with revised tasks focused on delivering preliminary design using General Contractor/Construction Manager (GC/CM) methodology. Through this Amendment and as detailed by Exhibit D-3, Carollo will: 1) revise the size and layout of new facilities to account for City only flows (no flows from the US Navy); 2) coordinate with the City's GC/CM during the preliminary design phase; and 3) modify field exploration services to collect geotechnical information needed to complete preliminary design.

SCOPE OF WORK is hereby changed and supplemented with the following:
Unused budget (and associated Consultant activities) anticipated to be spent on Task 300 Public Process Support and Task 600 Outfall Design will be reallocated to Subtask 740 Resize WWTP for City Only and Subtask 750 GC/CM Preliminary Design Coordination. Following reallocation of budget, Consultant will complete services necessary to support public process through the Preliminary Design Phase (through December 2014) and will deliver the outfall design and bid-phase services as originally proposed. Additionally, budget Authorized by Amendment 8 to complete pump testing under Subtask 920 ($22,788), will be reallocated to existing authorized tasks described in Amendment 8 Exhibit B2, and used to: 1) drill six (6) additional borings on the site; 2) estimate the permeability of subsurface till layers; 3) include additional information into a geotechnical report; 4) coordinate with the design and GC/CM teams throughout preliminary design phase to finalize subsurface design assumptions and methods.

PROJECT COMPLETION DATE AMENDED TO: December 2014.
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum total contract value of $3,320,429 does not change. The management reserve fund has been reduced by $20,804 to complete the additional services described in Amendment 9. Exhibit D-3 summarizes the level of effort associated with these additional services. Exhibit D-4 summarizes budget reallocation needed to complete the preliminary design phase as modified by Amendment 9 within the maximum total contract value.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian R. Matson, Senior Vice President

Consultant Signature

By: Scott Dudley, Mayor

Approving Authority Signature

9/23/14
Date

pw //Carollo/Documents/Client/WA/Oak Harbor/8549A10/Project Management/Contracts/Oak Harbor Amendment 9.docx

City of Oak Harbor
Wastewater Treatment Plant Preliminary Design
Amendment 9 Carollo Level of Effort Estimate
September 2, 2014

EXHIBIT D-3

WORK TASKS	Project Manager	QA/QC Team	Design Manager	Senior Engineer	Discipline Engineer	Staff Engineer	Sr. CAD/ Graphics Tech.	CAD/ Graphics Tech.	WP/ Admin. Support	Carollo Hours	Carollo DL Cost	Carollo Indirect Cost	Carollo Expenses	Subtotal Carollo Cost	Total Cost
Direct Labor (DL) Rates	$67	$67	$69	$55	$58	$40	$38	$25	$25						
TASK 780 - MANAGEMENT RESERVE AUTHORIZATION															
Subtask 740 - Re-use WWTP for City-Only	4	8	8	16	12	16		16		80	$4,208	$7,995	$1,044	$13,246	$13,246
Subtask 750 - GC/CM Preliminary Design Coordination	40		80	32	68	120	40			380	$21,042	$39,980	$5,020	$66,043	$66,043
Task 780 Subtotal	44	8	88	48	80	136	40	16	0	460	$4,208	$7,995	$1,044	$13,246	$79,289
SUBTOTAL AUTHORIZED BUDGET	44	8	88	48	80	136	40	16	0	460	4,208	$7,995	$1,044	$13,246	$79,289
CAROLLO FEE (12% of Carollo Cost for Task 780)															$9,515
SUBCONSULTANT MARKUP (5% of Subconsultant Cost)															$0
TOTAL AUTHORIZED BUDGET															$88,804

City of Oak Harbor
Wastewater Treatment Plant Preliminary Design
Budget Distribution By Task Following Amendment 9
September 2, 2014

EXHIBIT D-4

Task	Original Budget Total $	Expended Thru 6/14 Total $	Remaining Pre-Amend 9 Total $	Re-Allocated Budget Total $	Remaining Post-Amend 9 Total $	Notes
100 Project Management	$69,978	$43,937	$26,041	$69,978	$26,041	No change to ongoing services through pre-design.
200 Value Engineering Support	$293,117	$300,105	($6,988)	$300,105	$0	Task complete.
300 Public Process Support	$202,510	$74,671	$127,839	$142,022	$67,351	Reduced effort required to achieve site, Navy participation, and GC/CM decisions. Consultant will attend meetings and/or workshops as needed during duration of pre-design.
400 WWTP Preliminary Design	$968,491	$390,071	$578,420	$968,491	$578,420	No change to ongoing services through pre-design.
500 Project Delivery Analysis	$31,606	$37,106	($5,500)	$37,106	$0	Task complete.
600 Outfall Design	$274,318	$232,927	$41,391	$254,318	$21,391	No change to ongoing services through pre-design.
700 Amendment 9	$0	$0	$0	$79,289	$79,289	Re-size treatment facilities for City-only flows, up to xx hours of GC/CM coordination.
Fee	$159,152	$93,899	$65,253	$168,667	$74,768	Increased to reflect added scope ($20,804 Management Reserve authorization)
Total Pre-design	$1,999,172	$1,172,716	$826,456	$2,019,976	$847,260	
Total Contract	$3,320,429			$3,320,429		
Mgmt. Reserve Balance	$24,342			$3,538		

Consultant Agreement Amendment Number 8	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4500	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amendments 1-5) 8549A.10 (Amendment 6,7,8)	Execution Date 09/16/10	Completion Date (Prior) April 2014
Project Title: Engineering, Facilities Plan and Preliminary Design	New Maximum Amount Payable $ 3,320,429	
Description of Work: This phase of the work includes additional field work and structural/code assessment, assistance with GC/CM procurement, and purchase of a field camera (to be installed by others) for site monitoring throughout the project. This amendment also extends the completion date to December 2014.		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers
and executed on 09/16/10 and identified as Preliminary Engineering and Facilities Plan.

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:

SCOPE OF WORK is hereby amended to add the following:
The existing authorized Scope of Services will remain open and will be completed for the authorized budget. Through this amendment, Carollo will: 1) complete a preliminary structural and code assessment of the Whidbey Island Bank property (Exhibit B1); 2) conduct additional pump testing with authorization by the City (Exhibit B2, Task 400); 3) purchase a CCTV camera for installation at the proposed WWTP site (Exhibit B3); and 4) provide assistance for GC/CM procurement (Exhibit B4).

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: December 2014.

TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:

The maximum total contract value of $3,320,429 does not change. The management reserve fund has been reduced by $69,367 to complete the additional services described in Amendment 8. Exhibit D-3 summarizes the level of effort associated with these additional services.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian R. Matson, Senior Vice President

Consultant Signature

By: Scott Dudley, Mayor

Approving Authority Signature

3/17/14
Date

TASK ORDER NO. 1

CAROLLO ENGINEERS, INC.

AND

ROBERTS ENGINEERING

This Task Order is issued by the ENGINEER and accepted by the SUBCONSULTANT pursuant to the mutual promises, covenants and conditions contained in the Agreement between the above named parties dated the 7 day of February, 2014, in connection with:

City of Oak Harbor
Preliminary Engineering and Facilities Plan

PURPOSE

The City of Oak Harbor (OWNER) is considering purchase of the former Whidbey Island Bank building. SUBCONSULTANT will assist the ENGINEER in evaluating the structural condition and potential future use of this building. Currently, the building is categorized for use as an Occupancy Group B under the 2012 Edition of the International Building Code. This evaluation includes the following activities:

- Gravity Load Capacity Assessment
- FEMA Seismic Rehabilitation Cost Estimate Development

These activities will provide the OWNER with information to assist in addressing the following questions:

1. What potential issues and costs are associated with maintaining the Group B occupancy of both floors?
2. What potential issues and costs are associated with changing the occupancy of the first floor?
3. What potential issues and costs are associated with changing the occupancy of both floors?

SUBCONSULTANT'S SERVICES

SUBCONSULTANT shall provide services to ENGINEER as described herein:

Task 1 – Gravity Load Capacity Assessment

Based on information provided by the OWNER, SUBCONSULTANT will perform an assessment of the gravity load capacity of representative portions of the building to determine whether they have adequate capacity to support the gravity load demands of its current occupancy. This assessment will be limited to representative portions of the building for which we have reliable "as built" construction information, including but not limited to species and grades of lumber and glulam beams, grades of steel and welds used in steel fabrications, concrete, masonry and reinforcing steel properties and allowable soil bearing capacities. Where exact information is not

available, assumptions may be made based on the best information available. The report will also discuss improvements that could be implemented should the OWNER choose to increase the gravity load demands placed on structural members of the building.

Task 2 – FEMA Seismic Rehabilitation Cost Estimate Development

Section 3408 of the International Building Code 2012 edition, requires that a change in the occupancy classification (use) of the existing building will require the building to be "made to comply" with the current requirements of the building code, including seismic improvements as described in Section 3408.4 Seismic. The degree to which the building need comply with the code is subject to the determination of the building official. A FEMA 156 Seismic Rehabilitation Cost Estimate will be developed to provide a range of potential seismic rehabilitation costs expected if the occupancy classification (use) is changed.

The FEMA 156 cost estimate represents the mean structural costs, based on the statistical analysis of 2088 seismic rehabilitation projects, which are directly attributable to the seismic structural strengthening of the building.

SUBCONSULTANT will perform the following services as part of Task 2:

- Develop FEMA Seismic Rehabilitation Cost Estimate based on the FEMA 156 cost estimate previously prepared.

Assumptions:

- Estimate does not include the cost of removing or replacing architectural finishes or costs associated with code required upgrades to gravity load carrying systems, electrical, mechanical or accessibility systems.

Deliverables:

- FEMA Seismic Rehabilitation Cost Estimate

Task 3 – Summary Report Development

Following completion of Task 1 and 2, the SUBCONSULTANT shall prepare a Draft Summary Report outlining the results of the SUBCONSULTANT's analyses. The Draft Summary Report will summarize 1) the apparent structural adequacy of the building to support the expected gravity loads without an increase of gravity load demands; 2) the estimated costs range for a seismic upgrade should a change of use or occupancy trigger such a requirement.

Following a review by ENGINEER and OWNER, incorporate comments and prepare a Final Summary Report of findings.

Deliverables:

- Draft Summary Report in PDF and native (MS Word) format
- Final Summary Report in PDF and native (MS Word) format

TIME OF PERFORMANCE

SUBCONSULTANT shall provide the services described above in a timely manner on or before, February 28, 2014.

PAYMENT

SUBCONSULTANT shall bill ENGINEER monthly indicating the services performed and the cost of such services according to the burdened rate of $140 per hour with a not-to-exceed Total Price limit of *eight thousand dollars* ($8,000).

EFFECTIVE DATE

This Task Order No. 1 is effective as of the 7 day of February, 2014.

IN WITNESS WHEREOF, duly authorized representatives of the ENGINEER and of the SUBCONSULTANT have executed this Task Order No. 1 evidencing its issuance by ENGINEER and acceptance by SUBCONSULTANT.

CAROLLO ENGINEERS, INC.

By: _____

~~Karl W. Hadler~~

~~Associate Vice President~~

Brian Matson

Sr. Vice President

SUBCONSULTANT

Accepted this 6th day of February, 2014

By: Ronald Roberts

Digitally signed by Ronald M. Roberts, PE, SE
DN: cn=Ronald M. Roberts, PE, SE, o=Roberts Engineering PLLC, ou, email=Ron@RobertsEngineering.org, c=US
Location: Redmond, WA
Date: 2014.02.06 19:58:38 -08'00'

Officer

By: _____

Officer

PROGRESS BILLING

Please submit invoice in one pdf format to: accountspayable@carollo.com

Carollo Engineers, Inc.

Roberts Engineering, PLCC
(SUBCONSULTANT)

If mailing the invoice, please send to:

4600 E. Washington Street, Suite 500
(Address)

17503 NE 137th Street
(Address)

Phoenix, AZ 85034
(City, State, Zip)

Redmond, WA 98052
(City, State, Zip)

(Phone)

Sent by: _____

Date: _____

Attn: Accounts Payable
Oak Harbor Whidbey Island
Subject: Bank Evaluation

Carollo Project Number 8549A.1S

Professional Services for the Period Ending _____

Task Summary	Current Period	Previous Billings	Job to Date	Contract Limits	% of Budget
Task 1 - Gravity Load Capacity Assessment	$	$	$	$3,000.00	%
Task 2 - FEMA Seismic Rehab Cost Estimate				$3,000.00	
Task 3 - Summary Report Development				$2,000.00	
Total Amounts				$8,000.00	
Prior Billings Not Paid				$	
Progress Percent Complete (based on completed work)					%

NOTE: Attach SUBCONSULTANT's Current Period Invoice

EXHIBIT B2

GeoEngineers
600 Dupont Street
Bellingham, Washington 98225
360.647.1510

February 3, 2014

Carollo Engineers
1218 Third Avenue, Suite 1600
Seattle, Washington 98101

Attention: Brian Matson, PE

Subject: Scope and Fee Estimate
Phase I Environmental Site Assessment and
Geotechnical Engineering Services
Windjammer Wastewater Treatment Plant Site Evaluation
Oak Harbor, Washington
File No. 2751-017-02

INTRODUCTION

GeoEngineers, Inc. (GeoEngineers) is pleased to present this scope and fee estimate to provide Phase I Environmental Site Assessment (ESA) and Geotechnical Engineering Services for the proposed Windjammer Wastewater Treatment Plant (WWTP) proposed in the 200 block of SE Pioneer Way in Oak Harbor, Washington. The "site" consists of at least three properties: the northern portion of the site was a Whidbey Island Bank (WIB) site and parking lot; the southern portion of the site is part of the existing Windjammer Park and/or part of the existing WWTP property (see Exhibit A). This scope and fee estimate is based on conversations with Carollo Engineers, previous services performed during the siting study for the WWTP project, preliminary plans provided, and our experience in the project vicinity and with similar projects.

The proposed wastewater treatment plant will consist of the following elements:

- Administration building;
- Mechanical, electrical and chemical buildings;
- Headworks structure, which will extend approximately 20 feet below ground surface (bgs);
- Aeration basin, which will extend approximately 20 feet bgs;
- Solids and odor control buildings;
- Membrane bioreactor (MBR) building, which will extend approximately 10 feet bgs;
- Maintenance shop.

The location and configuration of the buildings has not been established onto the site as yet. We understand the northern limits of the new WWTP will likely be in the southern limits of the WIB property to allow for a future east-west roadway extension through the site. Because the site is relatively small, we understand that some of the at-grade structures will likely be constructed on top of some of the below grade structures. One boring, near the northeast corner of this site, was completed during our previous siting study. We have included explorations that will provide generalized subsurface conditions across the site to be able to address general design and construction considerations for planning and design purposes. For this scope of services, the geotechnical effort will support the design to about 30 percent stage for the project. We understand that a General Contractor/Construction Manager (GC/CM) will be brought into the project at about 10 percent design and will be involved with development of constructability and cost considerations.

Based on previous explorations in the project vicinity, subsurface conditions are likely to consist of a layer of historic fill overlying loose granular, liquefiable beach deposits, possibly a soft clay deposit, overlying dense glacial till The fill and beach deposits are expected to increase in thickness toward the beach to the south. Deeper construction excavations, like that anticipated for the aeration basin, will require dewatering and/or shoring, and some ground improvements are anticipated for the southern structures.

SCOPE OF SERVICES

The following sections present our proposed scope of services for completion of the Phase I ESA and geotechnical engineering services.

Task 100 – Phase I ESA

The purpose of the Phase I ESA is to identify RECs[1] in connection with the subject property. Our scope of services is in general accordance with the American Society for Testing and Materials (ASTM) Standard E 1527-13 for Phase I ESAs and the U.S. Environmental Protection Agency's (EPA's) Federal Standard 40 CFR Part 312 "Standards and Practices for All Appropriate Inquiries (AAI)." The services described below will be completed by, or under the direction of, an environmental professional as described in 40 CFR Part 312. Our specific scope of services for the Phase I ESA is as follows:

1. Review readily available geotechnical reports, environmental reports and/or other relevant documents pertaining to environmental conditions at the subject property.
2. Review the results of a federal, state, local and tribal environmental database search provided by an outside environmental data service for listings of properties with known or suspected environmental concerns on or near the subject property within the search distances specified by ASTM. Our database and file review search will include a check for and review of publications or reports on EPA and Washington State Department of Ecology (Ecology) websites concerning area wide soil and groundwater contamination on or adjacent to the subject property.

[1] Recognized Environmental Conditions are defined in ASTM E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property; (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions."

3. Review regulatory agency files regarding listed properties of potential environmental concern relative to the subject property.
4. Identify a key site manager with specific knowledge of past and present property use and request that the key site manager meet a GeoEngineers' representative on-site for an interview during the visual site reconnaissance and/or an interview by telephone if he or she is not available during the site reconnaissance. Identify and interview others familiar with the use and history of the subject property, as available and appropriate, including representatives of current occupants that likely use, store, treat, handle or dispose of hazardous substances now or in the past.
5. Interview current owners or occupants of neighboring properties only as necessary to gather information or fill site use data gaps regarding the subject property or if the subject property is abandoned and no owner or occupant interviews can be conducted.
6. Interview past owners and occupants of the subject property as necessary to gather information or fill property use data gaps regarding property use history.
7. Interview a representative of the local fire department, health department, and/or Ecology as necessary to gather information or fill data gaps regarding the history of the subject property and surrounding properties relative to the likely presence of hazardous substances.
8. Review historical aerial photographs, fire insurance maps, building department records, city directories, chain-of-title reports, and land use and tax assessor records, as available and appropriate, to identify past development history on and adjacent to the subject property relative to the possible use, generation, storage, release or disposal of hazardous substances. We will attempt to identify uses of the subject property from the present back to the time that records show no apparent structures on the property, back to the time that the property was first used for residential, agricultural, commercial, industrial or governmental purposes, or back to 1940, whichever is earliest.
9. Review current United States Geological Survey (USGS) topographic maps to identify the physiographic setting of the subject property and provide a statement on the local geologic, soil and groundwater conditions based on our general experience and sources such as geologic maps and soil surveys.
10. Conduct a visual reconnaissance of the subject property and adjacent properties to identify visible evidence of RECs.
11. Identify the source(s) of potable water for the subject property and current heating and sewage disposal system(s) used at the subject property, if any, and their age if readily available.
12. Identify data gaps relative to the Phase I ESA study findings.

13. Provide a written summary of the Phase I ESA results and identified RECs (including historical RECs [HRECs][2] and controlled RECs [CRECs][3], as well as *de minimis* conditions[4], if present) along with our opinion and recommendations regarding the potential for contamination by hazardous substances at the subject property and the significance of any data gaps identified.

We request that you complete the brief questionnaire at the end of this scope and fee estimate and provide a copy of the completed questionnaire to us as soon as possible.

We will also observe the soil and groundwater conditions during the concurrent geotechnical study for potential contamination during completion of the borings. Soil, surface water or groundwater sampling and chemical analysis are not included as part of this Phase I ESA scope of services. If appropriate based on conditions observed and if requested, we can provide additional information regarding these services.

Our scope of services does not include an environmental compliance audit or an evaluation for the presence of lead-based paint, toxic mold, polychlorinated biphenyls (PCBs) in light ballasts, radon, lead in drinking water, asbestos-containing building materials or urea-formaldehyde insulation in on-site structures or debris or other potentially hazardous building materials.

We request that you provide the names and phone numbers of key individuals with knowledge of property use history of the subject property and notify us if tax parcel maps do not accurately reflect the boundaries of the subject property. Additionally, we request that you provide us with the following helpful information, if readily available, prior to the start of our study: 1) copies of any past ESA and/or audit reports; 2) environmental permits; 3) registrations for underground and aboveground storage tanks; 4) material data safety sheets for hazardous substances used or stored on the subject property (if any); 5) community right-to-know plans pertaining to the subject property; 6) safety plans pertaining to on-site facilities; 7) reports regarding geotechnical and/or hydrogeologic conditions; 8) notices of environmental violations and/or environmental liens or property use restrictions; 9) specialized knowledge or experience and commonly known information of which you are aware regarding the subject property and related environmental conditions; and 10) explanation for any significant difference between purchase price and market value, if the subject property is not known to be contaminated.

Task 200 – Geotechnical Engineering Services

The purpose of our geotechnical engineering services is to explore soil and groundwater conditions at the site and provide geotechnical engineering recommendations for the 30 percent design level. We propose the following scope of services:

Data Review and Project Setup

1. Review existing information including geologic maps and previous geotechnical reports in the project vicinity. Meet with Carollo Engineers to understand site selection, proposed project geometry and facilities, and develop a suitable exploration program.

---

[2] An HREC is a past release that has been remediated to the satisfaction of the responsible regulatory agency.

[3] A CREC is a past release that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in-place subject to the implementation of the required controls.

[4] A de minimis condition is a condition that generally does not present a threat to human health or the environment and that generally would not be subject to an enforcement action if brought to the attention of the appropriate agencies.

Field Explorations and Laboratory Testing

1. Locate planned explorations in the field and call the state "dial-before-you-dig" contractor number to clear utility locations prior to the explorations. Parking lots typically have extensive electrical utilities for the lighting. This site visit could also serve as the reconnaissance for the Phase I ESA described above.

2. Drill four (4) geotechnical borings at the site to evaluate subsurface conditions; the borings are planned at the other three corners not explored and one toward the middle of the site, approximately as shown in the attached Conceptual Exploration Plan (Exhibit A). We will advance the borings into the dense glacial till expected to range from 30 to 60 feet bgs. We have scheduled two days of drilling and will adjust the program based on completing the maximum number and depth for reasonable characterization of the site. Our assumptions include:

   - Field samples will be observed for evidence of petroleum contamination; however, field screening (sheen test and PID) and chemical analytical testing is not included;
   - Drill cuttings may be disposed on-site;
   - No permits other than notification of the City are required; and
   - The parking area is asphalt such that no concrete coring is necessary.

3. Installation of a 2-inch-diameter open standpipe piezometer (monitoring well) at three of the boreholes for groundwater monitoring and installation of 4-inch-diameter test well at one location. The larger diameter well will be used for a future pump test (see Task 400 – Dewatering Assessment Pump Test).

4. Develop the monitoring wells the day after well installation by surging and bailing and/or pumping to remove fine sediment and drilling debris from the well screen and filter pack. This step is important to ensure a good hydraulic connection with the surrounding soils that will then provide accurate water levels and optimal conditions for slug/pump testing. We have budgeted for approximately one day to complete this task.

   - We assume that the City will conduct periodic monitoring of groundwater levels over time.

5. Conduct a day of slug testing to estimate the hydraulic conductivity of the soils. We will complete testing on all three of the 2-inch monitoring wells to provide a preliminary evaluation of hydraulic characteristics of the water-bearing materials for dewatering needs, as well as determine relative variability across the site. A pressure transducer will be installed in one piezometer for approximately 72 hours to evaluate potential tidal influence on groundwater elevations.

6. Conduct analysis and evaluation of pertinent physical and engineering characteristics of the foundation and subgrade soils based on laboratory tests performed on samples obtained from the explorations. We have assumed that laboratory testing will include determination of soil moisture content, Atterberg limits, and grain size distribution as applicable to the soils encountered. We have also included sufficient budget to complete one laboratory consolidation test (oedometer) if appropriate for soils encountered.

7. Provide soil corrosion testing of soil samples at locations and depths as requested, with preliminary report presenting corrosion potential (such as Ductile Iron Pipe Research

Association [DIPRA]) including pH, resistivity, oxidation-reduction potential, sulfides, chlorides, and sulfates, as applicable. We have assumed up to four sets of samples will be tested.

The explorations will be monitored by one of our geotechnical engineers or engineering geologists on a full-time basis. Our representative will obtain samples of the various soils encountered, classify the materials and maintain a detailed log of the exploration. The soil samples will be sealed and returned to our laboratory for additional examination and laboratory testing, as appropriate.

Engineering Analysis and Report

GeoEngineers will complete geotechnical engineering analysis and report preparation, as described below.

1. Evaluate geohazards per City of Oak Harbor Critical Areas Ordinance (CAO).
2. Provide seismic design considerations based on the 2012 International Building Code (IBC). Because it is anticipated that ground improvement (densification) will be required at this site, we have not included preparation of a site-specific response spectra in our scope of services at this time.
3. Develop recommendations for foundation design for the proposed structures. We will work with the design team to determine the most cost effective technique, as appropriate. We expect that shallow spread footings or mat foundations may be feasible for the proposed structures. We will include discussion of ground improvement techniques and/or pile support of structures as appropriate depending on soil conditions encountered, foundation loads and settlement tolerances of the proposed structures. We will provide conclusions and recommendations regarding design and construction for the facilities that will include some or all of the following:
    a. Seismic performance and mitigation. Included will be an evaluation of potential for soil liquefaction and liquefaction induced settlement and lateral spreading.
    b. Foundation improvements, support, and performance (settlement).
    c. Recommendations for slab-on-grade support.
    d. Wall design pressures including active, at-rest, and passive soil pressures, and hydrostatic and seismic loading for design.
    e. Soil coefficient of friction for resistance to lateral forces.
    f. Recommendations for pavement subgrade support and design sections (if requested) for parking and driveway areas.
    g. Typical drainage considerations based on the groundwater conditions encountered or expected for shallow structures.
    h. Hydrostatic pressures and buoyancy/uplift, dewatering considerations, including evaluation and discussion of tidal effects. Our dewatering recommendations will include the items presented in Task 400 – Dewatering Assessment and Pumping Test below.
    i. Provide design recommendations to mitigate buoyance/uplift, such as use of helical anchors, or similar.
    j. Recommendations for pipe trenching, support, and bedding.

k. Recommendations for earthwork including stripping depth, site preparation, use of on-site soils for structural fill, imported soils and compaction criteria for foundation support.

l. Conclusions regarding temporary slopes to construct below-grade walls and temporary shoring recommendations. We expect significant collaboration with the design team and GC/CM regarding dewatering, sheet piles, bracing and/or tiebacks for management of the deeper excavations.

4. Provide an electronic version of our draft geotechnical report with our conclusions and recommendations. Exploration logs, a site plan, cross sections of the subsurface profile and any supporting test data will be included. A final report will be submitted after receiving feedback from the design team and GC/GM.

Task 300 – Meetings and Project Management

1. We anticipate meeting attendance and coordination with the GC/CM will be required during this phase of the project and have included time for four meetings (two in Seattle and two in Oak Harbor), if requested.

2. We have included time to prepare six brief design memoranda during the course of the project to expedite toward 30 percent design; all design information will be incorporated into the final report.

3. Provide project management during the environmental and geotechnical phases of work, including project tracking, monthly invoicing, and miscellaneous consultation and coordination with the design team.

Task 400 – Dewatering Assessment and Pumping Test

A pumping test will be completed at the site to collect additional hydrogeologic data and produce an analysis of groundwater conditions to provide a Dewatering Assessment report that will enable the GC/CM to bid and implement a system of wells to effectively dewater the excavation during the site excavation and construction. The pumping test will reduce the risk to the dewatering contractor and should provide a much more accurate dewatering design and cost for construction.

For this task, the larger, 4-inch-diameter well installed in the previous exploration phase will be utilized as a pumping well. If this task is authorized, an additional shallow 2-inch standpipe piezometer would be installed in close proximity to the pumping well to measure drawdown effects. The layout for these wells will be internal to the area of expected excavation below the water table. Based on the potential volumes of discharge water anticipated during this pump test, water discharge options and locations will be required and alternatives will be developed in consultation with the City. Tentatively, our scope of services for this task would include:

1. Coordinate with the project team regarding subsurface exploration for the dewatering assessment. We will identify well screen intervals, and depths, and document the well installation and development during our site exploration phase of work.

2. Conduct pumping tests in the test well consisting of the following:
   - A step-rate pumping test to evaluate the yield performance characteristics of the dewatering well and select an appropriate rate for a constant-rate pumping test. We propose a 4-hour step-rate pumping test that consists of four, one-hour steps during which the well will be pumped at progressively higher rates. During this phase of testing, water elevation data will be collected at the test well and from the nearby observation wells using automated pressure sensors supplemented by periodic manual measurements.
   - Perform a constant-rate pumping test during which the discharge rate will be held constant for a period of at least 24 hours. During this phase of testing, water level data will be collected at the test well and nearby wells using automated pressure sensors supplemented by periodic manual measurements to determine the extent and depth of the cone of depression developed during pumping. We will coordinate with the City to see if City personnel can facilitate some data collection.
   - At the end of each pumping period, when the pump is turned off, data will also be collected on the recovery of water levels as they return toward the pre-pumping or 'static' condition.
   - Collate, reduce and analyze drawdown and recovery data collected from the pumping test to characterize the hydrogeologic conditions that will control dewatering efforts at the site.
3. Monitor field parameters for samples of the discharge water collected periodically during pumping. Parameters will include temperature, specific electrical conductivity (SEC), dissolved oxygen (DO), turbidity and oxidation-reduction potential (ORP).
4. We have assumed that the site and groundwater are not contaminated. Water generated during the pump test will be periodically monitored for sheen and volatile compounds. If evidence of contamination is detected during pumping, samples will be collected, then the pumping test will be terminated.
5. Provide a technical memorandum that describes the hydrogeologic conditions controlling the presence, flow and recharge of groundwater beneath the site, including potential tidal effects: anticipated extent and depth of excavations required; dewatering methods and options for controlling groundwater; discharge rate estimates; review of water disposal options and permitting requirements; and recommended water treatment techniques, if necessary. This scope item will include preparation of project-specific dewatering specifications for inclusion in the construction bid documents being prepared by Carollo Engineers.
6. Include final dewatering assessment details with the geotechnical report.

Task 500 – Additional Site Exploration Services

The site could be variable, depending on the historical ground modification that has occurred at the site. We have included additional site exploration to fill in potential gaps in information obtained. We have included budget for one additional day of drilling and one day of test pits with a subcontracted drill rig and excavator. These services will only be completed following written authorization by Carollo Engineers.

SCHEDULE, TERMS, AND BUDGET

GeoEngineers is available to begin work immediately following notice to proceed. The primary variable in beginning field explorations is the availability of the drilling subcontractor for the explorations. Currently, the drilling subcontractor is scheduled about three to four weeks out. We will complete the Phase I ESA information review, and site reconnaissance before the drilling begins, with a planned completion date of March 5, 2014.

The majority of the geotechnical laboratory testing and analyses will be completed approximately two to four weeks after the explorations are completed. We can provide verbal results to team members as the results become available. We assume that two separate reports will be prepared. We expect that our Phase I ESA report can be available within four to six weeks of authorization. We suggest that geotechnical/hydrogeologic design memoranda be provided during the 30% design and the draft report not be prepared until close to the finish of this phase to minimize changes. If this schedule does not meet your needs, please contact us regarding any modifications that will allow you to meet your time schedule.

We propose to conduct our services on a time and expenses basis in accordance with the attached Schedule of Charges and terms of the mutually negotiated contract with Carollo Engineers. The fee for our services will be in accordance with the approximate breakdown provided in Table 1 below. We will not provide additional services beyond the fees estimated below without your written authorization.

TABLE 1. ESTIMATED FEE SCHEDULE

Description	Fee
Task 100 – Phase I ESA	$ 4,750
Task 200 - Geotechnical Engineering Services	
Project Set-up, Review Existing Information, Develop Exploration Plan	$ 2,500
Utility Locate/Coordinate Subcontracted Explorations	$ 1,000
Subcontracted Drilling Services	$ 12,650
GeoEngineers' Field Services (Drilling, Well Development, Slug Test)	$ 6,400
Laboratory Testing and Log Preparation	$ 3,250
Engineering Analysis, Report Preparation	$ 9,900
Estimated Task 200 Subtotal	**$ 35,700**
Task 300 – Meeting Attendance, Design Memos and Project Management	$ 6,100
Task 400 – Dewatering Assessment Pump Test	$ 21,200
Task 500 – Additional Site Exploration Services	
Subcontracted Borings	$ 3,500
Subcontracted Test Pits	$ 1,500
GeoEngineers' Field Services (Locates, Explorations)	$ 3,500
Estimated Additional Explorations Subtotal	**$ 8,500**
Estimated Project Total	**$ 76,250**

Client's oral authorization to initiate services shall be considered by both parties as formal acceptance of all terms and conditions of this Agreement unless different terms from those represented in the Agreement are introduced by Client prior to commencement of services.

We anticipate further involvement during 60 and 90 percent design that has not been included in this scope or budget. Our level of involvement during construction will depend upon the conditions encountered and foundation complexity.

This scope and fee estimate is valid for a period of 60 days commencing from the first date listed above and subject to renegotiation by GeoEngineers, Inc., after the expiration date.

We appreciate the opportunity to present this scope and fee estimate and look forward to continued work with you during the design phase of this project. Formal authorization for our services can be provided by signed task order referencing this scope and fee estimate, or by returning one signed copy of this scope and fee estimate. Please call if you have questions.

Sincerely,
GeoEngineers, Inc.

Sean W. Cool, PE
Senior Geotechnical Engineer

J. Robert Gordon, PE
Senior Principal

SWC:JRG:tlh

Attachments:
Exhibit A - Conceptual Exploration Plan
Schedule of Charges – Puget Sound Special 2014
User Questionnaire

REV	DATE	BY	DESCRIPTION

DESIGNED: CE
DRAWN: AS
CHECKED:
DATE: MONTH YEAR

carollo

CITY OF OAK HARBOR
OAK HARBOR WASTEWATER TREATMENT PLANT
TITLE: VICINITY PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

JOB NO. 10484.10
DRAWING NO. 10C01
SHEET NO.

PROJECT NO. 10484.10 FILE NAME: 10484.10C01.dgn

Schedule of Charges – 2014

COMPENSATION

Our compensation will be determined on the basis of time and expenses in accordance with the following schedule unless a lump sum amount is so indicated in the proposal or services agreement. Current rates are:

Professional Staff		
Staff 1 Scientist/Analyst	$	88/hour
Staff 1 Engineer	$	94/hour
Staff 2 Scientist/Analyst	$	99/hour
Staff 2 Engineer	$	104/hour
Staff 3 Scientist/Analyst	$	114/hour
Staff 3 Engineer	$	120/hour
Engineer/Scientist/Analyst 1	$	135/hour
Engineer/Scientist/Analyst 2	$	140/hour
Senior Engineer/Scientist/Analyst 1	$	145/hour
Senior Engineer/Scientist/Analyst 2	$	156/hour
Associate	$	176/hour
Principal	$	192/hour
Senior Principal	$	233/hour
Technical Support Staff		
Administrator 1	$	61/hour
Administrator 2	$	71/hour
CAD Technician	$	64/hour
CAD Designer	$	74/hour
Technician	$	64/hour
Senior Technician	$	74/hour
Software Development Staff		
Database Architect/Analyst	$	166/hour
Senior Database Architect/Analyst	$	187/hour
Business Analyst	$	166/hour
Senior Business Analyst	$	187/hour
Software Architect/Developer	$	187/hour
Senior Software Architect Developer	$	207/hour
IT Project Manager	$	207/hour
Senior IT Project Manager	$	233/hour

Contracted professional and technical services will be charged at the applicable hourly rates listed above. Staff time spent in depositions, trial preparation and court or hearing testimony will be billed at one and one-half times the above rates. Time spent in either local or inter-city travel, when travel is in the interest of this contract, will be charged in accordance with the foregoing schedule. Rates for data storage and web-based access will be provided on a project-specific basis.

Equipment

Air Quality Equipment, per day	$	150.00
Air Sparging Field Test, per day	$	500.00
Construction Monitoring Equipment	$	25.00
Continuous recording data logger, per day	$	300.00
Environmental Exploration Equipment, per day	$	150.00
Field water quality testing equipment, per day (1 day min.)	$	80.00
Gas Detection and Oxygen Meters, per day (1 day min.)	$	100.00
Generator, per day (1 day min.)	$	100.00
Geotechnical Exploration Equipment, per day	$	125.00
Groundwater Development and Sampling Pumps, per day (1 day min.)	$	100.00
Groundwater Monitoring Equipment, per day	$	220.00
Nuclear Density Gauge, per hour (4 hour daily min.)	$	10.00
pH Meter (per day)	$	15.00
Single Channel data logger, per logger, per day (1 day min.)	$	100.00
Slope Indicator, per day (1 day min.)	$	200.00
Survey equipment, Porter sampling gear and Dynamic cone sounding equipment, per day	$	35.00
Vapor Extraction Field Test, per day	$	500.00
Vehicle usage, per mile, or $50/day, whichever is greater	$	0.65
Vehicle - 4-wheel drive truck, per day (1 day min.)	$	80.00
Water disposal equipment, per use, per day	$	50.00
Water Quality Equipment, per day	$	125.00
	$	

Specialized and miscellaneous field equipment, at current rates, list available upon request.

OTHER SERVICES, SUPPLIES AND SPECIAL TAXES

Charges for services, equipment, supplies and facilities not furnished in accordance with the above schedule, and any unusual items of expense not customarily incurred in our normal operations, are charged at cost plus 15 percent. This includes shipping charges, subsistence, transportation, printing and reproduction, miscellaneous supplies and rentals, surveying services, drilling equipment, construction equipment, watercraft, aircraft, and special insurance which may be required. Taxes required by local jurisdictions for projects in specific geographic areas will be charged to projects at direct cost.

Per diem may be charged in lieu of subsistence and lodging.

Routinely used field supplies stocked in-house by GeoEngineers, at current rates, list available upon request.

In-house testing for geotechnical soil characteristics at current rates, list available upon request.

Associated Project Costs (APC)

Computer hardware and software, telephone and fax communications, printing and photocopying and routine postage via USPS will be charged at a flat rate of 6 percent of labor charges. These charges are labeled as Associated Project Costs (APC).

All rates are subject to change upon notification.

GeoEngineers

PHASE I ESA USER QUESTIONNAIRE
WINDJAMMER WASTEWATER TREATMENT PLANT SITE EVALUATION
OAK HARBOR, WASHINGTON
GEI FILE NO. 2751-017-02

In order to qualify for one of the federal landowner liability protections, and to enable us to fully address the objectives of the Phase I ESA, please complete the questionnaire below to the best of your knowledge and provide the additional information requested.

7. Are you aware of any environmental cleanup liens against the subject property that are filed or recorded under federal, tribal and state or local law?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

8. Are you aware of any Activity and Use Limitations (AULs), such as engineering controls, land use restrictions or institutional controls, that are in place at the subject property and/or have been filed or recorded in a registry under federal, tribal, state or local law?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

9. As the user of this Phase I ESA, do you have any specialized knowledge or experience related to the subject property or nearby properties? For example are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

   ☐ YES ☐ NO ☐ DON'T KNOW Explain:

10. Does the purchase price being paid for the subject property reasonable reflect the fair market value of the property?

    ☐ YES ☐ NO ☐ DON'T KNOW Explain:

    a. If you conclude that there is a difference and you answered NO above, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

       ☐ YES ☐ NO ☐ DON'T KNOW Explain:

11. Are you aware of commonly known or reasonably ascertainable information about the subject property that would help us identify conditions indicative or releases or threatened releases? For example,

    a. Do you know the past uses of the property?

       ☐ YES ☐ NO ☐ DON'T KNOW Explain:

    b. Do you know of specific chemicals that are present or once were present on the property?

       ☐ YES ☐ NO ☐ DON'T KNOW Explain:

    c. Do you know of spills or other chemical releases that have taken place at the property?

       ☐ YES ☐ NO ☐ DON'T KNOW Explain:

    d. Do you know of any environmental cleanups that have taken place at the property?

       ☐ YES ☐ NO ☐ DON'T KNOW Explain:

12. Based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

    ☐ YES ☐ NO ☐ DON'T KNOW Explain:

User Questionnaire Completed By (Name and Organization): _____

_____

Date: _____

List of Requested Information, If Available

- Names and phone numbers of key individuals with knowledge of property use history.
- A map showing the boundaries of the subject property.
- Tax ID numbers for parcels included within the subject property.
- Copies of any past environmental site assessment and/or audit reports or risk assessment studies.
- Environmental permits.
- Registrations for underground and aboveground storage tanks (if any).
- Material data safety sheets for hazardous substances used or stored on-site (if any).
- Community right-to-know plans pertaining to the subject property.
- Safety plans pertaining to on-site facilities.
- Reports regarding geotechnical and/or hydrogeologic conditions at or near the subject property.
- Notices or other correspondence from any governmental agency relating to past or current violations of environmental laws with respect to the subject property or relating to environmental liens encumbering the property.
- Recorded Activity Use Limitations (AULs)
- Chain-of-Title or other Title Report documents

EarthCam, Inc.

84 Kennedy Street
Hackensack, New Jersey 07601

www.earthcam.com
Phone (201) 488-1111
Fax: (201) 488-1119

Invoice

EarthCam®

Date Jan 14, 2014
Page 1
Order Number
IN0000018152-02

Sold To:

Joe Stowell
Carollo Engineers, Inc.
1218 3rd Ave # 1600
Seattle, WA 98101

Ship To:

Joe Stowell
Carollo Engineers, Inc.
1218 3rd Ave # 1600
Seattle, WA 98101

Reference	PO Number	Customer No.	Salesperson	Order Date	Ship Via	Terms
WS0114146374-02		22558	TA	Jan 14, 2014		NET30

Qty. Shipped	Item Number	Description	Unit Price	UOM	Extended Price
1.00	ECAS03100	Gold Service Duration: 12 months	6,300.00	Ea.	6,300.00
1.00	ECSS01114	EarthCam Control Center - Streaming Video Edition - HD Robot Duration: 12 months	0.00	Ea.	0.00

Comments:

Tax Summary:

NT	0.00

Subtotal	**6,300.00**
Total sales tax	**0.00**
Total order	**6,300.00**

ALL PRICING IN U.S. DOLLARS

EXHIBIT B4 – SCOPE OF SERVICES

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY DESIGN PHASE

TASK 500 – PROJECT DELIVERY ANALYSIS

The objective of this task is to assist the City in procuring a General Contractor/Construction Manager (GC/CM) firm to participate in the Project. Consultant will provide the following services under Amended Task 500:

Subtask 520 – GC/CM Procurement Assistance

Coordinate with City's Third Party Owners' Advisor (OA) to develop information needed by the City to authorize GC/CM delivery. Assist in developing and presenting materials needed for GC/CM approval by the Washington State Project Review Committee (PRC). Following PRC approval, assist in developing Request for Qualification (RFQ), GC/CM contract documents, and Request for Final Proposal (RFFP) materials, as directed by the OA. Review proposals, participate in GC/CM interviews, and advise the City during GC/CM selection.

Subtask 520 Assumptions:

1. City's OA will lead GC/CM procurement efforts. Consultant's participation involves review of key materials and assistance in developing contract documents, cost estimates, presentation materials, etc.
2. Consultant Project Manager will attend and participate in the following activities related to GC/CM procurement:
   a. Up to four (4) coordination meetings with the City's OA.
   b. PRC presentation.
   c. Up to two (2) Council Meetings to facilitate GC/CM procurement (as directed by Owner).
   d. On-site pre-proposal conference during the GC/CM selection process.
   e. On-site GC/CM interviews.
   f. Two (2) meetings with City selection panel to review and score GC/CM proposals and interviews.

Subtask 520 Deliverables:

Deliverable	Subtask	Anticipated Delivery Date
(1) Materials for GC/CM procurement	520	As Directed by OA
(1) Written/verbal input for GC/CM selection	520	Spring 2014

City of Oak Harbor
Wastewater Treatment Plant Preliminary Design
Amendment 8 Carollo Level of Effort Estimate
February 13, 2014

WORK TASKS	Project Manager	QA/QC Team	Design Manager	Senior Engineer	Discipline Engineer	Staff Engineer	Sr. CAD/ Graphics Tech.	CAD/ Graphics Tech.	WP/ Admin. Support	Carollo Hours	Carollo DL Cost	Carollo Indirect Cost	Carollo Expenses	Subtotal Carollo Cost	Geo	Roberts	EarthCam	Total Cost
Direct Labor (DL) Rates	$87	$87	$69	$55	$58	$40	$38	$25	$25									
TASK 500 - PROJECT DELIVERY ANALYSIS																		
Subtask 520 - GC/CM Procurement Assistance	40	24	20	16	0	8	0	0	16	124	$8,549	$16,243	$1,736	$26,527				$26,527
Task 100 Subtotal	40	24	20	16	0	8	0	0	16	124	$8,549	$16,243	$1,736	$26,527	$0	$0	$0	$26,527
TASK 900 - MANAGEMENT RESERVE AUTHORIZATION																		
Subtask 910 - Structural/Code Assessment			2		2					4	$255	$484	$55	$794		$8,000		$8,794
Subtask 920 - Pump Testing			4		4					8	$510	$968	$110	$1,588	$21,200			$22,788
Subtask 930 - EarthCam										0	$0	$0	$0	$0			$6,300	$6,300
Task 900 Subtotal	0	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$21,200	$8,000	$6,300	$37,881
SUBTOTAL AUTHORIZED BUDGET	**40**	**24**	**20**	**16**	**0**	**8**	**0**	**0**	**16**	**124**	**$8,549**	**$16,243**	**$1,736**	**$26,527**	**$21,200**	**$8,000**	**$6,300**	**$64,409**
CAROLLO FEE (12% of Carollo Cost for Task 500)																		$3,183
SUBCONSULTANT MARKUP (5% of Subconsultant Cost)															$1,060	$400	$315	$1,775
TOTAL AUTHORIZED BUDGET																		$69,367

Consultant Agreement Amendment Number 7	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4500	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amendments 1-5) 8549A.10 (Amendment 6,7)	Execution Date 09/16/10	Completion Date (Prior) April 2014
Project Title: Engineering, Facilities Plan and Preliminary Design	New Maximum Amount Payable $ 3,320,429	
Description of Work: This phase of the work includes complete environmental documentation consistent with the State Environmental Policy Act (SEPA) requirements. This environmental documentation is in support of the Oak Harbor Wastewater Facilities project.		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers
and executed on 09/16/10 and identified as Preliminary Engineering and Facilities Plan.

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:

SCOPE OF WORK is hereby amended to add the following:
The existing authorized Scope of Services will remain open and will be completed for the authorized budget. Through this amendment, Carollo will prepare a SEPA document by utilizing the existing documentation prepared for the project and will support the Wastewater Facility Plan and State Environmental Review Process (SERP) documentation. Deliverables will include an internal review draft, including graphics, and a final "camera-ready" draft that incorporates comments by the City. The City will be responsible for public notification and printing and distribution of the SEPA checklist.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: May 2014.
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum total contract value of $3,320,429 does not change. The management reserve fund has been reduced by $9,327 to complete the additional services described in Amendment 7. Exhibit D-3 summarizes the level of effort associated with these additional services.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian R. Matson, Senior Vice President

Consultant Signature

By: Scott Dudley, Mayor

Approving Authority Signature

5/29/13
Date

City of Oak Harbor
Wastewater Treatment Plant Preliminary Design
Amendment 7 Carollo Level of Effort Estimate
May 23, 2013

WORK TASKS	Project Manager	QA/QC Team	Design Manager	Senior Engineer	Discipline Engineer	Staff Engineer	Sr. CAD/ Graphics Tech.	CAD/ Graphics Tech.	WP/ Admin. Support	Carollo Hours	Carollo DL Cost	Carollo Indirect Cost	Carollo Expenses	Subtotal Carollo Cost	ESA	Total Cost
Direct Labor (DL) Rates	$85	$85	$69	$55	$58	$40	$38	$25	$25							
TASK 700 - ENVIRONMENTAL REVIEW AND DOCUMENTATION																
Subtask 740 - SEPA Documentation	2	0	0	0	0	0	0	0	0	2	$170	$322	$30	$522	$8,386	$8,908
Task 100 Subtotal	2	0	0	0	0	0	0	0	0	2	$170	$322	$30	$522	$8,386	$8,908
SUBTOTAL AUTHORIZED BUDGET	2	0	0	0	0	0	0	0	0	2	$170	$322	$30	$522	$8,386	$8,908
CAROLLO FEE (12% of Carollo Cost)																$0
SUBCONSULTANT MARKUP (5% of Subconsultant Cost)															$419	$419
TOTAL AUTHORIZED BUDGET																$9,327
TOTAL CONTRACT AMOUNT																$9,327

ESA
Budget Proposal
Version: 5/23/13

Project No.:
Project Title: Oak Harbor Wastewater Facilities Project
Client: City of Oak Harbor / Carollo
Budget Total: $8,386

Project Manager: Lisa Adolfson
Contract No.:
Location: Seattle

		Project Director	Project Manager	Scientist/Planner	Graphics	Admin Assist	Expenses:			Totals	
	Rate:	$190.00	140.00	100.00	105.00	81.00					
		Hours	Hours	Hours	Hours	Hours	Units	Rate	Cost	Hours	Cost
Task 1	***SEPA Checklist Preparation***										
	Draft Checklist	4	24	20	4	4				56	$6,864
	Final Checklist	1	4	4	2	2				13	$1,522
	Task 1 Subtotal Hours	**5**	**28**	**24**	**6**	**6**				**69**	**$8,386**
Task 99999	**Reimbursable Expenses:**										
	Mileage						0	$0.550	$0		$0
	Camera						0	$25.00	$0		$0
	GPS							$25.00	$0		$0
	Subtotal Reimbursables										**$0**
									Project Total		**$8,386**

Consultant Agreement Amendment Number 6	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4500	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amendments 1-5) 8549A.10 (Amendment 6)	Execution Date 09/16/10	Completion Date (Prior) April 2014
Project Title: Engineering, Facilities Plan and Preliminary Design	New Maximum Amount Payable $ 3,320,429	
Description of Work: This phase of the work includes: development of preliminary engineering documents for Value Engineering (VE); additional engineering and public process support to select the final location within the Windjammer Vicinity site; development of procurement documents to select key process equipment (membranes and ultraviolet [UV] disinfection equipment); development of WWTP preliminary design to approximately 30 percent detail; assisting with selecting the preferred delivery method to complete WWTP construction; and development of Final Construction Documents, permits and bid period services for a replacement marine outfall into Oak Harbor.		

The City of Oak Harbor desires to supplement the agreement entered into with Carollo Engineers and executed on 09/16/10 and identified as Preliminary Engineering and Facilities Plan.

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:

SCOPE OF WORK is hereby amended to add the following:
The existing authorized Scope of Services will remain open and will be completed for the authorized budget. Please see the attached Scope of Services (Exhibit B), for additional phases of work.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: May 2014.
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
If all tasks in Amendment 6 and prior amendments are authorized, the maximum payable amount will be $3,221.326. An additional Management Reserve budget at $99,103 may be authorized by the City, bringing the total contract value to $3,320,429. See Exhibit D-3 for a summary and detail of the level of effort associated with the additional Scope of Services.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian R. Matson, Senior Vice President

Consultant Signature

By: Scott Dudley, Mayor

Approving Authority Signature

3/21/13
Date

carollo
Engineers...Working Wonders With Water™

DATE: October 19, 2012
SUBJECT: Consultant Agreement Amendment No. 5
WO#: 8549A00
COPIES TO: File

1218 THIRD AVENUE, SUITE 1600
SEATTLE, WASHINGTON 98101-3032
FAX: (206) 903-0419
PHONE: (206) 684-6532

TRANSMITTAL FORM

ADDRESS: City of Oak Harbor
865 SE Barrington Drive
Oak Harbor, WA 98277

ATTENTION: Nacelle J. Heuslein, CMC

THE FOLLOWING ITEMS ARE:

☐ REQUESTED	☐ REPORT	☐ COST ESTIMATE	
☒ ENCLOSED	☐ TEST RESULT	☐ CHECK PRINT	☐ CALCULATIONS
☐ SENT SEPARATELY	☐ SPECIFICATION	☐ PROGRESS EST.	☐ OTHER

VIA: UPS

NO. OF COPIES	DESCRIPTION
1	Signed Amendment No. 5

THESE DATA ARE SUBMITTED:

☒ AT YOUR REQUEST	☐ FOR YOUR REVIEW	☒ FOR YOUR FILES
☐ FOR YOUR APPROVAL	☐ FOR YOUR ACTION	☐ FOR YOUR INFORMATION

GENERAL REMARKS: Please sign and return one copy of each.

Sincerely,

CAROLLO ENGINEERS, INC.

By: Brian Matson, P.E.

Enclosures

Consultant Agreement Amendment Number 5	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4522	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00	Execution Date 9/16/10	Completion Date (Prior) December 2012
Project Title: Preliminary Engineering and Facilities Plan	New Maximum Amount Payable $1,239,261	
Description of Work: This phase of the work includes further characterization of the selected site and surrounding properties to allow for final site selection and preliminary design (30%).		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers
executed on 9/16/10 and identified as: Preliminary Engineering and Facilities Plan

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:

SCOPE OF WORK is hereby amended to add the following:
Please see the attached scope of work.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: April 2014
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
If all tasks in Amendment 5 are completed, the maximum payable amount of $1,089,561 will be increased by $149,700 to $1,239,261. Up to $88,301 is authorized initially. An additional $66,399 may be authorized in writing by the City.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian Matson, Vice President
Consultant Signature

By: Scott Dudley, mayor
Approving Authority Signature

10/16/12
Date

EXHIBIT B - SCOPE OF SERVICES
AMENDMENT NO. 5 – September 28, 2012

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

AMENDMENT 5 PURPOSE

The Windjammer Vicinity has been selected as the proposed site for a new wastewater treatment plant (WWTP) for the City of Oak Harbor (City). Additional site investigation is required before the City can acquire property and initiate design. Information collected as a result of this amendment will provide the City with surface, subsurface, and environmental information to help quantify risks prior to moving forward. Also, a new site near the Windjammer Vicinity is under consideration. Amendment 5 provides scope for necessary additional tasks including preliminary topographical and boundary surveys; geotechnical exploration; and technical/cost analysis of the new site. This amendment also includes a Phase 1 Environmental Site Assessment (ESA) and more detailed topographical/boundary surveys, to be conducted once the final site for the new WWTP has been selected.

SCOPE OF SERVICES

TASK 100 – PROJECT MANAGEMENT

The scope for Task 100 is increased to include project management activities support services outlined in this amendment, and to extend activities four (4) months beyond the anticipated duration of the authorized contract.

The existing Task 100 contract limit has been increased by $8,997 to reflect the additional scope and extended contract duration.

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

No change to Task 200 Scope and Contract Limit.

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

No changes to Task 300 Scope and Contract Limit.

TASK 400 – OUTFALL EVALUATION

No changes to Task 400 Scope and Contract Limit.

TASK 500 – REUSE OPPORTUNITIES

No changes to Task 500 Scope and Contract Limit.

TASK 600 – FACILITIES PLAN

No changes to Task 600 Scope and Contract Limit.

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

No changes to Task 700 Scope and Contract Limit.

TASK 800 – PUBLIC PROCESS SUPPORT

No changes to Task 800 Scope and Contract Limit.

TASK 900 – MANAGEMENT RESERVE

No changes to Task 900 Scope and Contract Limit.

TASK 1000 – SITE SURVEY AND MAPPING

The purpose of Task 1000 is to provide site survey and mapping data for the Windjammer Vicinity site. This task will be completed in two phases. During the initial phase, preliminary survey and mapping will be completed on approximately 58 acres as shown in Attachment 1 and generally described as: Island County Parcels S6565-00-00B02-0, S6565-00-00B18-0, S6565-00-00B34-2, S6565-00-00B05-2, S6565-00-00B13-1, S6565-00-00B17-0, S6565-00-00B06-0, S6565-00-00B20-0, S6565-00-00B21-0, S6565-00-00B14-0, S6565-00-00B09-0, S6565-00-00B22-0, R13202-106-0750; related adjacent parcels owned by the City of Oak Harbor; baseball fields; a lot north of existing Bayshore Drive; and a lot near the Windjammer Vicinity. Once a final site has been selected, a second phase will be completed to collect detailed topographical information on this site.

Subtask 1010 – Phase 1 Preliminary Survey

Survey activities will include:

- Establish legal property lines for all parcels included within the site outlined in Attachment 1:
  - Field locate and tie all existing property boundary corners.
  - Research property ownership records and identify any boundary encroachments, discrepancies, or easements that could affect acquisition of properties within the site, and delineate encroachments on boundary lines.
- Establish horizontal control:
  - Locate existing City of Oak Harbor control points.
  - Establish new horizontal control points as needed. Reference horizontal datum plan coordinates to Washington State Plan Coordinates (NAD 83/98). Mark new control with permanent brass cap monuments with labels as specified by the City.
- Establish vertical control:
  - Locate existing City of Oak Harbor control points.
  - Establish elevations on new horizontal control points. Reference vertical datum to NAVD-88.
- Provide a preliminary topographical survey of the site, including:
  - Attend a site walk through prior to starting field work.
  - Shoot up to 20 spot elevations at locations selected during the site walkthrough.
  - Coordinate with utility locating service to identify and paint on site all underground utilities. Delineate underground utilities as marked by a locating service.
  - Coordinate with geotechnical work on the site, and identify locations of borings marked by geotechnical subconsultant.

- Provide mapping of site based on AutoCAD 2009 (Version 9), with a scaled aerial photo overlay. Show contour lines based on existing LIDAR data.
- Provide final electronic files of survey points and descriptors.

Subtask 1020 – Phase 2 Detailed Survey

Survey activities will include:

- Establish legal property lines for up to three parcels included within the site outlined in Attachment 1 to be determined at a later date:
  - If corners are missing set new corners.
  - File Record of Survey in accordance with Washington State Survey Recording Act.
- Provide a topographical survey of a site to be determined (up to 10 acres in area), including:
  - Attend a site walk through prior to starting field work.
  - Spot elevations and cross sections as needed to generate accurate contours at one (1) foot delineation.
  - Delineate major physical features of the site including but not limited to edges of pavement, curb lines, sidewalks, building corners, top/bottom of ditches, trees, signs, etc.
  - Coordinate with utility locating service to identify and paint on site all underground utilities. Delineate underground utilities as marked by a locating service.
  - Provide mapping of site based on AutoCAD 2009 (Version 9) showing topographical detail, spot elevations, and one (1) foot contour lines.
  - Provide final electronic files of survey points and descriptors.

Task 1000 Assumptions:

1. Field work does not include potholing for utilities.
2. Title reports and survey recording fees will be provided by the City.
3. Field survey will include as much of the site as can be surveyed at low tide. Soundings of Oak Harbor Bay are not included.
4. Survey deliverables will be stamped and signed by a Professional Surveyor licensed by the State of Washington.

Task 1000 Deliverables:

1. New survey control field monuments as defined above.
2. Original topographic survey map (24" by 36") and electronic files, as defined above for Phase 1 and Phase 2 surveys.
3. Record of Survey filed with auditor and electronic files.

Task 1000 is a new task with a budget of $62,720. Subtask 1010 is authorized with a budget of $25,000. Subtask 1020 may be authorized by the City at a later date, with a budget of up to $37,720.

TASK 1100 – GEOTECHNICAL EXPLORATION

The purpose of Task 1100 is to determine soil and groundwater conditions at the site at a level of detail that is sufficient enough to provide geotechnical engineering recommendations for preliminary design. As defined below, the scope of services for Task 1100 includes:

Subtask 1110 – Geotechnical Exploration

Complete the following services to provide geotechnical information sufficient for preliminary (approximately 30 percent) level of design detail:

- Review existing information including geologic maps and previous geotechnical reports in the project vicinity. Conduct an initial site visit to evaluate surface conditions and coordinate with the design team to develop a suitable exploration program.
- Locate borings in the field and call the state "dial-before-you-dig" contractor number to clear utility locations prior to the explorations, and/or coordinate a private utility locating service to ensure buried utilities are identified prior to digging.
- Drill ten (10) geotechnical borings located around the site as determined by the City and ENGINEER to evaluate subsurface conditions:
  - Provide a licensed geotechnical engineer or engineering geologist on a full-time basis during field exploration to obtain samples of the various soils encountered, classify the materials, and maintain a detailed log of the exploration.
  - Seal and return collected soil samples to a laboratory for additional examination and laboratory testing, as required.
  - Install a 2-inch diameter open standpipe piezometer (monitoring well) inside of two (2) of the boreholes for groundwater monitoring.
- Conduct analysis and evaluation of pertinent physical and engineering characteristics of the foundation and subgrade soils based on laboratory tests performed on samples obtained from the explorations. Laboratory testing will include determination of soil moisture content, Atterberg limits, and grain size distribution as applicable to the soils encountered.
- Provide seismic design considerations based on the 2009 or 2012 International Building Code (IBC).
- Develop recommendations for foundation design for the proposed structures. Include discussion of ground improvement techniques and/or pile support of structures as appropriate depending on soil conditions encountered, foundation loads and settlement tolerances of the proposed structures.
- Provide lateral soil pressures and lateral resistance parameters for subsurface elements.
- Provide recommendations for slab-on-grade support.
- Provide recommendations for pavement subgrade support and design sections for parking and driveway areas.
- Provide drainage considerations based on the groundwater conditions encountered or expected and provide dewatering considerations.

- Provide recommendations for earthwork including stripping depth, site preparation, use of on-site soils for structural fill, imported soils and compaction criteria for foundation support.
- Provide conclusions regarding temporary slopes to construct below-grade walls and temporary shoring recommendations, if required.
- Attend up to two (2) meetings in Oak Harbor to discuss results of explorations and preliminary recommendations.

Subtask 1120 Additional Exploration As Authorized

Subtask 1120 provides budget for additional site exploration as deemed necessary and authorized by the City and ENGINEER. Budget is provided for two additional days of drilling and one day of test pits with a subcontracted drill rig and excavator.

Subtask 1130 Archaeological Support

Section 106 of the National Historic Preservation Act (NHPA), SEPA and Executive Order 05-05 requires agencies to consider the effects of their actions on historic properties and to consult with others in carrying out historic preservation activities. Washington State also has a series of RCWs and the Associated WACs that regulate work in and around a range of cultural resources including human remains. The purpose of Subtask 1130 is to provide archaeological support during the geotechnical exploration of the site, in accordance with these regulations, including:

- Assist in developing the Area of Potential Effect (APE).
- Conduct background research on project and study area.
- Provide on-site monitoring and examination of geotechnical samples collected during field exploration.

Task 1100 Assumptions:

1. No special permits are required to complete the scope outlined herein.
2. City will coordinate with existing property owners and provide written permission to access site prior to authorizing work.
3. The site consists of multiple properties including: a car sales and maintenance facility; part of the existing Windjammer Park; and several parking lots. City and ENGINEER will coordinate with Geotechnical Engineer in selecting locations for field exploration during a site visit.
4. Drill cuttings will be disposed on site. Concrete surfacing will be cored in advance of the borings with a concrete corer.
5. Geotechnical Engineer's site visit will serve as the reconnaissance for the Phase I ESA (Task 1200).
6. The cost of filed exploration depends on the number of days of drilling. The budget for Task 1100 assumes two (2) days of drilling. The program may be adjusted within these

two days to complete a number and depth of borings to allow for reasonable characterization of the site.

7. The cost of filed exploration depends on the total depth of drilling. The budget for Task 1100 assumes: one (1) boring of approximately 50 feet below ground surface (bgs); two (2) borings to approximately 20 feet bgs; seven borings of approximately 20 to 30 feet bgs. Additional exploration budget may be used as authorized by City and ENGINEER, if required by field conditions.

8. Piezometers installed during field exploration may be used for future pump or slug testing. These tests are not included in this scope.

Subtask 1130 scope specifically does not include

- A phase one field investigation that includes subsurface testing in the project area;
- Costs associated with completing Historic Property Inventory Forms (HPIFs) for any buildings older than 50 years;
- Costs associated with developing additional plans, protocols, or permits should they be required for this project;
- Costs associated with encountering human remains or other archaeological findings that may be encountered during the field testing.

Task 1100 Deliverables:

1. Draft and Final Preliminary Geotechnical Report (electronic .PDF version) summarizing field work and including conclusions and recommendations for preliminary design.
2. Exploration logs, a site plan, cross sections of the subsurface profile and any supporting test data.
3. A brief project memorandum describing archaeological conditions encountered at the site in compliance with Section 106 of the NHPA.

Task 1100 is a new task with a budget of $55,359. Subtasks 1110 and 1130 are authorized with a budget of $40,134. Subtask 1120 may be authorized by the City at a later date, with a budget of up to $15,225.

TASK 1200 – PHASE 1 ESA

The purpose of Task 1200 is to conduct a Phase 1 Environmental Site Assessment (ESA) to identify the recognized environmental condition (REC) associated with the site in preparation for a future property acquisition. The Phase 1 ESA will be conducted in general accordance with ASTM International (ASTM) Standard E 1527-05 for Phase I ESAs and the U.S. Environmental Protection Agency's (EPA's) Federal Standard 40 CFR Part 312 "Standards and Practices for All Appropriate Inquiries (AAI)."

Complete the services described below by, or under the direction of, an environmental professional as described in 40 CFR Part 312:

- Review readily available geotechnical reports, environmental reports and/or other relevant documents pertaining to environmental conditions at the subject property.

- Review the results of a federal, state, and local environmental database search provided by an outside environmental data service (EDR) for listings of properties with known or suspected environmental concerns on or near the subject property within the search distances specified by ASTM. The database and file review search will include a check for and review of publications or reports on EPA and Washington State Department of Ecology (Ecology) and other state agency websites concerning area-wide soil and groundwater contamination on or adjacent to the subject property. The EDR report will include a search for environmental liens for each parcel comprising the subject property.

- Review regulatory agency files regarding listed properties of potential environmental concern relative to the subject property.

- Identify a key site manager with specific knowledge of past and present property use and request that the key site manager meet on site for an interview during the visual site reconnaissance and/or an interview by telephone if he or she is not available during the site reconnaissance. Identify and interview others familiar with the use and history of the subject property, as available and appropriate, including representatives of current occupants that likely use, store, treat, handle or dispose of hazardous substances now or in the past.

- Interview current owners or occupants of neighboring properties only as necessary to gather information or fill site property use data gaps regarding the subject property or if the subject property is abandoned and no owner or occupant interviews can be conducted.

- Interview past owners and occupants of the subject property as necessary to gather information or fill property use data gaps regarding property use history.

- Interview a representative of the local fire department, health department, police department, planning department, and/or Ecology as necessary to gather information or fill data gaps regarding the history of the subject property and surrounding properties relative to the likely presence of hazardous substances.

- Review historical aerial photographs, fire insurance maps, building department records, city directories, chain-of-title reports, and land use and tax assessor records, as available and appropriate, to identify past development history on and adjacent to the subject property relative to the possible use, generation, storage, release or disposal of hazardous substances. Attempt to identify uses of the subject property from the present back to the time that records show no apparent structures on the property, back to the time that the property was first used for residential, agricultural, commercial, industrial or governmental purposes, or back to 1940, whichever is earliest.

- Review current United States Geological Survey (USGS) topographic maps to identify the physiographic setting of the subject property and provide a statement on the local geologic, soil and groundwater conditions based on our general experience and sources such as geologic maps and soil surveys.

- Conduct a visual reconnaissance of the subject property and adjacent properties to identify visible evidence of RECs.

- Identify the source(s) of potable water for the subject property and current heating and sewage disposal system(s) used at the subject property, if any, and their age if readily available.

- Identify data gaps relative to the Phase I ESA study findings.

- Provide a report with a summary of the Phase I ESA results and identified RECs along with a recommendations regarding the potential for contamination by hazardous substances at the subject property and the significance of any data gaps identified.

- Observe the soil and groundwater conditions for potential contamination during completion of the borings.

Task 1200 Assumptions:

1. The City will complete a brief questionnaire in support of Task 1200 work.

2. The City will provide the names and phone numbers of key individuals with knowledge of the use history of the subject property.

3. If available, the City to provide copies of the following:
   - Any past ESA and/or audit reports;
   - Environmental permits;
   - Registrations for underground and aboveground storage tanks;
   - Material data safety sheets for hazardous substances used or stored on the subject property (if any);
   - Community right-to-know plans pertaining to the subject property; 6) safety plans pertaining to on-site facilities;
   - Reports regarding geotechnical and/or hydrogeologic conditions;
   - Notices of environmental violations and/or environmental liens or property use restrictions;
   - Specialized knowledge or experience and commonly known information of which you are aware regarding the subject property and related environmental conditions; and
   - Explanation for any significant difference between purchase price and market value, if the subject property is not known to be contaminated.

4. Recognized Environmental Conditions (REC) are defined in ASTM E 1527-05 as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

5. The following are specifically not included in Task 1200:
   - Soil, surface water or groundwater sampling and chemical analysis;
   - An environmental compliance audit or an evaluation for the presence of lead-based paint, toxic mold, polychlorinated biphenyls (PCBs) in light ballasts, radon, lead in drinking water, asbestos-containing building materials or urea-formaldehyde insulation in on-site structures or debris or other potentially hazardous building materials;
   - An assessment of vapor intrusion into structures on the property per ASTM Standard E 2600-08.

Task 1200 Deliverables:

1. Phase 1 ESA summary report.

Task 1200 is a new task with a budget of $13,454. Written authorization from the City is required prior to completing this task.

TASK 1300 – ADDITIONAL SITE TECHNICAL/COST ANALYSIS

The purpose of Task 1300 is to conduct additional technical and cost analysis for a potential new site near the Windjammer Vicinity. Technical and cost information developed under Task 1300 will be used to determine the benefits of conducting a full triple bottom line plus technical (TBL+) analysis of the site, according to the criteria and process used to identify the Windjammer Vicinity as the proposed site for a new WWTP. Services for Task 1300 include:

- Evaluate site-specific layout differences associated with potentially locating a WWTP on property near the Windjammer Vicinity. Include wastewater/treated effluent conveyance; geotechnical and groundwater issues identified through Task 1100; and other relevant technical considerations.

- Develop an opinion of probable construction cost for a WWTP located property near the Windjammer Vicinity. Develop a comparative analysis showing how costs may be different for a facility located on this site (versus a facility located on the site proposed through the charrette process).

- Summarize differences into a brief project memorandum. Develop presentation slides illustrating differences in cost and layout. Present information to City Staff and City Council.

Task 1300 Assumptions: None.

Task 1300 Deliverables:

1. Cost/Technical Project Memorandum.

2. City Council presentation slides and information.

Task 1300 is a new task with a budget of $9,170.

EXHIBIT D-3

City of Oak Harbor
Wastewater Treatment Plant Preliminary Design and Facilities Plan
October 4, 2012
Changes from Previous Budget (Through Amendment No. 4)

WORK TASKS	Carollo	BHC	ESA Adolfson	Triangle Associates	Envirolssues	Michael Willis Architects	Cosmo. Engineering Group	Geo-Engineers	Bruce Dees and Associates	ERCI (Archaeologist)	KI&A	Paragon Research	Certified Land Services	Harmsen (Surveyor)	Eel Grass Survey	Total Cost
		Subconsultants														
Hourly Billing Rate																
TASK 100 - PROJECT MANAGEMENT	$8,999	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,999
TASK 200 - PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 300 - FINAL ALTERNATIVES DEVELOPMENT AND SCREENING	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 400 - OUTFALL EVALUTION	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 500 - REUSE OPPORTUNITIES	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 600 - FACILITIES PLAN	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 700 - ENVIRONMENTAL REVIEW AND DOCUMENTATION	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 800 - PUBLIC PROCESS SUPPORT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 900 - MANAGEMENT RESERVE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TASK 1000 - SITE SURVEY AND MAPPING	$6,017	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$54,000	$0	$60,017
TASK 1100 - GEOTECHNICAL EXPLORATION	$8,469	$0	$0	$0	$0	$0	$0	$40,930	$0	$3,513	$0	$0	$0	$0	$0	$52,912
Subtask 1110 - Geotechnical Exploration	$8,469	0	0	0	0	0	0	26,430	0	0	0	0	0	0	0	34899
Subtask 1120 - Additional Investigation As Authorized	0	0	0	0	0	0	0	14,500	0	0	0	0	0	0	0	14500
Subtask 1130 - Archaeological Support	0	0	0	0	0	0	0	0	0	3,513	0	0	0	0	0	3513
TASK 1200 - PHASE 1 ESA	$3,705	$0	$5,000	$0	$0	$0	$0	$4,500	$0	$0	$0	$0	$0	$0	$0	$13,205
TASK 1300 - ADDITIONAL SITE TECHNICAL/COST ANALYSIS	$9,170	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,170
SUBTOTAL COST	$36,360	$0	$5,000	$0	$0	$0	$0	$45,430	$0	$3,513	$0	$0	$0	$54,000	$0	$144,303
SUBCONSULTANT MARKUP (5% for all subconsultants except BHC)			$250					$2,272		$176				$2,700	$0	$5,397
TOTAL COST	$36,360	$0	$5,250	$0	$0	$0	$0	$47,702	$0	$3,689	$0	$0	$0	$56,700	$0	$149,700

Cost Summary (Project Total Through Amendment No. 5)

WORK TASKS	Carollo	BHC	ESA Adolfson	Triangle Associates	Envirolssues	Michael Willis Architects	Cosmo. Engineering Group	Geo-Engineers	Bruce Dees and Associates	ERCI (Archaeologist)	KI&A	Paragon Research	Certified Land Services	Harmsen (Surveyor)	Eel Grass Survey	Total Cost
		Subconsultants														
TASK 100 - PROJECT MANAGEMENT	$55,498	$10,534	$3,264	$6,963	$1,364	$4,902	$3,222	$608	$520	$0	$2,160	$1,072	$831	$0	$0	$99,294
TASK 200 - PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING	$127,197	$104,211	$9,886	$4,298	$0	$16,141	$0	$7,262	$0	$0	$2,880	$1,195	$4,221	$0	$0	$277,290
TASK 300 - FINAL ALTERNATIVES DEVELOPMENT AND SCREENING	$62,597	$41,590	$0	$1,433	$0	$9,408	$0	$0	$4,420	$0	$0	$0	$0	$0	$0	$119,448
TASK 400 - OUTFALL EVALUTION	$7,740	$0	$0	$0	$0	$0	$94,258	$0	$0	$0	$0	$0	$0	$0	$0	$101,997
TASK 500 - REUSE OPPORTUNITIES	$13,644	$7,298	$3,732	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$24,674
TASK 600 - FACILITIES PLAN	$64,816	$42,110	$0	$0	$0	$30,393	$0	$0	$0	$0	$15,840	$0	$0	$0	$0	$153,159
TASK 700 - ENVIRONMENTAL REVIEW AND DOCUMENTATION	$5,330	$0	$54,570	$0	$0	$0	$0	$0	$0	$0	$0	$8,196	$0	$0	$9,425	$77,521
TASK 800 - PUBLIC PROCESS SUPPORT	$92,778	$18,274	$0	$46,364	$46,900	$13,165	$0	$0	$0	$0	$3,360	$0	$0	$0	$0	$220,841
TASK 900 - MANAGEMENT RESERVE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,893
TASK 1000 - SITE SURVEY AND MAPPING	$6,017	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$54,000	$0	$60,017
TASK 1100 - GEOTECHNICAL EXPLORATION	$8,469	$0	$0	$0	$0	$0	$0	$40,930	$0	$3,513	$0	$0	$0	$0	$0	$52,912
TASK 1200 - PHASE 1 ESA	$3,705	$0	$5,000	$0	$0	$0	$0	$4,500	$0	$0	$0	$0	$0	$0	$0	$13,205
TASK 1300 - ADDITIONAL SITE TECHNICAL/COST ANALYSIS	$9,170	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,170
SUBTOTAL COST	$456,844	$223,016	$76,451	$59,058	$48,264	$74,009	$97,480	$53,300	$4,940	$3,513	$24,240	$10,463	$5,052	$54,000	$9,425	$1,213,447
SUBCONSULTANT MARKUP (5% for all subconsultants except BHC)	$0	$0	$3,696	$2,953	$2,414	$3,704	$4,874	$2,665	$247	$176	$1,212	$478	$253	$2,700	$471	$28,914
TOTAL COST	$456,844	$223,016	$80,149	$62,011	$50,678	$77,713	$102,354	$55,965	$5,187	$3,689	$25,452	$10,941	$5,305	$56,700	$9,896	$1,242,361

CITY OF Oak Harbor
WHIDBEY ISLAND, WASHINGTON

Memo

Date: 10/8/12

To: Mayor Dudley

Cc:

From: Joe Stowell, Interim City Engineer

RE: Consultant Agreement Amendment #4- Carollo Engineers
WWTP Preliminary Engineering and Facilities Plan

Attached for your signature are three original copies of Consultant Agreement Amendment Number 4 with Carollo Engineers.

The proposed amendment provides a scope of work and funding for an eel grass study for the WWTP outfall. Now that a vicinity has been chosen for the proposed WWTP, the outfall location is more secure. Because an eel grass study is necessary and only able to be completed certain times of the year, the work needed to be completed before the end of last month. In an oversight, the amendment did not make it to the Mayor before the work was completed. Please accept our apologies. As soon as we realized the amendment had not been completed, we started processing the document.

The maximum payable amount of $1,089,561 does not change. We are proposing to use $9,896 of management reserve funds to pay for the study. $3,933 will remain in the management reserve.

Please contact me at 279-4520 if you have any questions.

Consultant Agreement Amendment Number 4	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4522	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00	Execution Date 9/16/10	Completion Date (Prior) December 2012
Project Title: Preliminary Engineering and Facilities Plan	New Maximum Amount Payable $1,089,561	
Description of Work: This phase of the work includes development of preliminary engineering and a Facilities Plan.		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers
executed on 9/16/10 and identified as: Preliminary Engineering and Facilities Plan

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:

SCOPE OF WORK is hereby amended to add the following:
Please see the attached scope of work.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: December 2013
TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum payable amount of $1,089,561 does not change. The management reserve fund has been reduced by $9,896 for the additional services. The remaining balance of the management reserve fund is $3,933.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian Matson, Vice President
Consultant Signature

By: Scott Dudley, Mayor
Approving Authority Signature

10/9/12
Date

EXHIBIT B - SCOPE OF SERVICES
AMENDMENT NO. 4 – September 17, 2012

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

AMENDMENT 4 PURPOSE

An alignment for a new outfall adjacent to or within the alignment for the existing Rotating Biological Contactor (RBC) treatment plant outfall has been selected. Areas around Oak Harbor Bay are known to contain eelgrass (*Zostera marina*). To satisfy permitting requirements for the new outfall, an underwater survey is required to detect the presence of eelgrass and macroalgae along the proposed outfall alignment. To be considered effective the survey must be conduced in the summer or fall months, prior to October 1. The purpose of this amendment is to complete the eelgrass survey, which will be funded from the Project Management Reserve.

SCOPE OF SERVICES

TASK 100 – PROJECT MANAGEMENT

No change to Task 100 Scope and Contract Limit

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

No change to Task 200 Scope and Contract Limit

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

No changes to Task 300 Scope and Contract Limit.

TASK 400 – OUTFALL EVALUATION

No changes to Task 400 Scope and Contract Limit.

TASK 500 – REUSE OPPORTUNITIES

No changes to Task 500 Scope and Contract Limit.

TASK 600 – FACILITIES PLAN

No changes to Task 600 Scope and Contract Limit.

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

The eelgrass survey of the outfall alignment will be added as subtask 740.

Subtask 740 – Eelgrass and Macroalgae Survey

Conduct an underwater survey for the presence of eelgrass (*Zostera marina*) and macroalgae along the existing RBC outfall alignment. The survey will be conducted using the protocol described in the Washington State Department of Fish and Wildlife *Eelgrass / Macroalgae Habitat Interim Survey Guidelines* (WDFW 2008). The survey will consist of five (5) transects documenting the eelgrass and macroalgae density along the proposed alignment, and at parallel 10 ft and 25 ft distances from the alignment.

The survey findings will be summarized in a project report. The report will include eelgrass density data (including mean and variance) as well as a percent cover of macroalgae. The report will also include a map of the survey area, displaying eelgrass locations, macroalgae concentrations, survey transect locations and sediment characteristics.

Subtask 740 Assumptions:

1. The JARPA and BA permits will be submitted within 2 years of the survey date. If the permits are submitted more than two years after the eelgrass survey, the survey may need to be repeated.
2. The summary report will provide sufficient information for the JARPA and BA permits.
3. The permitting authorities may require additional surveys at the time of the outfall construction to document eelgrass / macroalgae densities at the time of construction.
4. If eelgrass is found along the alignment a broader survey or a more advanced survey may be required.

The Task 700 scope has been increased by $9,896 to reflect the additional scope.

TASK 800 – PUBLIC PROCESS SUPPORT

No changes to Task 800 Scope and Contract Limit.

TASK 900 – MANAGEMENT RESERVE

This objective of this task is to provide additional engineering services throughout delivery of the Project (e.g. additional workshops, meetings, evaluations, etc.). Any work performed under this task will require prior written authorization from the City's Project Manager. Authorization will specify the requested scope of services and cost for the work, which will be reviewed, negotiated, and agreed upon by the Project Manager and Consultant prior to performing the work.

To fund the scope needed for Subtask 740, the Management Reserve budget will decrease by $9,896. This will bring the fund's balance to $3,933.

Consultant Agreement Amendment Number 4	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4522	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00	Execution Date 9/16/10	Completion Date (Prior) December 2012
Project Title: Preliminary Engineering and Facilities Plan	New Maximum Amount Payable $1,089,561	
Description of Work: This phase of the work includes development of preliminary engineering and a Facilities Plan.		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers
executed on 9/16/10 and identified as: Preliminary Engineering and Facilities Plan

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:

SCOPE OF WORK is hereby amended to add the following:
Please see the attached scope of work.

SCOPE OF WORK is hereby changed and supplemented with the following:

PROJECT COMPLETION DATE AMENDED TO: December 2013

TIME OF COMPLETION – SCOPE OF SERVICES:

PAYMENT shall be amended as follows:
The maximum payable amount of $1,089,561 does not change. The management reserve fund has been reduced by $9,896 for the additional services. The remaining balance of the management reserve fund is $3,933.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: BRIAN MATSON, VICE PRESIDENT

Consultant Signature

By: Scott Dudley MAYOR

Approving Authority Signature

10/9/12
Date

EXHIBIT B - SCOPE OF SERVICES
AMENDMENT NO. 4 – September 17, 2012

ENGINEERING SERVICES FOR CITY OF OAK HARBOR
WASTEWATER TREATMENT PLANT
PRELIMINARY ENGINEERING AND FACILITIES PLAN

AMENDMENT 4 PURPOSE

An alignment for a new outfall adjacent to or within the alignment for the existing Rotating Biological Contactor (RBC) treatment plant outfall has been selected. Areas around Oak Harbor Bay are known to contain eelgrass (*Zostera marina*). To satisfy permitting requirements for the new outfall, an underwater survey is required to detect the presence of eelgrass and macroalgae along the proposed outfall alignment. To be considered effective the survey must be conduced in the summer or fall months, prior to October 1. The purpose of this amendment is to complete the eelgrass survey, which will be funded from the Project Management Reserve.

SCOPE OF SERVICES

TASK 100 – PROJECT MANAGEMENT

No change to Task 100 Scope and Contract Limit

TASK 200 – PRELIMINARY ALTERNATIVES DEVELOPMENT AND SCREENING

No change to Task 200 Scope and Contract Limit

TASK 300 – FINAL ALTERNATIVES DEVELOPMENT AND SCREENING

No changes to Task 300 Scope and Contract Limit.

TASK 400 – OUTFALL EVALUATION

No changes to Task 400 Scope and Contract Limit.

TASK 500 – REUSE OPPORTUNITIES

No changes to Task 500 Scope and Contract Limit.

TASK 600 – FACILITIES PLAN

No changes to Task 600 Scope and Contract Limit.

TASK 700 – ENVIRONMENTAL REVIEW AND DOCUMENTATION

The eelgrass survey of the outfall alignment will be added as subtask 740.

Subtask 740 – Eelgrass and Macroalgae Survey

Conduct an underwater survey for the presence of eelgrass (*Zostera marina*) and macroalgae along the existing RBC outfall alignment. The survey will be conducted using the protocol described in the Washington State Department of Fish and Wildlife *Eelgrass / Macroalgae Habitat Interim Survey Guidelines* (WDFW 2008). The survey will consist of five (5) transects documenting the eelgrass and macroalgae density along the proposed alignment, and at parallel 10 ft and 25 ft distances from the alignment.

The survey findings will be summarized in a project report. The report will include eelgrass density data (including mean and variance) as well as a percent cover of macroalgae. The report will also include a map of the survey area, displaying eelgrass locations, macroalgae concentrations, survey transect locations and sediment characteristics.

Subtask 740 Assumptions:

1. The JARPA and BA permits will be submitted within 2 years of the survey date. If the permits are submitted more than two years after the eelgrass survey, the survey may need to be repeated.
2. The summary report will provide sufficient information for the JARPA and BA permits.
3. The permitting authorities may require additional surveys at the time of the outfall construction to document eelgrass / macroalgae densities at the time of construction.
4. If eelgrass is found along the alignment a broader survey or a more advanced survey may be required.

The Task 700 scope has been increased by $9,896 to reflect the additional scope.

TASK 800 – PUBLIC PROCESS SUPPORT

No changes to Task 800 Scope and Contract Limit.

TASK 900 – MANAGEMENT RESERVE

This objective of this task is to provide additional engineering services throughout delivery of the Project (e.g. additional workshops, meetings, evaluations, etc.). Any work performed under this task will require prior written authorization from the City's Project Manager. Authorization will specify the requested scope of services and cost for the work, which will be reviewed, negotiated, and agreed upon by the Project Manager and Consultant prior to performing the work.

To fund the scope needed for Subtask 740, the Management Reserve budget will decrease by $9,896. This will bring the fund's balance to $3,933.

Consultant Agreement Amendment Number: 11	Organization and Address: City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: (360) 279-4521	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amend 1-5) and 8549A.10 (Amend 6-11)	Execution Date 09/06/2010	Completion Date January 2016
Project Title: Engineering, Facilities Plan and Preliminary Design ENG 15-02 (previously ENG 13-05	New Maximum Amount Payable $8,109,264	
Description of Work: This Amendment authorizes services to complete construction phase services associated with the City of Oak Harbor Outfall Replacement Project.		

The Local Agency of City of Oak Harbor desires to supplement the agreement entered into with Carollo Engineers, Inc. and executed on September 16, 2010 and identified as Preliminary Engineering and Facilities Plan.

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:

SCOPE OF WORK is hereby changed to read:
The existing Scope of Services will remain open and will be completed for the authorized budget. Please see the attached Scope of Services (Exhibit B) for additional phases of work.

TIME FOR BEGINNING AND COMPLETION IS AMENDED to read: No Change

PAYMENT shall be amended as follows:
The maximum total contract value is increased from $7,907,388 to $8,109,264. This maximum upper limit includes a Management Reserve as indicated in prior amendments. Exhibit D-3 summarizes the level of effort associated with Amendment No. 11 services.

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

By: Carollo Engineers, Inc.

Consultant Signature
Brian R. Matson, Senior Vice President

Consultant Signature
Karl W. Hadler, Associate Vice President

By: Scott Dudley, Mayor

Approving Authority Signature

Date

EXHIBIT B – SCOPE OF SERVICES

ENGINEERING SERVICES FOR THE CITY OF OAK HARBOR OUTFALL REPLACEMENT PROJECT

BACKGROUND

The City of Oak Harbor (City) has completed Preliminary Design documents, and authorized Final Design for a new wastewater treatment plant (CWF). Construction of a new marine outfall is needed to replace the existing outfall, which has ceased functioning.

Carollo Engineers (Consultant) will provide construction support and over sight, inspection and other engineering services during construction for the Outfall Replacement Project (Project) based on a General Contractor/Construction Manager (GC/CM) delivery method, and as described herein.

It is assumed that the Owner will provide field staff including the City's Project Manager and Field Inspectors, as well as independent third party construction management staff. Consultant will provide the following staff over the duration of the Project:

- Project Manager (PM).
- Project Engineer/Field Inspector (PE/FI) to assist with construction support and field engineering services.
- Marine Outfall Design Engineer (ODE) to provide inspection of offshore marine activities, submittal review, and timely design interpretations and clarifications.
- Office Administrator to provide contract documentation of engineering services during construction.
- Public involvement professionals to facilitate outreach activities associated with project planning and outfall construction.

LEVEL OF EFFORT

The level of construction assistance required by Consultant is highly dependent on the GC/CM's performance and the level of assistance provided by the City. The City and the Consultant will review job progress on a monthly basis in accordance with the construction schedule, to verify the effort to complete Project tasks as defined by this Scope of Services (SOS). With written authorization from the City, adjustments to the SOS and Consultant's level of effort will be made as deemed appropriate by Consultant and the City Project Manager. The estimated level of effort and associated fee schedule for the services defined herein is presented in Exhibit D-3.

SCOPE OF SERVICES

This Scope of Services is divided into the following tasks:

Task 200 – Public Process Support – Construction
Task 810 – Project Management
Task 820 – Construction Meetings
Task 830 – Field Services During Construction
Task 840 – Office Services During Construction
Task 850 – Baseline Sediment Sampling

SCHEDULE

This SOS is based on on-site staffing needs to support the construction duration of six (6) months, as currently estimated by the GC/CM Contractor.

Milestone	GC/CM Estimate of Construction Schedule
Notice to Proceed (NTP)	April 2015
Substantial Completion	October 2015
Final Completion	Clean Water Facility Start-Up

TASK 200 – PUBLIC PROCESS SUPPORT – CONSTRUCTION

Provide additional public process support, materials development, and outreach as outlined in subtasks:

Subtask 210 – Construction Communications Plan

Assist City in developing project strategy for construction communications, to be defined in a Construction Communications Plan. Plan shall include a "Good Neighbor Plan" appendix, to be approved by City Council by resolution.

Subtask 210 Assumptions:

1. Plan will be coordinated with City, GC/CM, and Third Party CM.
2. One draft, with one round of reviews is assumed to finalize plan.
3. Budget for meetings required to finalize plan is included in Subtask 240.

Subtask 210 Deliverables:

1. Construction Communications Plan with a "Good Neighbor Plan" Appendix, one (1) draft and one (1) final.

Subtask 220 – Outfall Construction Launch Materials

Support near-term activities to ready for launch of outfall construction in June 2015. This can include:

- Up to three (3) print materials (e.g., bill stuffer, project one-pager, project newsletter);
- One (1) display ad for media;
- Review of and contribution toward Council briefing template for construction/project progress; and
- Display/banner for construction fencing/way finding.

Subtask 220 Assumptions:

1. The City shall pay directly for any costs associated with mass printing, postage, newspaper advertising, and display materials.

2. Limited time is assumed for ongoing Council template review and development (up to two (2) hours per month after creation for four (4) months). Any additional support for ongoing Council briefings review will require review of scope of work and budget.
3. Budget for meetings required to finalize materials is included in Subtask 240.

Subtask 220 Deliverables:

1. Up to three (3) print materials for distribution.
2. Up to one (1) display ad for media.
3. One (1) display banner.

Subtask 230 – Web Development Supporting Construction

Ready website for construction, including refresh of Project Library page for ease of navigation and to easily capture history of project. Update website on a weekly basis during outfall construction.

Subtask 230 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City staff.
2. Outfall construction duration assumed to be 24 weeks for weekly activities.
3. Updates to web do not require in-person meetings/coordination and can be completed via email correspondence/teleconference.

Subtask 230 Deliverables:

1. Update project website library page.
2. Weekly website updates during outfall construction.

Subtask 240 – Ongoing Planning and Materials/Product Development Supporting Construction

Support day-to-day activities and strategic planning associated with project construction. This will include monthly meetings in Oak Harbor (total five (5)). Activities include a weekly construction update call in order to compile weekly project email updates (up to 25).

Develop graphics and products that support project construction outreach (such as project base map, contact cards, comment cards, press releases, advertisements for project events), to be defined through development of Construction Communications Plan in Task 210.

Subtask 240 Assumptions:

1. Monthly project meetings shall include up to two (2) subconsultant staff.
2. Outfall construction duration assumed to be 24 weeks for weekly activities.
3. Content for weekly construction updates is assumed will be generated by other project staff, to be compiled and edited by Consultant for public consumption.

4. Up to seven (7) additional public products/graphics materials assumed in this Subtask, to be further defined through completion of Task 210 (Construction Communications Plan).
5. All written or web materials and communications products will be reviewed and approved by City staff.
6. Event planning support for a project groundbreaking or other commemorative event is not included in this subtask. Subconsultant support for such an event would require additional conversation/definition of scope of work and roles/responsibilities.
7. Consultant shall provide limited media strategy/coordination associated with this task.

Subtask 240 Deliverables:

1. Seven (7) additional project graphics/public communication products, on an as needed basis.

TASK 810 – PROJECT MANAGEMENT

Provide project management services throughout the duration of the Project, including:

1. Management of Consultant's team to track schedule and budget, work elements accomplished, work items planned, labor, scope changes, and time and budget needed to complete this SOS. Coordinate with PE/FI to review budget status, and coordinate Project activities.
2. Prepare monthly Project progress reports with each monthly invoice that identify the month's accomplishments, anticipated tasks for the next month, and current or potential issues or changes.
3. Manage, coordinate, and monitor subconsultant's efforts.
4. Issue a Declaration of Completion letter in accordance with Department of Ecology (DOE) requirements, following Final Acceptance.

Task 810 Assumptions:

1. The monthly progress report will contain a summary of cost to date and remaining budget for each major task.
2. A schedule update will be included in the monthly progress report, and will account for all activities and tasks defined in the SOS.
3. Project duration is approximately 24 weeks.

Task 810 Deliverables:

1. Monthly progress reports.
2. Declaration of Completion letter by the Engineer of Record.

TASK 820 – CONSTRUCTION MEETINGS

Provide design team support at construction meetings as required throughout the Project, including:

Subtask 821 – Construction Kick-off Conference

Participate in a Construction Kick-Off Conference attended by the City, Consultant, GC/CM, subcontractors, and other interested parties to confirm roles, responsibilities, and other pertinent items related to construction of the Project.

Subtask 821 Assumptions:

1. City and GC/CM will schedule and conduct the Construction Kick-Off Conference.
2. Three (3) members of the Consultant staff will attend, including the PM, PE/FI, and ODE.

Subtask 821 Deliverables:

1. Meeting materials, as requested by the City.
2. Comments on meeting minutes issued by the GC/CM or City.

Subtask 822 – Progress Meetings

Attend weekly progress meetings that focus on the status of submittal reviews, requests for information (RFI's), change order requests, design clarifications, schedule issues, construction quality, and other issues relevant to the Project.

Subtask 822 Assumptions:

1. GC/CM will schedule, coordinate, and conduct Weekly Progress Meetings and prepare necessary materials and minutes.
2. The Consultant's PE/FI will attend Weekly Progress Meetings, and ODE will attend up to four (4) meetings.

Subtask 822 Deliverables:

1. Written recommendations in response to GC/CM action items, as required.

TASK 830 – FIELD SERVICES DURING CONSTRUCTION

Provide a Project PE/FI to serve as the first point of contact in the field for the City and the GC/CM. The PE/FI will be responsible for the following tasks:

1. Monitor Construction for Compliance with Contract Documents: Review and monitor construction work for compliance with the contract documents. Document and report any observed non-conformances and deficiencies to the City and GC/CM, and monitor the correction of these deficiencies.

2. Provide and Manage Subconsultant Field Inspection Personnel: Manage the activities of all subconsultant field inspection personnel. Coordinate with subconsultant performing forage fish sampling for Hydraulic Project Approval (HPA). Provide supplemental inspection of general, civil, and mechanical activities. Collect and log field inspection reports by others, and prepare inspection reports when inspections occur. Summarize weekly and monthly inspection reports for the City.
3. Attend and Participate in Construction Meetings: Attend and participate in construction meetings, including weekly progress meetings.
4. Track Requests for Information (RFI): Coordinate and manage the RFI process according to the contract documents. Screen all RFIs and determine their validity before responding or distributing to subconsultant. Forward RFIs and clarifications to the ODE when appropriate.
5. Track Shop Drawing Submittals: Coordinate and manage the shop drawing and submittal review process. Screen the submittals and determine their completeness before distributing to the ODE for review.
6. Prepare Field Memos and Clarifications: Manage and issue field memos and clarifications of drawings and specifications by the ODE to the GC/CM.
7. Review Quantities in the Monthly Progress Payment Requests: Compare requested quantities in the GC/CM's monthly progress payment requests to the quantities completed, as requested by the City's Project Manager.
8. Review Construction Schedule: Review and provide comments to the City regarding the baseline schedule and monthly updates consistent with the contract document requirements. The review will focus on key elements such as logic, duration of activities, duration of startup and testing, and construction sequencing constraints and milestones.
9. Review Monthly Construction Progress Reports: Review monthly construction progress reports prepared by the GC/CM and provide comments to the City's Project Manager. It is anticipated that reports will include compliance with progress schedule, description of work completed, Project issues, potential claims status, and Project photographs.
10. Review Change Order Requests: Review and provide comments to the City on change order requests based on changes in scope and conditions. Assist the City's Project Manager in developing change order value. Incorporate approved change orders into the contract.
11. Photographic Documentation of Construction: Prepare periodic photographic records of site construction, in conjunction with inspection reports.
12. Conduct Final Inspection: Schedule and conduct a final inspection of the completed facilities and issue punch lists of uncompleted items where necessary. Assist the City in negotiation of unsettled changes or disputes associated with these inspections, as requested. Advise City when final punch list items have been completed or resolved, and recommend final acceptance by the City.

Task 830 Assumptions:

1. PE/FI will be on-site as needed throughout the duration of the Project. Budget is based on PE/FI providing an average of six (6) hours per week (15% commitment) over the six (6) month Project duration, between NTP and final acceptance. This time is allocated to both on-site observation of work under this task, and attendance of weekly progress meetings.
2. Special testing and inspection associated with permitting requirements will be scheduled, provided for, and managed by the GC/CM and/or the City.

Task 830 Deliverables:

1. Daily inspection logs and photographs.
2. Monthly summary inspection reports.
3. Review comments on Weekly Progress Meeting Minutes.
4. Review comments on Monthly Construction Progress Reports.
5. Tracking logs for RFI's, submittals, field memos, design clarifications, change order requests, etc.

TASK 840 – OFFICE SERVICES DURING CONSTRUCTION

Provide office engineering services during construction, including:

Subtask 841 – Requests for Information (RFI)

Provide interpretation, review, and responses to RFIs and incorporate decisions made during design into RFI responses.

Subtask 841 Assumptions:

1. Consultant's effort includes services to research, respond, and document each RFI in accordance with the contract documents.
2. Budget is based on 20 RFI's with an average effort of one (1) hour per each to review and issue final responses drafted by the ODE. The ODE's scope of services included time for detailed RFI review.
3. The overall level of effort is reduced based on the assumption that the GC/CM will proactively coordinate these services and provide high quality submittals.

Subtask 841 Deliverables:

1. Up to 20 written RFI responses.

Subtask 842 – Review of Shop Drawings and Submittals

Review shop drawing and submittals (test certifications and other specified reports) and provide written responses, including submittals and/or associated re-submittals as described below.

Subtask 842 Assumptions:

1. GC/CM will implement quality control measures to screen each submittal prior to forwarding to Engineer for action. The overall level of effort is reduced based on the assumption that the GC/CM will proactively coordinate these services and provide high quality submittals.
2. Consultant's effort includes services to review and respond to each shop drawing, and to document responses in accordance with the contract documents.
3. Budget is based on a total of 32 basic submittals at 0.5 hours of effort each to review and issue final responses by the ODE. The ODE's scope of services includes time for detailed submittal review.

Subtask 842 Deliverables:

1. Up to 32 submittal responses in accordance with the contract documents.

Subtask 843 – Review of Schedule of Value and Payment Applications

Review contractor's schedule of value, draft payment applications, and provide comment to City for information and/or action.

Subtask 843 Assumptions:

1. Consultant's effort includes services to review the contractor's schedule of value, and draft payment applications. Written responses summarizing the review shall be provided to the City's PM.
2. Budget is based on a total of four (4) hours to review the schedule of values, and two (2) hours effort to review each draft payment application (up to 5 monthly payment applications, and 1 final payment application).
3. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review the schedule of value, draft payment applications, and recommend appropriate modifications to their contractor, prior to the Consultants review.

Subtask 843 Deliverables:

1. Up to six (6) payment application responses in accordance with the contract documents.

Subtask 844 – Record Drawings

Upon completion of project, Consultant will review GC/CM's as-built drawings, produce record drawings in Auto CAD format from the information provided, and will inform Owner of any known inaccuracies and/or omissions on the GC/CM's drawings. The Consultant will not be responsible for incorrect information that has been provided by others, or omitted information that should have been provided by others that was previously unknown to the Consultant.

Subtask 844 Assumptions:

1. Budget is based on a total of four (4) hours to review GC/CM as-built drawings, and 40 hours to produce record drawings from the information provided.
2. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review their contractor's work, and incorporate as-built information as work progresses.

Subtask 844 Deliverables:

1. Written review comments following review of as-built drawings provided by GC/CM.
2. Outfall record drawings in Auto CAD format.

Subtask 845 – Claim Review

As directed by the City, evaluate claims due to changed conditions, project delays, or design errors/omissions. Assist in evaluating the claimed impact by the Contractor. Prepare written responses to the claims merit, and submit written documentation to the City for action.

Subtask 845 Assumptions:

1. Budget is based on a total of one (1) claim with an average effort of eight (8) hours to review and respond.
2. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review and dismiss any unsubstantiated claims by their subcontractor(s).

Subtask 845 Deliverables:

1. Written review comments and recommendations associated with the claim.

TASK 850 – BASELINE SEDIMENT SAMPLING

Following precedent from other aquatic lands easements for municipal WWTP outfalls, DNR will require baseline sediment sampling in the vicinity of the new diffuser. A sediment sampling and analysis plan including four (4) proposed sediment sampling stations will be submitted to DNR for approval. If any samples exceed any of the 47 SMS chemicals, then Consultant will communicate with DOE and DNR to determine whether bioassay analysis is required.

Task 850 Assumptions:

1. Budget is based on four (4) sediment samples, analysis of 47 sediment management standard chemicals, dioxin, furan, and conventional sediment variables.
2. No sediment sample collection for bioassays (toxicity testing) is anticipated. Budget does not include any additional biological testing that may be required by DNR.

Task 850 Deliverables:

1. Sediment sampling and analysis plan will be submitted to DNR for approval.
2. Laboratory report with sediment testing results.

City of Oak Harbor
CWF Outfall Replacement Project
Level of Effort Estimate
April 24, 2015

WORK TASKS	Project Manager	Design Manager	PE/FI	SR. CAD Designer	WP/ Admin. Support	Carollo Hours	Carollo DL Cost	Carollo Indirect Cost	Carollo Expenses	Subtotal Carollo Cost	Subconsultant Cost		Total Cost
											CME	EI	
Direct Labor (DL) Rates	$88	$76	$58	$40	$27								
TASK 200 - Public Process - Construction													
Subtask 210 - Construction Communication Plan												$15,000	$15,000
Subtask 220 - Outfall Launch Materials												$9,500	$9,500
Subtask 230 - Web Development Supporting Construction												$10,000	$10,000
Subtask 240 - On-going Planning and Material Development												$22,000	$22,000
Task 200 Subtotal	0	0	0	0	0	0	$0	$0	$0	$0	$0	$56,500	$56,500
TASK 810 - Project Management	16				12	28	$1,732	$3,291	$406	$5,428			$5,428
Task 810 Subtotal	16	0	0	0	12	28	$1,732	$3,291	$406	$5,428	$0	$0	$5,428
TASK 820 - Project Meetings													
Subtask 821 - Construction Kick-Off Meeting		8	8			16	$1,072	$2,037	$238	$3,347			$3,347
Subtask 822 - Progress Meetings		16	72			88	$5,392	$10,245	$1,271	$16,908			$16,908
Task 820 Subtotal	0	24	80	0	0	104	$6,464	$12,282	$1,509	$20,254	$0	$0	$20,254
TASK 830 - Field Services During Construction			60			60	$3,480	$6,612	$852	$10,944	$49,218		$60,162
Task 830 Subtotal	0	0	60	0	0	60	$3,480	$6,612	$852	$10,944	$49,218	$0	$60,162
TASK 840 - Office Services During Construction													
Subtask 841 - Request for Information			20		16	36	$1,592	$3,025	$475	$5,092			$5,092
Subtask 842 - Review of Shop Drawings and Submittals			16		16	32	$1,360	$2,584	$419	$4,363			$4,363
Subtask 843 - Review of Schedule of Values / Payment Apps			4			4	$232	$441	$57	$730			$730
Subtask 844 - Record Drawings			4	40		44	$1,832	$3,481	$573	$5,886			$5,886
Subtask 845 - Claim Review	4	4	4			12	$888	$1,687	$184	$2,760			$2,760
Task 840 Subtotal	4	4	48	40	32	128	$5,904	$11,218	$1,708	$18,830	$0	$0	$18,830
TASK 850 - Baseline Sediment Sampling							$0	$0	$0	$0	$27,391		$27,391
Task 850 Subtotal	0	0	0	0	0	0	$0	$0	$0	$0	$27,391	$0	$27,391
SUBTOTAL AUTHORIZED BUDGET	**20**	**28**	**188**	**40**	**44**	**320**	**$17,580**	**$33,402**	**$4,475**	**$55,457**	**$76,609**	**$56,500**	**$188,566**
CAROLLO FEE (12% of Carollo Cost)													**$6,655**
SUBCONSULTANT MARKUP (5% of Subconsultant Cost)											$3,830	$2,825	**$6,655**
TOTAL AUTHORIZED BUDGET													**$201,876**

EXHIBIT B – SCOPE OF SERVICES

ENGINEERING SERVICES FOR THE CITY OF OAK HARBOR OUTFALL REPLACEMENT PROJECT

BACKGROUND

The City of Oak Harbor (City) has completed Preliminary Design documents, and authorized Final Design for a new wastewater treatment plant (CWF). Construction of a new marine outfall is needed to replace the existing outfall, which has ceased functioning.

Carollo Engineers (Consultant) will provide construction support and over sight, inspection and other engineering services during construction for the Outfall Replacement Project (Project) based on a General Contractor/Construction Manager (GC/CM) delivery method, and as described herein.

It is assumed that the Owner will provide field staff including the City's Project Manager and Field Inspectors, as well as independent third party construction management staff. Consultant will provide the following staff over the duration of the Project:

- Project Manager (PM).
- Project Engineer/Field Inspector (PE/FI) to assist with construction support and field engineering services.
- Marine Outfall Design Engineer (ODE) to provide inspection of offshore marine activities, submittal review, and timely design interpretations and clarifications.
- Office Administrator to provide contract documentation of engineering services during construction.
- Public involvement professionals to facilitate outreach activities associated with project planning and outfall construction.

LEVEL OF EFFORT

The level of construction assistance required by Consultant is highly dependent on the GC/CM's performance and the level of assistance provided by the City. The City and the Consultant will review job progress on a monthly basis in accordance with the construction schedule, to verify the effort to complete Project tasks as defined by this Scope of Services (SOS). With written authorization from the City, adjustments to the SOS and Consultant's level of effort will be made as deemed appropriate by Consultant and the City Project Manager. The estimated level of effort and associated fee schedule for the services defined herein is presented in Exhibit D-3.

SCOPE OF SERVICES

This Scope of Services is divided into the following tasks:

Task 200 – Public Process Support – Construction
Task 810 – Project Management
Task 820 – Construction Meetings
Task 830 – Field Services During Construction
Task 840 – Office Services During Construction
Task 850 – Baseline Sediment Sampling

SCHEDULE

This SOS is based on on-site staffing needs to support the construction duration of six (6) months, as currently estimated by the GC/CM Contractor.

Milestone	GC/CM Estimate of Construction Schedule
Notice to Proceed (NTP)	April 2015
Substantial Completion	October 2015
Final Completion	Clean Water Facility Start-Up

TASK 200 – PUBLIC PROCESS SUPPORT – CONSTRUCTION

Provide additional public process support, materials development, and outreach as outlined in subtasks:

Subtask 210 – Construction Communications Plan

Assist City in developing project strategy for construction communications, to be defined in a Construction Communications Plan. Plan shall include a "Good Neighbor Plan" appendix, to be approved by City Council by resolution.

Subtask 210 Assumptions:

1. Plan will be coordinated with City, GC/CM, and Third Party CM.
2. One draft, with one round of reviews is assumed to finalize plan.
3. Budget for meetings required to finalize plan is included in Subtask 240.

Subtask 210 Deliverables:

1. Construction Communications Plan with a "Good Neighbor Plan" Appendix, one (1) draft and one (1) final.

Subtask 220 – Outfall Construction Launch Materials

Support near-term activities to ready for launch of outfall construction in June 2015. This can include:

- Up to three (3) print materials (e.g., bill stuffer, project one-pager, project newsletter);
- One (1) display ad for media;
- Review of and contribution toward Council briefing template for construction/project progress; and
- Display/banner for construction fencing/way finding.

Subtask 220 Assumptions:

1. The City shall pay directly for any costs associated with mass printing, postage, newspaper advertising, and display materials.

2. Limited time is assumed for ongoing Council template review and development (up to two (2) hours per month after creation for four (4) months). Any additional support for ongoing Council briefings review will require review of scope of work and budget.
3. Budget for meetings required to finalize materials is included in Subtask 240.

Subtask 220 Deliverables:

1. Up to three (3) print materials for distribution.
2. Up to one (1) display ad for media.
3. One (1) display banner.

Subtask 230 – Web Development Supporting Construction

Ready website for construction, including refresh of Project Library page for ease of navigation and to easily capture history of project. Update website on a weekly basis during outfall construction.

Subtask 230 Assumptions:

1. All written or web materials and communications products will be reviewed and approved by City staff.
2. Outfall construction duration assumed to be 24 weeks for weekly activities.
3. Updates to web do not require in-person meetings/coordination and can be completed via email correspondence/teleconference.

Subtask 230 Deliverables:

1. Update project website library page.
2. Weekly website updates during outfall construction.

Subtask 240 – Ongoing Planning and Materials/Product Development Supporting Construction

Support day-to-day activities and strategic planning associated with project construction. This will include monthly meetings in Oak Harbor (total five (5)). Activities include a weekly construction update call in order to compile weekly project email updates (up to 25).

Develop graphics and products that support project construction outreach (such as project base map, contact cards, comment cards, press releases, advertisements for project events), to be defined through development of Construction Communications Plan in Task 210.

Subtask 240 Assumptions:

1. Monthly project meetings shall include up to two (2) subconsultant staff.
2. Outfall construction duration assumed to be 24 weeks for weekly activities.
3. Content for weekly construction updates is assumed will be generated by other project staff, to be compiled and edited by Consultant for public consumption.

4. Up to seven (7) additional public products/graphics materials assumed in this Subtask, to be further defined through completion of Task 210 (Construction Communications Plan).
5. All written or web materials and communications products will be reviewed and approved by City staff.
6. Event planning support for a project groundbreaking or other commemorative event is not included in this subtask. Subconsultant support for such an event would require additional conversation/definition of scope of work and roles/responsibilities.
7. Consultant shall provide limited media strategy/coordination associated with this task.

Subtask 240 Deliverables:

1. Seven (7) additional project graphics/public communication products, on an as needed basis.

TASK 810 – PROJECT MANAGEMENT

Provide project management services throughout the duration of the Project, including:

1. Management of Consultant's team to track schedule and budget, work elements accomplished, work items planned, labor, scope changes, and time and budget needed to complete this SOS. Coordinate with PE/FI to review budget status, and coordinate Project activities.
2. Prepare monthly Project progress reports with each monthly invoice that identify the month's accomplishments, anticipated tasks for the next month, and current or potential issues or changes.
3. Manage, coordinate, and monitor subconsultant's efforts.
4. Issue a Declaration of Completion letter in accordance with Department of Ecology (DOE) requirements, following Final Acceptance.

Task 810 Assumptions:

1. The monthly progress report will contain a summary of cost to date and remaining budget for each major task.
2. A schedule update will be included in the monthly progress report, and will account for all activities and tasks defined in the SOS.
3. Project duration is approximately 24 weeks.

Task 810 Deliverables:

1. Monthly progress reports.
2. Declaration of Completion letter by the Engineer of Record.

TASK 820 – CONSTRUCTION MEETINGS

Provide design team support at construction meetings as required throughout the Project, including:

Subtask 821 – Construction Kick-off Conference

Participate in a Construction Kick-Off Conference attended by the City, Consultant, GC/CM, subcontractors, and other interested parties to confirm roles, responsibilities, and other pertinent items related to construction of the Project.

Subtask 821 Assumptions:

1. City and GC/CM will schedule and conduct the Construction Kick-Off Conference.
2. Three (3) members of the Consultant staff will attend, including the PM, PE/FI, and ODE.

Subtask 821 Deliverables:

1. Meeting materials, as requested by the City.
2. Comments on meeting minutes issued by the GC/CM or City.

Subtask 822 – Progress Meetings

Attend weekly progress meetings that focus on the status of submittal reviews, requests for information (RFI's), change order requests, design clarifications, schedule issues, construction quality, and other issues relevant to the Project.

Subtask 822 Assumptions:

1. GC/CM will schedule, coordinate, and conduct Weekly Progress Meetings and prepare necessary materials and minutes.
2. The Consultant's PE/FI will attend Weekly Progress Meetings, and ODE will attend up to four (4) meetings.

Subtask 822 Deliverables:

1. Written recommendations in response to GC/CM action items, as required.

TASK 830 – FIELD SERVICES DURING CONSTRUCTION

Provide a Project PE/FI to serve as the first point of contact in the field for the City and the GC/CM. The PE/FI will be responsible for the following tasks:

1. Monitor Construction for Compliance with Contract Documents: Review and monitor construction work for compliance with the contract documents. Document and report any observed non-conformances and deficiencies to the City and GC/CM, and monitor the correction of these deficiencies.

2. Provide and Manage Subconsultant Field Inspection Personnel: Manage the activities of all subconsultant field inspection personnel. Coordinate with subconsultant performing forage fish sampling for Hydraulic Project Approval (HPA). Provide supplemental inspection of general, civil, and mechanical activities. Collect and log field inspection reports by others, and prepare inspection reports when inspections occur. Summarize weekly and monthly inspection reports for the City.
3. Attend and Participate in Construction Meetings: Attend and participate in construction meetings, including weekly progress meetings.
4. Track Requests for Information (RFI): Coordinate and manage the RFI process according to the contract documents. Screen all RFIs and determine their validity before responding or distributing to subconsultant. Forward RFIs and clarifications to the ODE when appropriate.
5. Track Shop Drawing Submittals: Coordinate and manage the shop drawing and submittal review process. Screen the submittals and determine their completeness before distributing to the ODE for review.
6. Prepare Field Memos and Clarifications: Manage and issue field memos and clarifications of drawings and specifications by the ODE to the GC/CM.
7. Review Quantities in the Monthly Progress Payment Requests: Compare requested quantities in the GC/CM's monthly progress payment requests to the quantities completed, as requested by the City's Project Manager.
8. Review Construction Schedule: Review and provide comments to the City regarding the baseline schedule and monthly updates consistent with the contract document requirements. The review will focus on key elements such as logic, duration of activities, duration of startup and testing, and construction sequencing constraints and milestones.
9. Review Monthly Construction Progress Reports: Review monthly construction progress reports prepared by the GC/CM and provide comments to the City's Project Manager. It is anticipated that reports will include compliance with progress schedule, description of work completed, Project issues, potential claims status, and Project photographs.
10. Review Change Order Requests: Review and provide comments to the City on change order requests based on changes in scope and conditions. Assist the City's Project Manager in developing change order value. Incorporate approved change orders into the contract.
11. Photographic Documentation of Construction: Prepare periodic photographic records of site construction, in conjunction with inspection reports.
12. Conduct Final Inspection: Schedule and conduct a final inspection of the completed facilities and issue punch lists of uncompleted items where necessary. Assist the City in negotiation of unsettled changes or disputes associated with these inspections, as requested. Advise City when final punch list items have been completed or resolved, and recommend final acceptance by the City.

Task 830 Assumptions:

1. PE/FI will be on-site as needed throughout the duration of the Project. Budget is based on PE/FI providing an average of six (6) hours per week (15% commitment) over the six (6) month Project duration, between NTP and final acceptance. This time is allocated to both on-site observation of work under this task, and attendance of weekly progress meetings.
2. Special testing and inspection associated with permitting requirements will be scheduled, provided for, and managed by the GC/CM and/or the City.

Task 830 Deliverables:

1. Daily inspection logs and photographs.
2. Monthly summary inspection reports.
3. Review comments on Weekly Progress Meeting Minutes.
4. Review comments on Monthly Construction Progress Reports.
5. Tracking logs for RFI's, submittals, field memos, design clarifications, change order requests, etc.

TASK 840 – OFFICE SERVICES DURING CONSTRUCTION

Provide office engineering services during construction, including:

Subtask 841 – Requests for Information (RFI)

Provide interpretation, review, and responses to RFIs and incorporate decisions made during design into RFI responses.

Subtask 841 Assumptions:

1. Consultant's effort includes services to research, respond, and document each RFI in accordance with the contract documents.
2. Budget is based on 20 RFI's with an average effort of one (1) hour per each to review and issue final responses drafted by the ODE. The ODE's scope of services included time for detailed RFI review.
3. The overall level of effort is reduced based on the assumption that the GC/CM will proactively coordinate these services and provide high quality submittals.

Subtask 841 Deliverables:

1. Up to 20 written RFI responses.

Subtask 842 – Review of Shop Drawings and Submittals

Review shop drawing and submittals (test certifications and other specified reports) and provide written responses, including submittals and/or associated re-submittals as described below.

Subtask 842 Assumptions:

1. GC/CM will implement quality control measures to screen each submittal prior to forwarding to Engineer for action. The overall level of effort is reduced based on the assumption that the GC/CM will proactively coordinate these services and provide high quality submittals.
2. Consultant's effort includes services to review and respond to each shop drawing, and to document responses in accordance with the contract documents.
3. Budget is based on a total of 32 basic submittals at 0.5 hours of effort each to review and issue final responses by the ODE. The ODE's scope of services includes time for detailed submittal review.

Subtask 842 Deliverables:

1. Up to 32 submittal responses in accordance with the contract documents.

Subtask 843 – Review of Schedule of Value and Payment Applications

Review contractor's schedule of value, draft payment applications, and provide comment to City for information and/or action.

Subtask 843 Assumptions:

1. Consultant's effort includes services to review the contractor's schedule of value, and draft payment applications. Written responses summarizing the review shall be provided to the City's PM.
2. Budget is based on a total of four (4) hours to review the schedule of values, and two (2) hours effort to review each draft payment application (up to 5 monthly payment applications, and 1 final payment application).
3. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review the schedule of value, draft payment applications, and recommend appropriate modifications to their contractor, prior to the Consultants review.

Subtask 843 Deliverables:

1. Up to six (6) payment application responses in accordance with the contract documents.

Subtask 844 – Record Drawings

Upon completion of project, Consultant will review GC/CM's as-built drawings, produce record drawings in Auto CAD format from the information provided, and will inform Owner of any known inaccuracies and/or omissions on the GC/CM's drawings. The Consultant will not be responsible for incorrect information that has been provided by others, or omitted information that should have been provided by others that was previously unknown to the Consultant.

Subtask 844 Assumptions:

1. Budget is based on a total of four (4) hours to review GC/CM as-built drawings, and 40 hours to produce record drawings from the information provided.
2. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review their contractor's work, and incorporate as-built information as work progresses.

Subtask 844 Deliverables:

1. Written review comments following review of as-built drawings provided by GC/CM.
2. Outfall record drawings in Auto CAD format.

Subtask 845 – Claim Review

As directed by the City, evaluate claims due to changed conditions, project delays, or design errors/omissions. Assist in evaluating the claimed impact by the Contractor. Prepare written responses to the claims merit, and submit written documentation to the City for action.

Subtask 845 Assumptions:

1. Budget is based on a total of one (1) claim with an average effort of eight (8) hours to review and respond.
2. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review and dismiss any unsubstantiated claims by their subcontractor(s).

Subtask 845 Deliverables:

1. Written review comments and recommendations associated with the claim.

TASK 850 – BASELINE SEDIMENT SAMPLING

Following precedent from other aquatic lands easements for municipal WWTP outfalls, DNR will require baseline sediment sampling in the vicinity of the new diffuser. A sediment sampling and analysis plan including four (4) proposed sediment sampling stations will be submitted to DNR for approval. If any samples exceed any of the 47 SMS chemicals, then Consultant will communicate with DOE and DNR to determine whether bioassay analysis is required.

Task 850 Assumptions:

1. Budget is based on four (4) sediment samples, analysis of 47 sediment management standard chemicals, dioxin, furan, and conventional sediment variables.
2. No sediment sample collection for bioassays (toxicity testing) is anticipated. Budget does not include any additional biological testing that may be required by DNR.

Task 850 Deliverables:

1. Sediment sampling and analysis plan will be submitted to DNR for approval.
2. Laboratory report with sediment testing results.

City of Oak Harbor
CWF Outfall Replacement Project
Level of Effort Estimate
April 24, 2015

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TASK 850 - Baseline Sediment Sampling							$0	$0	$0	$0	$27,391		$27,391
Task 850 Subtotal	0	0	0	0	0	0	$0	$0	$0	$0	$27,391	$0	$27,391
SUBTOTAL AUTHORIZED BUDGET	**20**	**28**	**188**	**40**	**44**	**320**	**$17,580**	**$33,402**	**$4,475**	**$55,457**	**$76,609**	**$56,500**	**$188,566**
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TOTAL AUTHORIZED BUDGET													**$201,876**

Consultant Agreement Amendment Number 12	Organization and Address City of Oak Harbor 865 SE Barrington Drive Oak Harbor, WA 98239 Phone: 360-279-4500	
Original Agreement Title: Engineering Services for City of Oak Harbor Wastewater Treatment Plant Preliminary Engineering and Facilities Plan		
Project Number: 8549A.00 (Amendments 1-5) 8549A.10 (Amendment 6 - 12)	Execution Date 09/16/10	Completion Date (Prior) July 2016
Project Title: Engineering, Facilities Plan and Preliminary Design	New Maximum Amount Payable $9,605,341	
Description of Work: This Amendment authorizes services to complete additional design phase services and construction phase services associated with Site Preparation Packages B and C.		

The City of Oak Harbor
desires to supplement the agreement entered into with Carollo Engineers, Inc.
and executed on 09/16/10 and identified as Preliminary Engineering and Facilities Plan.

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:

AGREEMENT is hereby amended to add the following:
Please see the attached Engineering Services Insert (Exhibit A). The requirements in this insert are hereby incorporated into the original agreement.

SCOPE OF WORK is hereby amended to add the following:
The existing Scope of Services will remain open and will be completed for the authorized budget. Please see the attached Scope of Services (Exhibit B) for additional phases of work.

PROJECT COMPLETION DATE AMENDED TO: July 2016

PAYMENT shall be amended as follows:
The maximum total contract value is increased from $8,109,264 to $9,605,341. This maximum upper limit includes a Management Reserve as indicated in prior amendments. Exhibit D-3 summarizes the level of effort associated with Amendment 12 services.

Payment shall be made in accordance with the terms and conditions described in the original contract.

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

By: Brian R. Matson, Senior Vice President

Consultant Signature

By: Scott Dudley, Mayor

Approving Authority Signature

10/20/2015
Date

By: Lara R. Kammereck, Vice President

Consultant Signature

DEPARTMENT OF ECOLOGY
State of Washington

WASHINGTON STATE DEPARTMENT OF ECOLOGY

WATER POLLUTION CONTROL REVOLVING FUND

ENGINEERING SERVICES INSERT

Revised 10/24/14

The following clauses will be incorporated into contracts for engineering services receiving financial assistance from the Washington State Department of Ecology Water Pollution Control Revolving Fund. In the event of conflict within the contract these clauses shall take precedence

Compliance with State and Local Laws

The engineering services provider (CONTRACTOR) shall assure compliance with all applicable federal, state, and local laws, requirements, and ordinances as they pertain to the design, implementation, and administration of the approved project.

State Interest Exclusion

Partial funding of this project is being provided through the Washington State Department of Ecology Water Pollution Control Revolving Fund. Neither the State of Washington nor any of its departments or employees are, or shall be, a party to this contract or any subcontract.

Third Party Beneficiary

Partial funding of this project is being provided through the Washington State Department of Ecology Water Pollution Control Revolving Fund. All parties agree that the State of Washington shall be, and is hereby, named as an express third-party beneficiary of this contract, with full rights as such.

Cost Basis of Contract

No contract may be written for "cost-plus-a-percentage-of-cost" or "percentage of construction cost." The cost basis for this contract must be cost-reimbursement, unit price, fixed-price, time and materials, or any combination of these four methods.

Funding Recognition

Documents produced under this agreement shall inform the public that the project received financial assistance from the Washington State Water Pollution Control Revolving Fund. Washington State Department of Ecology's and the EPA's logomust be on all signs and documents. Logos will be provided as needed.

Access to the work site and to records

The CONTRACTOR shall provide for access to their records by Washington State Department of Ecology and Environmental Protection Agency (EPA) personnel.

The CONTRACTOR shall maintain accurate records and accounts to facilitate the Owner's audit requirements and shall ensure that all subcontractors maintain auditable records. These records shall be separate and distinct from the CONTRACTOR's other records and accounts.

All such records shall be available to the Owner and to Washington State Department of Ecology and EPA personnel for examination. All records pertinent to this project shall be retained by the CONTRACTOR for a period of three (3) years after the final audit.

Certification Regarding Suspension, Debarment, Ineligibility Or Voluntary Exclusion

1. The CONTRACTOR, by signing this agreement, certifies that it is not suspended, debarred, proposed for debarment, declared ineligible or otherwise excluded from contracting with the federal government, or from receiving contracts paid for with federal funds. If the CONTRACTOR is unable to certify to the statements contained in the certification, they must provide an explanation as to why they cannot.

2. The CONTRACTOR shall provide immediate written notice to the Washington State Department of Ecology if at any time the CONTRACTOR learns that its certification was erroneous when submitted or had become erroneous by reason of changed circumstances.

3. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this clause, have the meaning set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the Washington State Department of Ecology for assistance in obtaining a copy of the regulations.

4. The CONTRACTOR agrees it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under the applicable Code of Federal Regulations, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.

5. The CONTRACTOR further agrees by signing this agreement, that it will include this clause titled "Certification Regarding Suspension, Debarment, Ineligibility Or Voluntary Exclusion" without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

6. Pursuant to 2CFR180.330, the CONTRACTOR is responsible for ensuring that any lower tier covered transaction complies with certification of suspension and debarment requirements.

7. The CONTRACTOR acknowledges that failing to disclose the information required in the Code of Federal Regulations may result in the delay or negation of this funding agreement, or pursuance of legal remedies, including suspension and debarment.

8. The CONTRACTOR agrees to keep proof in its agreement file that it and all lower tier

recipients or contractors are not suspended or debarred and will make this proof available to the Washington State Department of Ecology upon request. The RECIPIENT/CONTRACTOR must run a search in http://www.sam.gov/ and print a copy of completed searches to document proof of compliance.

This term and condition supersedes EPA Form 5700-49, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters."

Disadvantaged Business Enterprises

General Compliance (40 CFR Part 33).
The CONTRACTOR shall comply with the requirements of the Environmental Protection Agency's Program for Participation By Disadvantaged Business Enterprises (DBE) 40 CFR Part 33.

Non-discrimination Provision (40CFR Appendix A to Part 33).
The CONTRACTOR shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The CONTRACTOR shall carry out applicable requirements of 40 CFR part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the CONTRACTOR to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies.

Six Good Faith Efforts (40 CFR Part 33 Subpart C).
The CONTRACTOR agrees to make the following good faith efforts whenever procuring subcontracts, equipment, services and supplies. The CONTRACTOR shall retain records documenting compliance with the following six good faith efforts.

1. Ensuring Disadvantaged Business Enterprises are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing Disadvantaged Business Enterprises on solicitation lists and soliciting them whenever they are potential sources. Qualified Women and Minority business enterprises may be found on the Internet at www.omwbe.wa.gov or by contacting the Washington State Office of Minority and Women's Enterprises at (866) 208-1064.
2. Making information on forthcoming opportunities available to Disadvantaged Business Enterprises and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by Disadvantaged Business Enterprises in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of thirty (30) calendar days before the bid or proposal closing date.
3. Considering in the contracting process whether firms competing for large contracts could subcontract with Disadvantaged Business Enterprises. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by Disadvantaged Business Enterprises in the competitive process.
4. Encourage contracting with a consortium of Disadvantaged Business Enterprises when a

contract is too large for one of these firms to handle individually.

5. Using services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.
6. If the prime contractor awards subcontracts, requiring the subcontractors to take the six good faith efforts in paragraphs 1 through 5 above.

EXHIBIT B – SCOPE OF SERVICES

ENGINEERING SERVICES FOR THE CITY OF OAK HARBOR SUPPLEMENTAL DESIGN AND CONSTRUCTION SUPPORT ACTIVITIES

BACKGROUND

Carollo Engineers (Consultant) has completed 60 Percent Design documents for the City of Oak Harbor (City) wastewater treatment plant (CWF). Certain elements of the 60 Percent Design must be revised and finalized to accommodate recommended and anticipated scope revisions. These include but are not limited to: modifying the architectural design theme to reflect public input; modifying the Administration Building to eliminate the Training Room from the project; finalizing the design of Headworks facilities per Value Engineering recommended at 30 Percent Design; completing Site Preparation B and C Bid Packages; completing site/civil design of City Beach Street and parking/access to the north and south of the CWF; and evaluating/incorporating other potential Value Engineering decisions to be made between 60 and 90 Percent Design. Construction of Site Preparation B (shoring and excavation) and Site Preparation C (micro-pile installation) is needed to maintain schedule as final design is completed. Finally, mitigation activities related to park planning and additional public process support are required to support ongoing construction activities.

LEVEL OF EFFORT

Consultant will provide the following services:

- Complete additional public process support during final design and construction of Site Preparation B and C packages.
- Complete Final Design Documents for the CWF in coordination with the General Contractor/Construction Manager (GC/CM) and City staff to incorporate additional Value Engineering ideas as accepted.
- Support additional permitting efforts to complete the Outfall Project and as needed for approval of CWF design documents.
- Evaluate and incorporate value engineering concepts developed following 30% and 60% design.
- Assist the City in preparing staffing and operations planning efforts in order to prepare to operate the CWF.
- Complete mitigation activities, including a plan to integrate the CWF into the Windjammer Park as a requirement of the Conditional Use Permit.
- Complete construction support and oversight, inspection and other engineering services for Site Preparation Packages B and C based on a GC/CM delivery method. It is assumed that the Owner will provide field staff including the City's Project Manager and Field Inspectors, as well as independent third party construction management staff. Consultant will provide the following staff over the duration of Site Preparation Packages B and C:
  - Project Manager (PM).
  - Project Engineer/Field Inspector (PE/FI) to assist with construction support and field engineering services.
  - Office Administrator to provide contract documentation of engineering services during construction.

- Geotechnical Engineer (GE) to provide submittal review, timely interpretations of geotechnical issues, and inspection of stone column, sheet pile shoring system and micropile installation.
- Public involvement professionals to facilitate outreach activities associated with project planning and outfall construction.

The level of construction assistance required by Consultant is highly dependent on the GC/CM's performance and the level of assistance provided by the City. The City and the Consultant will review job progress on a monthly basis in accordance with the construction schedule, to verify the effort to complete Project tasks as defined by this Scope of Services (SOS). With written authorization from the City, adjustments to the SOS and Consultant's level of effort will be made as deemed appropriate by Consultant and the City Project Manager. The estimated level of effort and associated fee schedule for the services defined herein is presented in Exhibit D-3.

SCOPE OF SERVICES

This Scope of Services is divided into the following tasks:

Task 200 – Public Process Support - Construction
Task 300 – Public Process Support - Design
Task 400 - CWF Final Design and Permitting
Task 500 - Project Delivery Coordination
Task 600 - Operational Planning and Commissioning Support
Task 800 - Engineering Services During Construction
Task 900 - Windjammer Park Conceptual Plan

SCHEDULE

This Scope of Services is based on a duration of eight (8) months, as currently estimated.

Milestone	Schedule Estimate
Design Complete	June 2016
Site Preparation (Phase C) Final Completion	June 2016

TASK 200 – PUBLIC PROCESS SUPPORT – CONSTRUCTION

Subtask 240 – Ongoing Planning and Materials/Product Development Supporting Construction

Provide additional public process support, materials development, and outreach. Consultant services will include:

- Continue to assist City in implementing construction communications as defined in a Construction Communications Plan.
- Maintain website for construction and project activities, including updating of Project Library page for ease of navigation and to easily capture history of project. Update

website on a weekly basis during outfall construction, and overall monthly for ease of navigation for ongoing final design/project activities.
- Support Public Process related to construction of Site Preparation Packages B and C. This will include monthly meetings in Oak Harbor (total nine). Activities include a weekly construction update call in order to compile weekly project email updates (up to 36).
- Support briefing coordination to update community groups about project, including coordination of presentations.
- Lead logistics to implement a Groundbreaking event for facility, including event invitation, planning, day-of logistics, and keepsake.

Task 200 Assumptions:

1. The City shall pay directly for any costs associated with mass printing, postage, newspaper advertising, and display materials.
2. Monthly project meetings shall include up to two subconsultant staff.
3. Construction duration assumed to be 36 weeks for weekly activities.
4. Up to seven (7) additional public products/graphics materials assumed in this Subtask (including stakeholder briefing presentation materials).
5. Maintain an ongoing list of project fence graphics/banners and coordinate with contractor for wayfinding.
6. All written or web materials and communications products will be reviewed and approved by City staff/consultants.
7. Direct costs associated with day-of logistics, notification and keepsake for Groundbreaking shall be invoiced directly to City.

Task 200 Deliverables:

1. Weekly construction outreach materials/web updates.
2. Groundbreaking notifications.
3. Up to seven (7) additional public products/graphics for construction outreach.

TASK 300 – PUBLIC PROCESS SUPPORT – DESIGN

Subtask 340 – Public Meetings/City Council Workshops

Provide additional materials to support public process associated with design and permitting activities. Consultant services will include:

- Development of an alternate architectural concept (Concept B) for public comment.
- Preparation for and attending two (2) additional public meetings to review architectural concepts and develop recommended approach.
- Development of additional site landscaping renderings to assist in defining parking and site access requirements to the north and south of the CWF.
- Development of renderings to assist in viewshed analysis for public comment and as required by the City permitting process.
- Development of one (1) rendering showing the Lab/Administration Facility as a single-story, without a training facility.

Assist in planning for and delivering joint Public Meetings/City Council Workshops, defined below. For each meeting coordinate with City staff to: Participate in up to two (2) planning

sessions via phone; assist City to arrange for suitable meeting location; prepare meeting plan; produce up to six (6) display boards; assist with development of PowerPoint presentation; develop sign-in sheet and public comment form; develop draft and final agenda; develop draft and final meeting announcement postcard and display ad notification; provide one (1) facilitator and one (1) support staff; and produce one (1) draft and one (1) final meeting summary (minutes).

Assist in planning and soliciting public input on facility name by conducting online survey. Participate in up to two (2) planning sessions via phone; develop draft and final survey announcement postcard and display ad notification; and produce one (1) draft and one (1) final survey summary for Council consideration.

Public Meeting/Council Workshop	Objectives
P1 – Public Meeting No. 1, Q4 2015 (Input on Final Design Progress)	Report Project Status at 90/100% design Obtain Input to Assist With Final Design Decisions Communicate Future Opportunities for Input
P2 – Public Meeting No. 2, Q2 2016	Report Project Status/current opportunity for input
P3 – Facility Naming	Online survey associated with project naming

Subtask 360 – Council Meeting/Workshop Participation

Support monthly presentation development for Council meetings, and attend up to two Council meetings or workshops in a speaking capacity.

Subtask 370 – Public/Stakeholder Involvement Product Development

In consultation with City staff develop three (2) one-page double-sided project update fliers. Draft content and develop two (2) full-size (11x17 double-sided) project newsletter/mailer. Prepare two (2) display ads associated with newsletter content for publication in Whidbey News-Times

Task 300 Assumptions:

1. Public Meetings may be held in conjunction with City Council Workshops to enhance efficiency for sharing information.
2. The City will pay for meeting locations and facilities.
3. The City will coordinate with local paper to publish announcements and include notices of meetings on their website.
4. The City will coordinate posting and distribution of meeting announcements.
5. The City will pay for all costs related to meeting notifications, including printing and postage.
6. The City will pay for all costs related to printing meeting boards.
7. Consultant will participate in planning meetings via phone, unless coordinated with meetings identified in Subtask 240.
8. Any other planning or Council meeting attendance shall be captured in Subtask 240.

9. All written or web materials and communications products will be reviewed and approved by City staff/consultants.
10. The City will be responsible for distributing materials to the public, including paying for printing, advertisements, and postage.

Task 300 Deliverables:

1. Up to four (4) renderings and boards for alternate landscaping concept (Concept B).
2. Materials and participation in two (2) additional public meetings to review and discuss architectural concepts.
3. Site renderings of the Windjammer Vicinity showing parking and site access options to the north and south of the CWF.
4. One (1) rendering of a single-story Lab/Administration Facility.
5. Up to six (6) renderings illustrating viewsheds for public comment and in compliance with the City permitting process.
6. Public meeting materials.
7. Naming survey.
8. Council Workshop Materials.
9. Project Update Fliers.
10. Project Newsletter/Mailer.

TASK 400 – CWF FINAL DESIGN AND PERMITTING

The objective of this task is to complete work requested by the City and GC/CM to complete final design and permitting of the CWF, between 30 Percent Design and Final Design.

Subtask 471 – 60 Percent Design

Complete Cone Penetration Testing (CPT) on the site to better define depth to glacial till layers at key locations around the proposed CWF site.

Subtask 472 – 90 Percent Design

Complete Final Design documents incorporating decisions by the City and recommendations by the GC/CM. These include:

- Finalize site/civil design to include City Beach Street alignment and grade;
- Complete architectural design for Concept B without a Training Facility;
- Design parking, access, and stormwater conveyance/treatment to the north and south of the CWF;
- Coordinate utility relocation on the north side of the CWF. Coordinate PSE applications, design support (drawing backgrounds), and final design coordination for both temporary and final power. Coordinate water, natural gas, and fiber optic cable relocations.
- Finalize process, structural, mechanical, electrical, and site design based on VE ideas proposed by the GC/CM and adopted by the City.

Subtask 475 – Early Site Preparation

Prepare two (2) additional separate and early sets of design documents for completing site preparation for the new CWF. Site preparation is expected to include: demolition of existing WWTP facilities; utility relocation; installation of shoring and dewatering systems; excavation; and stockpiling of excavated material; foundation stabilization work including stone columns and micropiles.

Prepare two (2) stand-alone design documents (Site Prep B and Site Prep C) including technical specifications needed for the Early Site Preparation Packages. The documents will be suitable for bidding or negotiated self-performance by the GC/CM.

Subtask 480 – Permit Coordination

The objective of this subtask is to assist the City of Oak Harbor with additional permit support that has been identified as the site preparation and final design packages have been further defined for the CWF. These include

- Continued coordination with the Washington Department of Natural Resources (WDNR) in obtaining the land lease for the outfall, supporting Contractor activities in negotiating the grounding of a barge on the intertidal zone, and coordinating approval of the sediment monitoring requirements.
- Revision, review, and updates to the biological assessment in support of the Shoreline Conditional use Permit.
- Extended coordination and meetings with the City to adjust the project's permit strategy and permit submittal requirements.
- Final SERP Cross-cutter document update and submittal.
- Additional forage fish sampling visits to comply with permit requirements made in the Biological Assessment prepared for the project. Difficulties in outfall construction have resulted in slower than anticipated completion of the intertidal work. Coordinate, conduct, and report on 12 additional forage fish monitoring events (18 total) according to the established protocol.
- Preparation of a more complex boundary line adjustment (BLA) and extended coordination and resolution to address the title conflicts, limited recorded information, and City Beach easement on Windjammer Park parcel.
- Permits and agency coordination to support the three (3) Site Preparation Packages including:
  - Grading Permit
  - Floodplain Permit
  - Foundation Permit
  - Coordination with Ecology

Task 400 Assumptions:

1. City will handle City Beach easement vacate coordination and execution.
2. All permit applications fees will be paid directly by the City.
3. Consultant will provide up to an additional twenty (20) hours for technical support and responses to agency comments.

4. Additional permitting efforts associated with potential/conceptual mitigation measures that the City may choose to implement at a later phase are excluded from Consultant's authorized scope and may be authorized by the City at a later date. Examples include:
   a. Renovation or restoration of structures within Windjammer Park.
   b. Traffic circulation improvements to City Beach St.
   c. North and south parking lots outside of the CWF parcel.
   d. Demolition of the Whidbey Island Bank building.

Task 400 Deliverables:

1. Final CWF construction documents incorporating City, Public, and GC/CM input between 30 Percent Design and Final Design.
2. Site Preparation Package B drawings and specifications.
3. Bidding Support for Site Preparation Package B.
4. Site Preparation Package C drawings and specifications.
5. Bidding Support for Site Preparation Package C.
6. Up to ten (12) additional brief forage fish sampling reports delivered to WDFW (1 per sampling event).
7. Materials to provide final update for SERP cross-cutter documentation.
8. Update letter to supplement biological assessment.
9. Additional Development Permit Application Packages to support early site work.
   a. Three (3) Grading Permits
   b. Two (2) Floodplain Permits
   c. One (1) Foundation Permit
10. One (1) update to the site plan figure prior to issuance of the Site Preparation Package foundation permit.

TASK 500 – PROJECT DELIVERY COORDINATION

The objective of this task is to develop, evaluate, and incorporate Value Engineering (VE) ideas with the City and GC/CM. Effort included in this task includes VE ideas accepted since 30 Percent Design and anticipated between 60 Percent Design and Final Design.

Subtask 520 – Evaluate/Implement VE Ideas

Evaluate and review value engineering ideas based on 30% and 60% design documents. Assess preliminary cost impacts and O&M considerations with the City and GC/CM to determine if concept should be incorporated into final design. Conduct additional design coordination meetings with O&M staff for accepted ideas during implementation.

Task 500 Deliverables:

1. Preliminary assessment and recommendations on VE ideas at 30% and 60% design completion.
2. Participate in VE evaluation meetings at 30% and 60% design completion.

3. Conduct two (2) additional design review meetings with O&M to review the status of incorporated VE concepts.
4. 60% CWF construction documents incorporating accepted value engineering concepts from 30% design including reorientation of the Headworks.
5. 90% CWF construction documents incorporating accepted value engineering concepts from 60% design.

TASK 600 – OPERATIONS PLANNING AND COMMISSIONING SUPPORT

The objective of this task is to initiate the implementation plan that identifies the needs to transition the City of Oak Harbor O&M staff to operate the planned CWF, an advanced wastewater treatment plant.

Subtask 610 – Staff Workload Plan

The objective of this subtask is to provide an organizational staffing plan that identifies the detailed daily and preventative maintenance manpower needs for each process area, permitting, and overall plant operation and assigns specific roles/responsibilities/decision making authority for the seven (7) operations and maintenance positions supporting the CWF. This plan will also serve as a guidance tool for the City to consider such as current capabilities, skillset needs, potential personnel acquisition, or compensation tied to expertise. Finally, this plan will recommend an overarching schedule that focuses on the City's manpower needs during the design phase and construction phase transition periods.

Consultant will participate in two (2) meetings to survey O&M staff and receive feedback from the City.

Task 600 Deliverables:

1. Draft and final Staff Workload Plan.
2. Agenda and meeting minutes for two (2) meetings.

TASK 800 – ENGINEERING SERVICES DURING CONSTRUCTION

The City of Oak Harbor (City) has completed Preliminary Design documents, and authorized Final Design for a new wastewater treatment plant (CWF). In order to facilitate, the CWF project timeline, various site preparation activities, such as utility relocations, shoring, mass excavation, and ground improvements allow the site to be readied for the main plant construction work as the CWF design is being finalized.

Carollo Engineers (Consultant) will provide construction support and over sight, inspection and other engineering services during construction for the Site Preparation Project (Project) based on a General Contractor/Construction Manager (GC/CM) delivery method, and as described herein.

It is assumed that the Owner will provide field staff including the City's Project Manager and Field Inspectors, as well as independent third party construction management staff. Consultant will provide the following staff over the duration of the Project:

- Project Manager (PM).

- Project Engineer/Field Inspector (PE/FI) to assist with construction support and field engineering services.
- Geotechnical Engineer (GE) to provide submittal review, timely interpretations of geotechnical issues, and inspection of stone column, sheet pile shoring system and micropile installation.
- Office Administrator to provide contract documentation of engineering services during construction.

Subtask 810 – Project Management

Provide project management services throughout the duration of the Project, including:

- Management of Consultant's team to track schedule and budget, work elements accomplished, work items planned, labor, scope changes, and time and budget needed to complete this SOS. Coordinate with PE/FI to review budget status, and coordinate Project activities.
- Prepare monthly Project progress reports with each monthly invoice that identify the month's accomplishments, anticipated tasks for the next month, and current or potential issues or changes.
- Manage, coordinate, and monitor subconsultant's efforts.
- Issue a Declaration of Completion letter in accordance with Department of Ecology (DOE) requirements, following Final Acceptance.

Subtask 810 Assumptions:

1. The monthly progress report will contain a summary of cost to date and remaining budget for each major task.
2. A schedule update will be included in the monthly progress report, and will account for all activities and tasks defined in the SOS.
3. Project duration is approximately 8 months.

Subtask 810 Deliverables:

1. Monthly progress reports.
2. Declaration of Completion letter by the Engineer of Record.

Subtask 820 – Project Meetings

Provide design team support at construction meetings as required throughout the Project, including:

Subtask 821 – Construction Kick-off Conference

Participate in a Construction Kick-Off Conference attended by the City, Consultant, GC/CM, subcontractors, and other interested parties to confirm roles, responsibilities, and other pertinent items related to construction of the Project.

Subtask 822 – Progress Meetings

Attend weekly progress meetings that focus on the status of submittal reviews, requests for information (RFI's), change order requests, design clarifications, schedule issues, construction quality, and other issues relevant to the Project.

Subtask 820 Assumptions:

1. City and GC/CM will schedule and conduct the Construction Kick-Off Conference.
2. Four (4) members of the Consultant staff will attend, including the PM, DM, PE/FI, and GE.
3. GC/CM will schedule, coordinate, and conduct Weekly Progress Meetings and prepare necessary materials and minutes.
4. The Consultant's PE/FI will attend up to 36 Weekly Progress Meetings, and GE will attend up to four (4) meetings.

Subtask 820 Deliverables:

1. Meeting materials, as requested by the City.
2. Comments on meeting minutes issued by the GC/CM or City.
3. Written recommendations in response to GC/CM action items, as required.

Subtask 830 – Field Services

Provide a Project PE/FI to serve as the first point of contact in the field for the City and the GC/CM. The PE/FI will be responsible for the following tasks:

- Monitor Construction for Compliance with Contract Documents: Review and monitor construction work for compliance with the contract documents. Document and report any observed non-conformances and deficiencies to the City and GC/CM, and monitor the correction of these deficiencies.
- Provide and Manage Subconsultant Field Inspection Personnel: Manage the activities of all subconsultant field inspection personnel. Provide supplemental inspection of general, civil, and mechanical activities. Collect and log field inspection reports by others, and prepare inspection reports when inspections occur. Summarize weekly and monthly inspection reports for the City.
- Attend and Participate in Construction Meetings: Attend and participate in construction meetings, including weekly progress meetings.
- Track Requests for Information (RFI): Coordinate and manage the RFI process according to the contract documents. Screen all RFIs and determine their validity before responding or distributing to subconsultant. Forward RFIs and clarifications to the GE when appropriate.
- Track Shop Drawing Submittals: Coordinate and manage the shop drawing and submittal review process. Screen the submittals and determine their completeness before distributing for review.
- Prepare Field Memos and Clarifications: Manage and issue field memos and clarifications of drawings and specifications to the GC/CM.

- Review Quantities in the Monthly Progress Payment Requests: Compare requested quantities in the GC/CM's monthly progress payment requests to the quantities completed, as requested by the City's Project Manager.
- Review Construction Schedule: Review and provide comments to the City regarding the baseline schedule and monthly updates consistent with the contract document requirements. The review will focus on key elements such as logic, duration of activities, duration of startup and testing, and construction sequencing constraints and milestones.
- Review Monthly Construction Progress Reports: Review monthly construction progress reports prepared by the GC/CM and provide comments to the City's Project Manager. It is anticipated that reports will include compliance with progress schedule, description of work completed, Project issues, potential claims status, and Project photographs.
- Review Change Order Requests: Review and provide comments to the City on change order requests based on changes in scope and conditions. Assist the City's Project Manager in developing change order value. Incorporate approved change orders into the contract.
- Photographic Documentation of Construction: GE shall provide periodic photographic records of site construction, in conjunction with inspection reports.
- Conduct Final Inspection: Schedule and conduct a final inspection of the completed facilities and issue punch lists of uncompleted items where necessary. Assist the City in negotiation of unsettled changes or disputes associated with these inspections, as requested. Advise City when final punch list items have been completed or resolved, and recommend final acceptance by the City.

Subtask 830 Assumptions:

1. PE/FI will be on-site as needed throughout the duration of the Project. Budget is based on PE/FI providing an average of eight (8) hours per week (20% commitment) over the eight (8) month Project duration, between NTP and final acceptance. This time is allocated to both on-site observation of work under this task, and attendance of weekly progress meetings.
2. Special testing and inspection associated with permitting requirements will be scheduled, provided for, and managed by the GC/CM and/or the City.

Subtask 830 Deliverables:

1. Construction inspection reports and photographs.
2. Review comments on Monthly Construction Progress Reports.
3. Tracking logs for RFI's, submittals, field memos, design clarifications, change order requests, etc.

Subtask 840 – Office Services During Construction

Provide office engineering services during construction, including:

Subtask 841 – Requests for Information (RFI)

Provide interpretation, review, and responses to RFIs and incorporate decisions made during design into RFI responses.

Subtask 842 – Review of Shop Drawings and Submittals

Review shop drawing and submittals (test certifications and other specified reports) and provide written responses, including submittals and/or associated re-submittals as described below.

Subtask 843 – Review of Schedule of Value

Review contractor's schedule of value, and provide comment to City for information and/or action.

Subtask 844 – Record Drawings

Upon completion of project, Consultant will review GC/CM's as-built drawings, produce record drawings in Auto CAD format from the information provided, and will inform Owner of any known inaccuracies and/or omissions on the GC/CM's drawings. The Consultant will not be responsible for incorrect information that has been provided by others, or omitted information that should have been provided by others that was previously unknown to the Consultant.

Subtask 845 – Claim Review

As directed by the City, evaluate claims due to changed conditions, project delays, or design errors/omissions. Assist in evaluating the claimed impact by the Contractor. Prepare written responses to the claims merit, and submit written documentation to the City for action.

Subtask 840 Assumptions:

1. Consultant's effort includes services to research, respond, and document each RFI in accordance with the contract documents.
2. Budget is based on 60 RFI's with an average effort of two (2) hour per each to review and issue final responses. The GE's scope of services included time to respond to geotechnical related RFI's.
3. The overall level of effort is reduced based on the assumption that the GC/CM will proactively coordinate these services.
4. GC/CM will implement quality control measures to screen each submittal prior to forwarding to Engineer for action. The overall level of effort is reduced based on the assumption that the GC/CM will proactively coordinate these services and provide high quality submittals.
5. Consultant's effort includes services to review and respond to each shop drawing, and to document responses in accordance with the contract documents.
6. Budget is based on a total of 65 basic submittals at 4 hours of effort each to review and issue final responses. The GE's scope of services includes time for detailed submittal review for dewatering, stone columns, soils and aggregates, sheet piling and tie-backs.
7. Consultant's effort includes services to review the contractor's schedule of value. Written responses summarizing the review shall be provided to the City's PM.
8. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review the schedule of value, draft payment applications, and recommend appropriate modifications to their contractor, prior to the Consultants review. Budget is based on a total of four (4) hours to review GC/CM as-built drawings, and 40 hours to produce record drawings from the information provided.

9. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review their contractor's work, and incorporate as-built information as work progresses.
10. Budget is based on a total of one (1) claim to review and respond.
11. The overall level of effort is reduced based on the assumption that the GC/CM will proactively review and dismiss any unsubstantiated claims by their subcontractor(s).

Subtask 840 Deliverables:

1. Up to 60 written RFI responses.
2. Up to 65 submittal responses in accordance with the contract documents.
3. Written review comments regarding the proposed Schedule of Values.
4. Written review comments following review of as-built drawings provided by GC/CM.
5. Site Preparation Project record drawings in Auto CAD format.
6. Written review comments and recommendations associated with the claim.

TASK 900 – WINDJAMMER PARK CONCEPTUAL PLAN

The objective of this task is to develop a conceptual plan to integrate the CWF with Windjammer Park.

Subtask 910 – Project Initiation

The project team will meet with the City of Oak Harbor (COH) to confirm project scope and work plan. The team will prepare a list of project goals and finalize the project schedule with key tasks, meetings, deliverables, responsible parties, milestones, required predecessors, and anticipated durations of each element and phase of work. This task requires an in person meeting and an initial pre-meeting phone call with COH staff to discuss the work plan and associated documents.

Subtask 920 – City Council Work Session

The project team will facilitate a half-day work session with the Oak Harbor City Council. This work session will serve to bring council members up to date with regards to the CWF design process, current Windjammer Park amenities and conditions, past Windjammer Park planning efforts and past and current City of Oak Harbor transportation and land-use planning efforts in the vicinity of the park. This overview will provide the Council a current perspective when determining the future program and vision for Windjammer Park.

Subtask 921 – Site Analysis

We will prepare a Site Analysis package to help inform the Council as to the current condition of the park and its amenities. The package will include a Site Analysis map for presentation that communicates the location and general condition of current and known future park elements including but not limited to: the Clean Water Facility (CWF), restrooms, kitchens, playgrounds, hard surface courts, swimming lagoon, parking lots, RV park, pedestrian and automobile connections, adjacent property uses, existing land forms, significant trees and plantings and park furnishings. Park elements will be inventoried, photographed and documented with

descriptions of current condition and estimated replacement costs. The Site Analysis will include dialogue, images, and diagrams and potential future development along Pioneer.

Subtask 922 – Opportunities and Constraints

We will prepare an Opportunities and Constraints map for presentation that will depict existing and proposed future park infrastructure. This map will serve to communicate our assumptions related to major constraints, validate our starting point for the planning effort, and gather feedback from Council that may give us early direction. Specific elements that need to be addressed include: Ball Fields, Swimming Lagoon, RV Park and the Bayshore Drive right of way.

The critical outcomes from the work session will serve to define the Windjammer Park planning limits and the Windjammer Park program, determining the inclusion or omission of major constraints. Other outcomes include receipt of feedback on important goals and program elements from Council members and the charter of a Windjammer Park Stakeholder Committee (WPSC) to participate in the planning process moving forward.

Subtask 930 – Alternative Development and Public Involvement

The project team will support formation, coordinate and facilitate a Windjammer Park Stakeholder Committee and two public open houses. The WPSC will advise the design team on programming and aesthetics for the park and will be charged with making a recommendation to City Council. As the WPSC meets, the design team will develop and present park design alternatives for Windjammer Park.

Subtask 931 – Public Open House and Stakeholder Committee

Meeting	Objectives
WPSC Meeting #1 (January)	• Charter and Ground Rules • Explain Park requirements/constraints • Introduce design guidelines [seek feedback]
WPSC Work Session #2/Public Open House (January/February)	• Introduce the project and the WPSC to the community • Explain the project as an extension of the CWF • Present Park requirements/constraints • Gather general feedback from the community on values, priorities, and what the WPSC should be considering as they work with the design team

Meeting	• Objectives
WPSC Work Session #3 (February)	• Present and gather feedback on two (2) alternatives including: – Program – Site layout – Integration or omission of specific proposed or existing infrastructure (i.e. roads, parking lots, RV park, etc.) • *Specific focus will be given to the integration and/or omission of project elements based on City Council direction*
WPSC Meeting #4/Public Open House/Online Open House (March)	• Present two (2) Park plan alternatives • Gather feedback from the WPSC and community on preferred alternative to inform final design
WPSC Meeting #5 (April)	• Review preferred plan to be presented as recommendation to Council • Gather any final thoughts or feedback

Subtask 932 – Alternative Development

The design team will develop two (2) preliminary conceptual alternatives for Windjammer Park that respond to feedback and input from the City Council, WPSC, and the general public. The alternatives will clearly illustrate the scale, physical proportions, and inter-relationships of all agreed upon elements of the conceptual plan. The alternatives will conceptually identify the size, range of amenities and functional arrangements for new development such as parking, access, circulation, open space, programmed recreational space and building and site configurations. Supplemental illustrative graphics will be developed to further communicate design elements and park character and be suitable for presentation. The conceptual plan alternatives and associated graphics will be prepared using high quality, illustrative renderings that will be reviewed and refined for public presentation.

Subtask 940 – Preferred Alternative Development

The design team will use information gathered at the final open house to develop a preferred alternative for integration into the conceptual plan report.

Subtask 950 – Conceptual Plan Documentation

The design team will finalize the conceptual plan report which will include results of the site analysis; overview of the opportunities and constraints; documentation of discussions and decisions from the City Council work session, WPSC meetings and Public Open Houses; two (2) conceptual alternatives; the preferred conceptual plan for development of Windjammer Park; preliminary cost estimate and draft phasing strategy.

Task 900 Deliverables:

1. Agenda and meeting notes for Project Initiation meeting.
2. Project schedule.
3. Agenda, presentation materials and meeting notes for City Council Work Session.
4. Site Analysis and Opportunities and Constraints maps.
5. Park Inventory document.
6. Park Program document.
7. Meeting plans/agendas, presentation materials, facilitation, and meeting notes for five (5) public and WPSC meetings.
8. Meeting announcements (2 per meeting, total 10).
9. Online open house.
10. Project website subpage.
11. Two (2) Windjammer Park conceptual alternatives with supplemental illustrative graphics (up to 5).
12. Preliminary cost estimates for two (2) alternatives.
13. Preferred Conceptual Plan illustrative graphics.
14. Updated preliminary cost estimate for preferred Conceptual Plan.
15. Draft phasing strategy.
16. Draft and final Conceptual Plan Report.

City of Oak Harbor
Clean Water Facility
Amendment 12 Level of Effort Estimate
October 9, 2015

WORK TASKS	Project Manager	QA/QC Team	Design Manager	Senior Engineer PE/FE	Discipline Engineer	Staff Engineer	Sr. CAD/ Graphics Tech.	CAD/ Graphics Tech.	WP/ Admin. Support	Carollo Hours	Carollo DL Cost	Carollo Indirect Cost	Carollo Expenses	Subtotal Carollo Cost	ESA	EI	MWA	Geo	GW	HAI	Total Cost
Direct Labor (DL) Rates	$58	$85	$76	$58	$62	$42	$40	$27	$25												
TASK 200 - PUBLIC PROCESS SUPPORT - CONSTRUCTION																					
Subtask 240 - Ongoing Planning and Material Development										0	$0	$0	$0	$0		$74,000					$74,000
Task 200 Subtotal	0	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$74,000	$0	$0	$0	$0	$74,000
TASK 300 - PUBLIC PROCESS SUPPORT - DESIGN																					
Subtask 340 - Public Meetings/Council Workshops										0	$0	$0	$0	$0		$20,000	$43,000		$23,500		$86,500
Subtask 360 - Council Meetings/Workshop Presentations										0	$0	$0	$0	$0		$8,000					$8,000
Subtask 370 - Public/Stakeholder Involvement Product Development										0	$0	$0	$0	$0		$20,000					$20,000
Task 300 Subtotal	0	0	0	0	0	0	0	0	0	0	$0	$0	$0	$0	$0	$48,000	$43,000	$0	$23,500	$0	$112,500
TASK 400 - CWF FINAL DESIGN AND PERMITTING																					
Subtask 471 - 60% Design (CPT Field Work)										0	$0	$0	$0	$0				$21,000			$21,000
Subtask 472 - 90% Design (Additional Site/Civil, Redesign Concept B)	8		16	48	200		144	80		496	$25,024	$47,546	$8,411	$78,981			$128,000		$80,000	$15,000	$301,981
Subtask 475 - Early Site Prep Package (Add Phases B & C)	16	12	24	120	32	80	80	40	24	388	$19,796	$37,612	$5,028	$82,437							$82,437
Subtask 480 - Permit Coordination (Additional Services to Complete)	16		32	88		24	24		24	208	$11,512	$21,873	$2,748	$36,132	$38,000		$12,000			$6,500	$92,632
Task 400 Subtotal	40	12	72	256	232	84	228	120	48	1,092	$56,332	$107,031	$14,187	$177,550	$38,000	$0	$140,000	$21,000	$80,000	$21,500	$478,050
TASK 500 - PROJECT DELIVERY COORDINATION																					
Subtask 520 - Evaluate/Implement VE Ideas	60	40	120	60	72	140	80	60	40	672	$37,444	$71,144	$8,892	$117,479			$10,000	$7,000			$134,479
Task 500 Subtotal	60	40	120	60	72	140	80	60	40	672	$37,444	$71,144	$8,892	$117,479	$0	$0	$10,000	$7,000	$0	$0	$134,479
TASK 600 - OPERATIONAL PLANNING AND COMMISSIONING SUPPORT																					
Subtask 610 - Operations Staff Planning	4	8	32	100					16	160	$9,664	$18,362	$2,161	$30,186							$30,186
Task 600 Subtotal	4	8	32	100	0	0	0	0	16	160	$9,664	$18,362	$2,161	$30,186	$0	$0	$0	$0	$0	$0	$30,186
TASK 800 - ENGINEERING SERVICES DURING CONSTRUCTION																					
Subtask 810 - Project Management	32								16	48	$3,216	$6,110	$667	$9,993							$9,993
Subtask 820 - Project Meetings	4		28	80						112	$7,120	$13,528	$1,533	$22,181				$7,500			$29,681
Subtask 830 - Field Services				216						216	$12,526	$23,803	$2,887	$39,216				$206,500			$245,716
Subtask 841 - Request for Information				80	80				16	136	$7,800	$14,440	$1,801	$23,841				$4,200			$28,041
Subtask 842 - Review of Shop Drawings and Submittals				66	66	130			32	292	$14,060	$26,714	$3,735	$44,509				$8,500			$53,009
Subtask 843 - Review of Schedule of Values				8						8	$464	$882	$107	$1,453							$1,453
Subtask 844 - Record Drawings				8			64			72	$3,024	$5,746	$695	$9,865							$9,865
Subtask 845 - Claim Review	2		4	8	8					22	$1,440	$2,736	$304	$4,480							$4,480
Task 800 Subtotal	38	0	32	446	153	130	64	0	64	906	$49,452	$93,959	$11,928	$155,338	$0	$0	$0	$226,700	$0	$0	$382,038
TASK 900 - WINDJAMMER PARK CONCEPTUAL PLAN																					
Subtask 910 - Project Initiation	8									8	$704	$1,338	$121	$2,162			$3,500		$6,000		$11,662
Subtask 920 - City Council Work Session	16		8							24	$2,016	$3,830	$357	$6,203		$5,000	$3,500		$15,000		$29,703
Subtask 930 - Alternative Development and Public Involvement	8		8							16	$1,312	$2,493	$236	$4,041		$47,000	$8,000		$26,000		$85,041
Subtask 940 - Preferred Alternative Development	8		8							16	$1,312	$2,493	$236	$4,041			$6,000		$13,000		$23,041
Subtask 950 - Conceptual Plan Documentation										0	$0	$0	$0	$0		$4,500	$7,500		$19,000		$31,000
Task 900 Subtotal	40	0	24	0	0	0	0	0	0	64	$5,344	$10,154	$950	$16,448	$0	$56,500	$28,500	$0	$79,000	$0	$180,448
SUBTOTAL AUTHORIZED BUDGET	182	60	280	861	437	364	372	180	168	2,894	$168,236	$300,648	$38,118	$497,002	$38,000	$178,500	$221,500	$254,700	$182,500	$21,500	$1,391,702
CAROLLO FEE (12% of Carollo Cost)																					$59,640
SUBCONSULTANT MARKUP (5% of Subconsultant Cost)															$1,900	$8,925	$11,075	$12,735	$9,125	$1,075	$44,736
TOTAL AUTHORIZED BUDGET																					$1,496,077

Carollo Contract Summary
City of Oak Harbor
Wastewater Treatment Plant

February 2, 2016

Contract	Purpose	Authorized by	Approval Date	Facilities Plan Authorized Amount	Preliminary Design Authorized Amount	Final Design Authorized Amount	SCADA Services	Authorized Management Reserve	Available Management Reserve	Base + Management Reserve
Original Contract	Facilities Plan	City Council	8/4/10	$ 1,039,561				$ 50,000	$ 50,000	$ 1,089,561
Amendment 1	Increase No. of Alternatives	Staff	7/6/11	$ 14,683					$ 35,317	
Amendment 2	Additional Field Investigation	Staff	5/8/12	$ 3,404					$ 31,913	
Amendment 3	Added Charrette Process	Staff	8/1/12	$ 18,084					$ 13,829	
Amendment 4	Complete Eel Grass Survey	Staff	10/9/12	$ 9,896					$ 3,933	
Amendment 5	Geotech, Survey, Freund	City Council	10/16/12	$ 121,021				$ 28,679	$ 32,612	$ 149,700
Email	Geotech	Staff	3/13/13	$ 28,679					$ 3,933	
Amendment 6	Preliminary Design, Outfall	City Council	3/19/13		$ 1,982,065			$ 99,103	$ 103,036	$ 2,081,168
Amendment 7	ESA to Complete SEPA	Staff	5/29/13	$ 9,327					$ 93,709	
Amendment 8	GC/CM Assist, Pump Test, Camera	Staff	3/17/14	$ 22,260	$ 47,107				$ 24,342	
Amendment 9	Facilities Re-Design, GC/CM Coord.	Staff	9/23/14		$ 20,804				$ 3,538	
Amendment 10	Final Design	City Council	12/2/14			$ 4,368,533		$ 218,427	$ 221,965	$ 4,586,960
Amendment 11	Outfall Engineering Services	City Council	5/5/15			$ 201,876			$ 221,965	$ 201,876
Amendment 12	Deep Excavation Eng. Services Concept B & Parking Design Park Planning and Outreach	City Council	10/20/15			$ 1,496,877			$ 221,965	$ 1,496,877
Amendment 13	SCADA Services	City Council	pending				$ 1,828,155		$ 221,965	$ 1,828,155
			Total	**$ 1,266,915**	**$ 2,049,976**	**$ 6,067,286**	**$ 1,828,155**	**$ 396,208**		**$ 11,434,296**