

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

**CONTRACT NUMBER**

**TITLE OF WORK PROJECT  
Tryon Creek Wastewater Treatment Plant Secondary Process Improvements**

This contract is between the City of Portland, hereafter call City, and Carollo Engineers, hereafter called Consultant. The City's Project Manager for this contract is Vu Han 503-823-2635.

**Effective Date and Duration**

This contract shall become effective on the date recorded by the City auditor. This contract shall expire, unless otherwise terminated or extended, on June 30, 2020.

**Consideration**

- (a) City agrees to pay Consultant a sum not to exceed \$1,137,130 for accomplishment of the work.
- (b) Interim payments shall be made to Consultant according to the schedule identified in the STATEMENT OF THE WORK AND PAYMENT SCHEDULE.

---

**CONSULTANT DATA AND CERTIFICATION**

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

Address: 720 SW Washington Street, Suite 550, Portland, OR 97205

Employer Identification Number (EIN): 86-0899222

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

City of Portland Business Tax Registration Number: 424264

Citizenship: Nonresident alien ☐ Yes ☐ No

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

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

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

---

**TERMS AND CONDITIONS**

**1. Standard of Care**

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

**2. Effect of Expiration**

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

**3. Order of Precedence**

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

a) these Terms and Conditions; b) Statement of Work and Payment Schedule; and c) any exhibits attached to the contract.

**4. Early Termination of Contract**

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

terminate, and fifteen (15) calendar days to cure the breach. If the breach is not cured within 15 days, the party seeking termination may terminate immediately by giving written notice that the Contract is terminated.

#### **5. Remedies and Payment on Early Termination**

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

#### **6. Assignment**

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

#### **7. Compliance with Applicable Law**

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

#### **8. Indemnification for Property Damage and Personal Injury**

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

#### **9. Insurance**

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

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

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

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

X Required and attached // ☐ Waived by Bureau Director or designee // ☐ Reduce by Bureau Director or designee

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

X Required and attached // ☐ Waived by Bureau Director or designee // ☐ Reduce by Bureau Director or designee

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



X Required and attached // ☐ Waived by Bureau Director or designee // ☐ Reduce by Bureau Director or designee

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

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

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

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

#### **10. Ownership of Work Product**

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

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

#### **11. EEO Certification**

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

#### **12. Equal Benefits**

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

#### **13. Successors in Interest**

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

#### **14. Severability**

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

#### **15. Waiver**

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

**16. Errors**

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

**17. Governing Law/Venue**

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

**18. Amendments**

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

**19. Business Tax Registration**

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

**20. Prohibited Conduct**

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

**21. Payment to Vendors and Subconsultants**

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

**22. Access to Records**

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

**23. Audits**

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

**24. Electronic Signatures**

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

**25. Merger Clause**

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

**26. Dispute Resolution/Work Regardless of Disputes**

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

**27. Progress Reports: /X Applicable /☐/ Not Applicable**

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

**28. Consultant's Personnel: /X Applicable /☐/ Not Applicable**

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



### 29. Subconsultants

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

### 30. Third Party Beneficiaries

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

### 31. Conflict of Interest

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

### 32. Respectful Workplace Behavior

The City of Portland is committed to a respectful work environment, free of harassment, discrimination and retaliation and other inappropriate conduct. Every individual has a right to work in a professional atmosphere where all individuals are treated with respect and dignity. The City's HR Rule 2.02 covers all employees with the City of Portland as well as contractors, vendors or consultants who provide services to the City of Portland. By signing this Contract/Agreement, the Contractor indicates compliance with all terms and conditions contained in this Contract including HR 2.02 as further described at:

<http://www.portlandonline.com/Auditor/Index.cfm?c=27929>.

---

## STATEMENT OF THE WORK AND PAYMENT SCHEDULE

### SCOPE OF WORK

The scope of work is defined in Attachment A.

### CONSULTANT PERSONNEL

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

NAME	ROLE ON PROJECT
Jeff McCormick	Project Manager
Hiriti Haileselassie	Project Engineer
Alan Straub	Senior Project Engineer

Project Cost Summary (by major task)

Task	Fee
100 - Preliminary Design	\$287,200
200 - Final Design	\$617,168
300 - Bid Phase Support Services	\$29,193
400 - Construction Phase Support Services	\$163,921
500 - Facility Startup and Operation Support	\$39,648
Total	\$1,137,130

### SUBCONSULTANTS

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

NAME	ROLE ON PROJECT	SUBCONTRACT AMOUNT
Elcon Associates, Inc.*	Electrical and Instrumentation	\$317,990

SEFT Consulting Group*	Structural	\$85,450
Akana*	Civil	\$59,010
Shur Architects, LLC*	Architectural	\$27,120
Webster Environmental Associates	Odor Control	\$33,490
Northwest Geotech, Inc.*	Geotechnical	\$21,250
Barney and Worth*	Public Involvement, Permitting	\$28,160
<b>Total</b>		<b>\$572,470</b>

\*M/W/ESB Subconsultant

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

## COMPENSATION

The maximum that the Consultant can be paid on this contract is \$1,137,130 (hereafter the “not to exceed” amount). The “not to exceed” amount includes all payments to be made pursuant to this contract, including reimbursable expenses, if any. Nothing in this contract requires the City to pay for work that does not meet the Standard of Care or other requirements of the Contract. The actual amount to be paid Consultant may be less than that amount.

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

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

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

## PAYMENT TERMS: Net 30 Days

### Hourly Rates

The billing rates shall not exceed those set forth below:

Employee	Max Rate \$/hr
<b>Carollo Engineers</b>	
Project Manager	210
Senior QA/QC	238
Senior Project Engineer	186
Project Professional	178
Project Engineer	138
Assistant Project Manager	140
Assistant Professional	98
CAD	
Tech	126
Support Staff	83
<b>Elcon</b>	
Principal	165

	Project Manager	155
	Senior Engineer	135
	Engineer	125
	Senior Designer	105
	Technician	105
	CAD Operator	85
	Admin	75
SEFT		
	Principal	200
	Project Manager	150
	Project Engineer	125
	Drafter	110
Akana		
	Chief Engineer	200
	Project Manager	155
	Assistant Engineer	90
	Landscape Architect	110
	CAD/Graphics	85
Shur		
	Architect	145
Northwest		
	Principal Engineer	150
	Project Engineer	125
	Staff Geologist	95
	Staff Engineer	80
	Drafter	60
	Admin	45
Webster		
	Senior Engineer	227
	Project Manager	200
	Engineer	122
	Drafter	68
	Admin	72
Barney and Worth		
	Principal	220
	Associate	170
	Research Associate	130
	Graphic Designer	95

**Standard Reimbursable Costs**

The following costs will be reimbursed without mark-up:

- Photocopying/reproduction for reproduction of required drawings, reports, and design submittals
- Travel for employees outside of Portland office in excess of a 100 mile radius.

**Subconsultant Costs**

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

**Adjustment of Labor Rates Due to Inflation**

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

Rate increases are subject to the following limitations:

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

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

**Progress Payments**

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

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

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

**ACH Payments**

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

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



## WORKERS' COMPENSATION INSURANCE STATEMENT

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

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

Contractor Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Entity: \_\_\_\_\_

---

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

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

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

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

\_\_\_\_\_  
Contractor Signature

\_\_\_\_\_  
Date

---

### FOR CITY USE ONLY

**PROJECT MANAGER-COMplete ONLY IF CONTRACTOR DOES NOT HAVE WORKER'S COMPENSATION INSURANCE**  
ORS 670.600 Independent contractor standards. As used in various provisions of ORS Chapters 316, 656, 657, and 701, an individual or business entity that performs labor or services for remuneration shall be considered to perform the labor or services as an "independent contractor" if the standards of this section are met. The contracted work meets the following standards:

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

\_\_\_\_\_  
City Project Manager Signature

\_\_\_\_\_  
Date

**CONSULTANT SIGNATURE:**

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

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

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

**Carollo Engineers**

BY: 

Brian R. Matson  
Senior Vice President

Date: 02/02/17

By: 

Jeff McCormick  
Associate Vice President

CONTRACT NUMBER: \_\_\_\_\_

CONTRACT TITLE: \_\_\_\_\_

**CITY OF PORTLAND SIGNATURES:**

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Elected Official

Approved:  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Office of City Auditor

Approved as to Form:  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Office of City Attorney



**City of Portland Bureau of Environmental Services**  
**Tryon Creek Wastewater Treatment Plant**  
**Secondary Process Improvements**  
**CITY Project No. E10694**

**PROJECT BACKGROUND**

The Tryon Creek Wastewater Treatment Plant (TCWTP), located in the City of Lake Oswego, Oregon is owned and operated by the City of Portland and treats flow from collection systems for the City of Portland and the City of Lake Oswego. Operational and capital improvement expenses are shared between the City of Portland and the City of Lake Oswego based upon a 1984 Wholesale Sewage Treatment and Disposal Agreement.

The TCWTP was constructed in 1964 as a conventional activated sludge treatment plant with a design capacity of 5 Million Gallons per Day (MGD). In 1976 the plant was modified and expanded to a design capacity of 8.3 MGD.

The 2014 Tryon Creek Wastewater Treatment Plant Facilities Plan documents recommended improvements for the treatment plant to provide reliable treatment for next 20 years. One of the projects identified in the Facilities Plan is to improve secondary process performance, stability, and reliability. To accomplish this, the Facilities Plan identified the following potential upgrades:

1. Aeration basin process modifications.
2. Control system enhancements.
3. Conversion of Digester 2 to waste activated sludge (WAS) storage.
4. Evaluation of equalization options for digester supernatant return.
5. Odor control system for the existing gravity belt thickener (GBT) Facility and WAS Storage Tank.
6. Relocation of RAS/WAS Pump Station Electrical System.

The purpose of this project is to evaluate in detail the upgrades to the secondary process and to complete final design and construction support services. The detailed evaluations will include the following:

- **Aeration Basins:** The overall configuration and control of the aeration basin components will be evaluated to determine improvements needed to provide optimal conditions for sludge volume index (SVI) control and maximum hydraulic capacity and provide automated control of the secondary process. The hydraulic evaluations will include the hydraulics of basins, flow distribution channels, and blending pipeline capacity. The process evaluations will look at modifications to aeration basin operation including flow

splits, mixing intensity, and air distribution and control and the physical improvements needed to implement selected process changes.

- **Secondary Clarifiers:** The mixed liquor conveyance system and secondary clarifiers will be evaluated to maximize hydraulic and clarification capacity for the existing clarifier and for the addition of one future clarifier. The evaluation will include computational fluid dynamics (CFD) modeling of hydraulics and solids density, clarifier mechanism condition and performance, and optimization of mechanisms, sludge blanket control.
- **Solids Management:** Because the current waste activated sludge (WAS) conveyance and processing configuration does not allow consistent solids retention time (SRT) in the secondary process, and evaluation will be completed of converting Digester 2 into a WAS storage tank. Conversion of Digester 2 will require pumping and piping modifications, addition of a mixing system, and potentially a new aerations system and structural modifications. Conversion of Digester 2 will also eliminate the ability to use it as a Decant Tank for digested primary sludge. Therefore, this evaluation will also include evaluation of primary sludge management options with the goal of minimizing loads hauled off-site, maximizing the potential for energy recovery, optimizing any effects on the secondary process. An evaluation will also be completed of alternative thickening technologies, such as rotary drum thickeners (RDTs) that will minimize operator requirements and allow for continuous wasting.
- **Recycle Stream Management:** Management of recycle streams for WAS and primary sludge thickening as well as any decant from sludge digestion will be evaluated to optimize the performance of the secondary process.
- **Odor Control:** The requirements for, type and size of an odor control system for both the GBTs and the new WAS Storage Tank (Digester 2) will be evaluated. Evaluation for the WAS Storage Tank will include both aerated and un-aerated scenarios as well as odor control requirements for alternative thickening technologies such as RDTs.
- **Control Improvements:** An evaluation will be completed of the integration of automated SRT control for the secondary process. The evaluation will include instrumentation needs, mechanical improvements needed, and control programming structure. An evaluation will also be included on potential improvements to the control of the aeration system to improve process performance and minimize energy usage.
- **RAS/WAS Pump Station Electrical Systems Relocation:** The existing electrical systems for the RAS/WAS pump station are currently located in an area that is vulnerable to flooding. The evaluation for relocation of this equipment will include sizing for current and future demands, sizing and siting a new building to house the equipment, and architectural and site civil requirements for construction of the new building.

The results of these evaluations will define the improvements to be included in the final design.

## **SERVICES PROVIDED BY THE CITY**

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

- The City shall apply for the City of Portland Commercial Building Permit from the Bureau of Development Services (BDS). The Contract Documents shall require the Construction Contractor to be responsible for obtaining all other required City of Portland trade permits.
- Provide electronic copies of available as-built drawings, plant Discharge Monitoring Reports, process and hydraulic models, and other available documents and records requested by the Consultant.
- Distribution of deliverables to City reviewers as well as compilation, coordination, and vetting of City review comments. Consultant will print 20 copies of each submittal for City reviewers.
- Survey Services: The City will provide property boundary surveys and establish benchmarks and survey control monuments, and legal descriptions.
- Submit the Final Project Bidding Documents to Oregon DEQ for review of plans and specifications as required by OAR 340-052.
- Perform routine sampling of plant process streams as requested by the Consultant.
- Provide the City's Division 00 and Division 01 specifications, where the Consultant will incorporate project-specific information.
- Print Bid Documents.
- Solicit and evaluate Bids.
- Provide construction management and inspection services.
- Perform PLC and SCADA Graphical User Interface Automation Programming.
- Preparation of as-built drawings.
- Public involvement activities limited to maintenance of project web pages, final publication of newspaper advertisements and notices, printing and distribution of project informational materials, and receipt and responses to construction phase public inquiries.
- Provide training to Consultant staff in the use of City's web-based project management software (E-Builder).



## **SUMMARY OF SERVICES PROVIDED BY THE CONSULTANT**

Consultant shall provide the following services in association with the design and construction of the TCWTP Secondary Process Improvements:

- Complete preliminary design of the improvements to clearly define the project and provide the City with 30% design documents and cost estimate. Evaluations to be completed as part of the preliminary design include:
  - Hydraulic and process modeling to establish the existing capacities.
  - Hydraulic modeling to determine the aeration basin blending pipeline capacity and recommended design improvements needed to maintain the desired WSE in the aeration basin inlet channel when 50 MGD is delivered to the inlet channel.
  - CFD modeling evaluations of potential changes to hydraulic elements to estimate improvements in performance including:
    - ◆ Flow splitting to the aeration basin.
    - ◆ Flow splitting to the existing and future third secondary clarifier.
    - ◆ Secondary clarifier influent distribution.
  - Modeling of process changes including:
    - ◆ WAS storage to equalize wasting from the secondary process.
    - ◆ Decant recycle equalization.
    - ◆ Reducing digestion of primary solids and increasing thickening.
  - Sizing and siting for new electrical room for the RAS/WAS pump station.
  - Reconfiguration of RAS and WAS pumps to improve control of the secondary process.
  - Instrumentation upgrades need for SRT automation and improved DO control
  - Odor control evaluations.
  - Equipment condition evaluations including secondary clarifier mechanisms and hydraulic control equipment in the secondary process.
  - Siting for new equipment including electrical gear and odor control systems
  - Geotechnical and resiliency evaluations for new structures
- Prepare construction plans and specifications.
- Develop and prepare construction estimates and schedules.
- Prepare structural calculations for building permit.
- Provide support services during bid, construction, start-up and testing.

The scope of services is divided into the following tasks:

Preliminary Design (Task 100) entails the establishment of design criteria, followed by an evaluation of alternative methods for optimizing the secondary process at the TCWTP. Deliverables will include a Preliminary Design Report summarizing the evaluations completed, the upgrades to be included in the project, and preliminary cost estimates and project schedule.

Final Design Phase Services (Task 200) will focus on the development of the final design documents including drawings and specifications, construction cost estimate, application software development assistance, and overall project schedule.

Bidding Phase Support Services (Task 300) will include engineering services to support the City during the bidding of the project.

Construction Phase Support Services (Task 400) will include providing office engineering support services to support the City's construction management team.

Facility Startup and Operation Support Services (Task 500) will include supporting the City staff in the development of the PLC and SCADA programming. This task will also include training operations staff and providing support during start-up of the new facilities.

The following is detailed description of the work associated with each task outlined above.

## **TASK 100 – PRELIMINARY DESIGN**

The objective of this task is to complete evaluations necessary to clearly define the scope for the final design.

### **Subtask 110: Kick-off Meeting**

A kick-off meeting will be the first project meeting. Consultant Project Manager and members of the design team will meet with the City project team at a kickoff meeting to review project goals and objectives and confirm project scope, schedule, and approach.

#### ***Deliverables:***

- 1) Meeting Minutes.

#### ***Assumptions:***

- 1) Electrical is the only discipline to attend the kick-off meeting.

### **Subtask 120: Project Management**

Project management services will develop and implement administrative procedures that will be used to plan and monitor the progress of the project throughout the duration of the contract. Specific activities to be completed by the Consultant as part of this task include:

- Ongoing Project Management: Consultant will provide ongoing project management activities for the project. Typical activities include the coordination of the consultant project team, project resources, the overall budget, and quality management.
- Develop and actively manage a project schedule and budget.
- Manage and coordinate consultant resources and subconsultants to provide deliverables within the approved project schedule and budget.
- Project Monitoring and Progress Reporting: Consultant will monitor the progress of the project and provide City with a monthly Project Status report that will include:
  - Progress Report, summarizing work performed, and forecasted work efforts.
  - Budget Report, showing budget spent against progress (earned value) and estimated budget to complete the work.
  - Progress Schedule.
  - Invoice with Monthly Subconsultant Payment and Utilization Report (MUR).
- Quality Management: Consultant will manage and execute quality control procedures. Consultant will maintain a rolling decision log during design, updated as needed and kept in a historic register.

**Meetings:**

- 1) Consultant Project Manager will meet every two weeks with the City's Project Manager to review status of WBS activities and deliverables in progress, activities planned for the next three weeks, project risks, decisions, and pending/potential changes. Leads for activities in progress and activities planned for the next three weeks shall participate in the meeting in person or via teleconference.
- 2) Consultant will have up to ten conference calls with the project team members during design as part of the project management task.

**Deliverables:**

- 3) Decision log
- 4) Meeting Minutes.
- 5) Monthly Invoice with MUR and Project Status Reports (6).

**Assumptions:**

- 6) Project Duration - 32 months (14 months for design, 4 months of bidding and award, 14 months for Construction). This subtask includes project management during the 6 months of preliminary design.
- 7) Meeting minutes, and associated action items, will be distributed electronically by the Consultant to City and internal staff using web-based project management software (E-Builder); access and training will be provided by the City.

**Subtask 130: Data Collection and Review**



Consultant will work with the City to compile available information pertaining to the project including as-built drawings, documents, and data. Consultant will identify key data gaps and provide the City with recommendations for additional sampling and field work based on the gaps identified.

**Meetings:**

- 1) Meet with the City project team at the TCWTP to review available data and as-built data as well as recommendations for additional sampling and field work.

**Deliverables:**

- 1) Draft Testing Plans (including equipment, piping, materials, methods, procedures, sampling, testing, and analysis requirements) for all systems or components where testing is recommended.

**Assumptions:**

- 1) The City will provide sampling and testing recommended by the Consultant to support design of the facilities.
- 2) The City will provide access to facilities at the TCWTP as needed in order for the Consultant to confirm the accuracy of record drawings as to visible and/or accessible portions of the facilities.

**Subtask 140: Survey and Geotechnical Evaluation**

Assist the City in completing the survey work required to complete the design. Provide City with boundaries for survey and utility locate requirements.

Work to be completed as part of the geotechnical investigation shall include the following:

- Complete up to four mud rotary borings advanced to depths of approximately 30 and 17 feet. Borings will be advanced using a truck mounted drill rig and borings will be terminated once basalt bedrock is encountered.
- Complete Wenner probe field resistivity testing at up to four locations in the vicinity of the proposed Electrical Building.
- Installation two vibrating wire piezometers during the exploration phase. Complete a follow up reading about a week after installation, and three subsequent readings through the following winter to establish groundwater conditions for underground utility work.
- Complete laboratory testing on select samples recovered from the borings. The exact laboratory testing performed will depend on the soils encountered in the investigation
- Prepare a Draft Geotechnical Report that presents the results of the subsurface explorations, testing and recommendations. The recommendations will be limited to pavement section patching and overlay design sections, slab and foundation design recommendations and drainage, earthwork requirements and related geologic interpretations and earthquake hazards assessment. The appendix of the report shall

include the following: description of field exploration and sampling, description of laboratory testing, site vicinity map and boring location plan, and appendices containing current and historic borings and laboratory test results such that this portion of the report can be separated and included as information in contract documents. The Consultant shall produce an updated geotechnical report after receiving comments and edits.

**Meetings:**

- 1) Conduct and facilitate on-site meeting prior to geotechnical investigation.

**Deliverables:**

- 1) Draft Geotechnical Report.
- 2) Updated Geotechnical Report with comments incorporated from the City.

**Assumptions:**

- 1) The City will complete the survey.
- 2) The soils encountered will be classified, logged and samples retained for subsequent laboratory testing. Borings will be backfilled in accordance with applicable regulations. Drilling-derived-waste (excess cuttings) will be barreled and stored on City property until hazardous materials testing is completed, and appropriately disposed of.
- 3) It is assumed that the exploration locations are not contaminated with hazardous materials above human health risk standards.
- 4) As-built survey of exploration holes to be performed by the City.
- 5) No costs for restoration of landscaping or repair of damaged curbs/walks are included other than patching core holes with concrete or AC cold patch. Sod will be set aside and replaced at test pit locations, and backfill will be nominally compacted in lifts.
- 6) The exact laboratory testing performed will depend on the soils encountered in the investigation. However, for preliminary planning purposes we have assumed the following:
  - a. Two Atterberg limits tests.
  - b. Three percent fines content tests.
  - c. Moisture content tests for 16 samples.
  - d. One gradation test.
  - e. Two pH and two laboratory minimum resistivity tests will be performed.

**Subtask 150: Alternatives Evaluations**

1. Consultant will work with the City to establish hydraulic and process modeling goals. Consultant will update existing models or develop new models as needed to meet the goals and use information collected as part of Subtask 210 to calibrate hydraulic and process models.

2. Evaluate up to three process modifications to optimize SVI control including WAS storage. Provide cost and non-cost evaluation of each alternative.
3. Provide hydraulic and mass balance computer modeling to evaluate hydraulic and treatment capacities of the secondary process for resiliency during peak wet weather flows. The computer modeling will be performed for the following objectives:
  - a. Developing recommended wet weather operating modes.
  - b. Identifying peak capacities of the existing secondary treatment system with the incorporation of the recommended wet weather operating modes.
  - c. Identifying needed hydraulic modifications and other process improvements in the secondary system that will be required when a third secondary clarifier is added, to treat the projected year 2040 instantaneous peak flow of 49.9 mgd (25-year, 24-hour storm). The addition of a third clarifier is a future expansion not included in this project except for determining which secondary hydraulic improvements need to be made.
  - d. Identify modifications required to maximize capacity of the blending pipeline.
4. Complete condition assessment of critical secondary process hydraulic control equipment and secondary clarifier mechanisms.
5. Evaluate the adequacy of the existing air supply system for current and projected flows and loads. Evaluation will also include evaluation of the existing control system and identify improvements that will increase efficiency.
6. Evaluate the recommended modifications required for chlorination of RAS for process control.
7. Evaluate and recommend modifications to the return activated sludge (RAS) and waste activated sludge (WAS) systems, as well as other monitoring and control systems to determine modifications required to achieve complete process automation.
8. Evaluate and recommend modifications to minimize sludge hauled to CBWTP. Evaluation will include an estimate of energy balance for each alternative, hauling costs, and capital and operations and maintenance costs for process modifications.
9. Evaluate equalization of digester supernatant return to reduce instantaneous loading to the secondary process.
10. Evaluate and recommend alternative for odor control of the Gravity Belt Thickener facility and WAS storage tank. Evaluation will assume that the new WAS storage tank is aerated.
11. Develop draft process control approach for all processes recommended for modification.



12. Develop plan for electrical equipment to be relocated out of flood plain from the WAS/RAS pump station including determining location and size of a new electrical building for the relocated electrical equipment from the WAS/RAS pump station. Evaluation will also include a development of a preliminary sequencing plan for moving existing loads to the new electrical gear while maintaining critical operations at the plant.
13. Review City standards for electrical and instrumentation design and drafting standards.
14. Review design criteria established by the City of Lake Owego architectural standards and determine requirements for compliance with City's Green Building Policy. Develop basis of design recommendations for major elements based on evaluation and interpretation of building code requirements.
15. Work with the City to establish seismic resiliency requirements evaluation for new structures.

***Meetings:***

- 1) Conduct review meeting, collect and address comments, and finalize technical memoranda documenting the assumptions and findings of the hydraulic and mass balance modeling.
- 2) Conduct and facilitate up to (5) four-hour alternatives evaluation workshops with City staff to solicit focused City input on alternatives evaluations and decisions that are necessary for the development of the 30% Design Submittal. Approximately three (3) members of Consultant design team will attend each workshop, including Project Manager and other necessary staff/discipline engineers. The meetings include the following:
  - a. Two (2) process workshops; one will be to select the alternatives
  - b. One (1) mechanical and structural workshop.
  - c. One (1) electrical and instrumentation workshop.
  - d. One (1) architectural and structural workshop.

***Deliverables:***

- 1) Workshop agendas, materials, summary notes.
- 2) Modeling reports for BioWIN and CFD modeling, and recommendations from the modeling performed to support facility design, as well as the BioWIN files used for the project.
- 3) Draft sections of the 30% Design Submittal that summarizes the evaluations for the recommended alternatives.
- 4) Checklist to be used for completeness checking of the 30% Design Submittal similar to the 30% City Practices for Milestone Reviews Check List.

**Assumptions:**

The following draft sections of the 30% design submittal will be submitted to the City:

- 1) Basis of design.
- 2) Process control improvements evaluation and recommendation.
- 3) Secondary clarification optimization evaluation.
- 4) Solids processing and recycle stream management evaluation.

**Subtask 160: 30% Design Development**

1. Establish facility design criteria and standards to be used for project design including:
  - a. City Control Systems Standards.
  - b. The City's established CADD standards.
  - c. Generally accepted standards of practice for the design, construction, operation, and maintenance of municipal wastewater treatment facilities, as applicable to the TCWTP.
  - d. Compliance with the City's Green Building Policy as it applies to both occupied and unoccupied structures.
2. Prepare the 30% Design Submittal as described below.
3. Perform discipline-coordinated Quality Assurance/Quality Control (QA/QC), and reviews on the 30% Design Submittal. Address internal QA/QC comments on the 30% Design Submittal (or identify unresolved review comments with the proposed method to be used to address these comments in the 60% Design Submittal) and submit the Final 30% Design Submittal to the City for review.
4. Provide engineer's cost estimates at 30% design level.

**Meetings:**

- 1) Conduct 30% design review meeting, collect and address design review comments.
- 2) Conduct Electrical and Instrumentation review meeting

**Deliverables:**

- 1) Meeting Minutes.
- 2) Decision Log
- 3) Preliminary Design Report
- 4) Construction Cost Estimate meeting the requirements of an Association for the Advancement of Cost Engineering (AACE) International Class 3 estimates.

- 5) List of unresolved internal QA/QC comments on the 30% Design Submittal with the proposed approach to resolve each comment in the 60% Design Submittal.
- 6) Geotech report
- 7) Computer modeling reports for BioWIN and CFD modeling and BioWIN files
- 8) Alternatives analysis summary

***Assumptions:***

- 1) 20 hard copies of the draft preliminary design report and 5 final copies will be provided to CITY by the consultant. All remaining deliverables will be submitted electronically.

**Subtask 170: Public Involvement**

The City will assign a Public Involvement staff member to coordinate communications with the public as needed to support the project. Consultant will support the project's public involvement needs by:

1. Preparing a draft and final Public Involvement Plan for the Preliminary Design and Design Phases of the project using the City Public Involvement and Communications Plan template.
2. Preparing text and graphics for use on a project website to be maintained by the City.

***Meetings:***

- 1) Up to two Project Team meetings.

***Deliverables:***

- 1) Draft and final Public Involvement Plan.
- 2) Text and graphics for use on a project website to be maintained by CITY.
- 3) Summary of public involvement to submit with permit application.

**TASK 200 – FINAL DESIGN PHASE SERVICES:**

**Subtask 210: Project Management**

Project management services described in subtask 120 will continue into Task 200 during final design. Consultant as part of this task during final design include: ongoing project management, managing and coordinating consultant resources and subconsultants, project monitoring and progress reporting and quality management

***Meetings:***

- 1) Consultant Project Manager will meet every two weeks with the City's Project Manager to review status of WBS activities and deliverables in progress, activities planned for the next three weeks, project risks, decisions, and pending/potential changes. Leads for activities in progress and activities planned for the next three weeks shall participate in the meeting in person or via teleconference.



***Deliverables:***

- 1) Meeting Minutes.
- 2) Monthly Invoice with MUR and Project Status Reports (8).

***Assumptions:***

- 1) Project Duration - 32 months (14 months for design, 4 months for bidding and award, 14 months for Construction). This subtask includes project management during the 8 months of final design
- 2) Meeting minutes, and associated action items, will be distributed electronically by the Consultant to the City and internal staff using web-based project management software (E-Builder); access and training will be provided by the City.

**Subtask 220: 60% Design**

Upon completion of the Preliminary Design, Consultant will begin production of construction documents. Primary efforts for the 60% Design Development include:

1. Conduct design workshops as needed with City staff to solicit City input into the development of the 60% Design Submittal.
2. Prepare the 60% Design Submittal as described below.
3. Perform discipline-coordinated QA/QC and constructability reviews on the 60% Design Submittal. Address internal QA/QC comments on the 60% Design Submittal (or identify unresolved review comments with the proposed method to be used to address these comments in the 90% Design Submittal) and submit the final 60% Design Submittal to the City for review.

***Meetings:***

- 1) Conduct and facilitate up to (3) four-hour workshops with City staff to solicit focused City input on alternatives evaluations and decisions that are necessary for the development of the 60% Design Submittal
- 2) Conduct 60% design review meeting, collect and address design review comments. 60% design review will address constructability issues and concerns.
- 3) Conduct 60% review meeting for electrical and instrumentation.

***Deliverables:***

- 1) 60% Design Drawing Submittal including site plans and HVAC, mechanical, structural, and architectural plans and sections. Submittal to include one line diagrams and P&IDs and other components for a complete 60% drawing set.
- 2) Draft Specifications (CSI Master format 2014 with 50 Divisions) such that project specific information is included and non-pertinent information removed. First draft of construction sequence, milestones and constraints.

- 3) Construction Cost Estimate meeting the requirements of an AACE International Class 2 estimate.

**Assumptions:**

- 1) All deliverables will be submitted electronically. In addition, 20 hard copies of the 60% design drawing submittal and specifications will be submitted to CITY by Consultant.

**Subtask 230: 90% Design**

1. Conduct design workshops as needed with City staff to receive City input into the development of the 90% Design Submittal.
2. Prepare the 90% Design Submittal
3. Perform discipline-coordinated QA/QC and constructability reviews on the 90% Design Submittal. Address and resolve internal QA/QC comments on the 90% Design Submittal and submit the completed final 90% Design Submittal to the City for review.
4. Conduct review meeting with City staff to review City 90% Design Submittal comments and project permitting requirements.
5. Provide loop narratives and control descriptions for development of application programs.
6. Provide engineer's estimate and construction schedule at each design deliverable.

**Meetings:**

- 1) Conduct 90% design review meeting, collect and address design review comments. 90% design review will address constructability issues and concerns.
- 2) Conduct 90% design review for electrical and instrumentation design.

**Deliverables:**

- 1) 90% Design Drawing submittal including updated site plans and HVAC, mechanical, structural, and architectural plans and sections. Submittal to include updated one line diagrams and P&IDs and other components for a complete 90% drawing set.
- 2) Final version of Specifications incorporating comments from the 60% submittal review and reflecting full coordination with drawings. Include final construction sequence, milestones and constraints, measurement and payment, and proposed bid form.
- 3) Equipment list that includes equipment number, equipment size, equipment power requirements, and basic controls and operating strategies for all equipment on the project.
- 4) Final Basis of Design Technical Memorandum
- 5) Final Geotechnical Report

**Assumptions:**

- 1) Six (6) hours of QA/QC is assumed for Carollo's review of the City's front end documents. Carollo will review the documents and compare them to Consultant EJCDC standard front end documents and summarize differences or missing information in a report. The report will be reviewed by the Consultant's risk management division and will be sent to the City.

#### Subtask 240: Project Bidding Document Development

Incorporate 90% review comments from the City and Consultant QA/QC checker and prepare the construction Contract Documents for bidding the project.

##### **Meetings:**

- 1) No meetings will be completed as part of this task.

##### **Deliverables:**

- 1) Revised Plans and Specifications and calculations required for the Lake Oswego Building Official to issue a building permit.
- 2) Sealed project plans and specifications in electronic format, both pdf and AutoCAD/MS Word with no password protection.
- 3) Estimate of project construction contract cost meeting the requirements of an AACE International Class 1 estimate.
- 4) Final process narratives and loop descriptions for application software development.

##### **Assumptions:**

- 1) One hard copy of the final specs, one half size drawing set and one full size drawing set will be provided to City by Consultant.
- 2) Electronic copies of the final bid documents will be provided to the City in CAD, pdf, excel, and word format as applicable.

#### Subtask 250: Permitting Support

Permitting support includes identifying and acquiring the permits and approvals required from the City of Lake Oswego, State of Oregon, and other regulatory agencies for construction of the project. The Facilities Plan identified the need for the following permits for project construction:

1. Lake Oswego Land Use Review: The project will require a Conditional Use Permit and Major Development Review from the City of Lake Oswego per the Community Development Code of the City of Lake Oswego (LOCDC). It is anticipated that the City will be working with the City of Lake Oswego on updating the LOCDC to include a master plan or other permitting strategies for the site, but the schedule for this project necessitates the need to move forward under the current requirement for a Conditional Use Permit. Several members of the team are involved with permitting. Tasks include:
  - a. Provide all materials needed for a pre-application conference (development review, conditional use permit).



- b. Facilitate the required neighborhood meetings as outlined under the Public Involvement task.
  - c. Complete all evaluations, floodplain modeling and analyses, certifications, surveys, field investigations, studies, and reports required for a complete permit application.
  - d. Prepare and make presentations at Development Review Commission and Lake Oswego City Council meetings as required to secure the permits and approvals necessary for project construction.
2. Oregon Department of Environmental Quality (DEQ) Plan Review Approval: The City will submit the Final Project Bidding Documents to Oregon DEQ for review of plans and specifications as required by OAR 340-052.
  3. City of Lake Oswego Building Department Plan Review: Consultant will aid City in preparing the reports, drawings, specifications, calculations and permit application materials required for Lake Oswego Building Department review of the project compliance with applicable code requirements. The City will submit the permit application materials.

Consultant will take the lead on 1) Lake Oswego Land Use Review, which includes coordinating with the design team and the City to prepare for the pre-application conference, developing the land use application, facilitating neighborhood meetings, and other community outreach activities. It is also anticipated that the project will be presented to the newly formed Citizen Advisory Committee to get feedback on the planned updates.

#### Pre-Application Conference Support

Consultant will prepare the content of the Pre-Application form and attachments (noted below) for the City to submit:

- ☐ Application Form.
- ☐ County Assessor's Map.
- ☐ Existing Features Map (structures, topography, trees, creeks, etc.).
- ☐ Site Plan drawn to scale.

#### Neighborhood Meeting(s)-Requirements

- ☐ Consultant will attend the meeting with the recognized Neighborhood Association and prepare a letter for the City to distribute to all required neighborhood associations and property owners. Consultant will aid City in providing details for the neighborhood meeting that convey the appearance (materials and colors), site design, density, natural resources protection areas, arrangement of uses, access and other relevant visual information that would be included in a complete application for the type of development proposed.

#### Conditional Use Application Materials

Consultant will provide the required permit materials for the City to submit in the conditional use application.

**Meetings:**

- 1) One pre-application conference.
- 2) First neighborhood meeting (introduce project/early feedback).
- 3) Second neighborhood meeting (required land use meeting/application completed).
- 4) Open House meeting (share final plans with neighborhood).
- 5) Up to four Project Team coordination team meetings.
- 6) First Citizen Advisory Committee meeting (introduce project/early feedback).
- 7) Second Citizen Advisory Committee meeting (preview required land use meeting content/materials prior to neighborhood meeting).

**Deliverables:**

- 1) Pre-Application Conference: Consultant will coordinate with the design team and the City to prepare for the pre-application conference; attend the meeting, take notes and provide a summary document.
- 2) Neighborhood Meetings: Consultant will prepare and facilitate neighborhood meetings, develop fact sheet and presentations, and provide meeting summaries.
- 3) Citizen Advisory Committee: Consultant will prepare the team for CAC meetings, develop informational materials and presentations, and provide meeting summaries.
- 4) Support Project Team with development of presentations at Development Review Commission and Lake Oswego City Council.
- 5) Prepare Conditional Use Permit application and other land use and development requirements with support from the City and the design team.

**Assumptions:**

- 1) The City Public Involvement staff will support preparation for neighborhood meetings and open house by advertising the events on the City website and providing mailings.
- 2) City Public Involvement staff are responsible for any broader public outreach effort.
- 3) All CAD drawings and supportive figures for the application will be developed by Consultant team members.

**TASK 300 – BIDDING PHASE SUPPORT SERVICES.****Subtask 310: Project Management**

Project management services described in subtask 120 will continue into Task 300. Consultant as part of this task during the bid phase include: ongoing project management, managing and coordinating consultant resources and subconsultants, project monitoring and progress reporting and quality management

**Meetings:**

- 1) Consultant Project Manager will meet every two weeks with the City's Project Manager to review status of WBS activities and deliverables in progress, activities planned for the next three weeks, project risks, decisions, and pending/potential

changes. Leads for activities in progress and activities planned for the next three weeks shall participate in the meeting in person or via teleconference.

***Deliverables:***

- 1) Meeting Minutes.
- 2) Monthly Invoice with MUR and Project Status Reports (1).

***Assumptions:***

- 1) Project Duration - 32 months (14 months for design, 4 months for bidding and award, 14 months for Construction). This subtask includes project management during the 4 months of bid phase services.
- 2) Meeting minutes, and associated action items, will be distributed electronically by the Consultant to City and internal staff using web-based project management software (E-Builder); access and training will be provided by the City.

The City of Portland's Procurement Services Division will advertise the project, print and distribute bid documents, manage communications with prospective bidders, conduct the pre-bid conference, issue addenda, receive and evaluate bids, and award the construction contract. In support of these efforts, the Consultant will perform the following tasks as requested by the City:

Subtask 320 - Attend the project pre-bid conference.

Subtask 330 - Provide responses to bidder's questions as required.

Subtask 340 - Prepare addenda to clarify and or modify the project bidding documents.

Subtask 350 - Conformed Documents.

***Meetings:***

- 1) Attend the pre-bid conference.

***Deliverables:***

- 1) Provide responses to Bidder questions as requested by the City.
- 2) Revised plans and specifications required for the City to issue Addenda to the Bidding Documents to clarify the documents and to answer bidder questions.
- 3) Conformed documents, with incorporation of addenda, for construction.

***Assumptions:***

- 1) One hard copy conformed specs, one half size drawing set and one full size drawing set will be provided to City by Consultant.
- 2) All other documents will be submitted electronically to the City.



## **TASK 400 – CONSTRUCTION PHASE SUPPORT SERVICES**

The City's Construction Management Division will perform construction management and inspection of the construction work to ensure compliance with the plans and specifications. The Consultant will support of these efforts by performing the following tasks as requested by the City:

### **Subtask 410: Project Management**

Project management services described in subtask 120 will continue into Task 400. Consultant as part of this task during the construction phase include: ongoing project management, managing and coordinating consultant resources and subconsultants, project monitoring and progress reporting and quality management.

#### ***Meetings:***

- 1) Consultant Project Manager will meet every two weeks with the City's Project Manager to review status of WBS activities and deliverables in progress, activities planned for the next three weeks, project risks, decisions, and pending/potential changes. Leads for activities in progress and activities planned for the next three weeks shall participate in the meeting in person or via teleconference.

#### ***Deliverables:***

- 1) Meeting Minutes.
- 2) Monthly Invoice with MUR and Project Status Reports (14).

#### ***Assumptions:***

- 1) Project Duration - 32 months (14 months for design, 4 months for bidding and award, 14 months for Construction). This subtask includes project management during the 14 months of construction phase services.
- 2) Meeting minutes, and associated action items, will be distributed electronically by the Consultant to City and internal staff using web-based project management software (E-Builder); access and training will be provided by the City.

### **Subtask 420: Submittal Review:**

Review submittals for compliance with the plans, specifications and design intent. A maximum of 100 submittals, including resubmittals, is assumed. An average of 3 hours is assumed per submittal.

### **Subtask 430: Request for Information Response:**

Evaluating and responding to Requests for Information (RFI). Identify changes to design documents, if applicable. A maximum of 80 RFI is assuming. An average of 3 hours is assumed per RFI.

### **Subtask 440: Prepare Design Clarifications.**

This task includes preparing cost estimates for Design Clarifications. A maximum of 10 design clarifications is assumed. An average of 6 hours is assumed per design clarification to aid the City in preparing the design clarifications.

#### Subtask 450: Review Change Orders.

Evaluate Contractor change order requests, notices of change, and associated cost estimates. A maximum of 8 change orders will be reviewed. An average of 6 hours is assumed per change order.

#### Subtask 460: Perform a Power System Study

Including Short-Circuit, Coordination, and Arc-Flash Hazard) for the TCWTP Facility per applicable Institute of Electrical and Electronics Engineers (IEEE) Standards. Consultant to provide arc-flash labeling language for the City to prepare arc-flash labels.

#### Subtask 470: Construction Meetings

Attend construction progress meetings, as requested. It is assumed the Consultant will attend 1 meeting a month, up to 20 meetings total.

#### Subtask 480: Construction Observance

Provide periodic construction observation. Provide the services of specialty sub-consultants or specially trained and qualified consultant staff to review submittals; attend pre-installation conferences; and provide installation observation and/or fabrication inspection and testing services for waterproofing systems, structures, protective coatings, vibration testing and analysis, and other specialty systems as recommended by the Consultant. Perform the duties of the Registered Design Professional in Responsible Charge of the project as required the Lake Oswego Building Official and the Oregon Structural Specialty Code.

#### Subtask 490: Final Inspection

Provide final project inspection and report to close out building permit as required.

#### Subtask 495: CAD Drawing Revision Support

Provide revised CAD drawings for construction changes.

#### **Meetings:**

- 1) Attend pre-construction meeting.
- 2) Attend up to 20 construction progress meeting as requested by City staff.
- 3) Attend up to 20 construction observations.

#### **Deliverables:**

- 1) Submittal review responses.

- 2) Design Clarifications including sketches, drawing revisions, specifications, supporting calculations, quantity take-offs, and cost estimates for the work included in the design clarification.
- 3) Evaluations of Contractor Change Order Proposal requests including assessments of contractor entitlement to additional compensation based on the contract documents, proposed quantities, unit prices, production rates, and proposed change order total cost.
- 4) Inspection reports for specialty inspection and fabrication observation including roofing and waterproofing systems, fiberglass-reinforced plastic (FRP) tanks/structure fabrications, surface preparation and protective coating applications, and others as applicable.
- 5) Field Observation Reports as required by the Lake Oswego Building Official.
- 6) Draft and Final Electrical Power System Study (Short-Circuit, Coordination, and Arc-Flash Hazard) for the TCWTP per applicable IEEE International Standards. Consultant to provide arc-flash labeling language for the City to prepare arc-flash labels.
- 7) Prepare punchlist following final inspection.

#### **TASK 500 – FACILITY STARTUP AND OPERATION SUPPORT SERVICES.**

The City of Portland's CITY Wastewater Group staff will perform the Programmable Logic Controller (PLC) programming and Supervisory Control and Data Acquisition (SCADA) programming required for the new facilities. CITY and Consultant will team to perform the operator training required. Provide support to the City as requested to support the startup and operation of the new facilities in the context of the intended design or as modified during construction:

1. Visit TCWTP site to observe and assist CITY staff with system operational readiness tests.
2. Participate in teleconferences, respond to email inquiries, evaluate operational data and procedures.
3. Lead testing and provide services for a system integrator (ORT2)

Provide recommendations for operational and other system changes to improve system performance.

#### **Deliverables:**

- 1) Letters, reports, and forms to the Building Official and other regulatory agencies as required for permit closeout.
- 2) Site Visit Summary Reports with recommendations to improve facility performance.
- 3) Suggested testing and start up sequences.



- 4) Draft and Final process O&M manual, in format accommodating to the City's e-manual (electronic manual).
- 5) Recommended plan and training materials for process training for Operations staff.
- 6) Revised final process narratives and loop descriptions.
- 7) Provide testing and startup plan for City to execute ORT2

***Assumptions:***

- 1) Up to four training session at 4 hours each.
- 2) 2 site visits will be needed for the operational readiness tests.
- 3) 2 site visits will be made to make recommendations to improve facility performance.

**GENERAL ASSUMPTIONS:**

The City shall furnish Consultant available studies, reports and other data pertinent to Consultant's services; obtain or authorize Consultant to obtain or provide additional reports and data as required; furnish to Consultant services of others required for the performance of Consultant's services hereunder, and Consultant shall be entitled to use and rely upon all such information and services provided by the City or others in performing Consultant's services under the Contract.

The City shall arrange for access to and make all provisions for Consultant to enter upon public and private property as required for Consultant to perform services hereunder.

In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for potential projects, Consultant has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, Consultant makes no warranty that the City's actual project costs, financial aspects, economic feasibility, or schedules will not vary from Consultant's opinions, analyses, projections, or estimates.

The parties agree that Consultant shall be indemnified to the fullest extent permitted by law for all claims, damages, losses and expense including attorney's fees arising out of or resulting from the construction contractor's performance of work including injury to any worker on the job site. Additionally, Consultant shall be named as additional primary insured(s) by the construction contractor's General Liability and Builders All Risk insurance policies without offset and be included in any waivers of subrogation, and all Construction Documents and insurance certificates shall include wording acceptable to the parties herein with reference to such provisions.

Consultant shall not be responsible for the means, methods, techniques, sequences, or procedures of construction selected by construction contractors or the safety precautions and programs incident to the work of construction contractors and will not be responsible for construction contractors' failure to carry out work in accordance with the Contract Documents.

Hazardous materials or asbestos may exist at a site where there is no reason to believe they could or should be present. Consultant and the City agree that the discovery of unanticipated hazardous materials or asbestos constitutes a changed condition mandating a renegotiation of Consultant's services.



**Preliminary Sheet List**  
**Tryon Creek Wastewater Treatment Plant**  
**Tryon Creek Wastewater Treatment Plant Secondary Processes Improvements**

<b>General Drawings</b>			
1	01 G	-	1 Cover Sheet
2	01 G	-	2 Sheet Index
3	01 G	-	3 Abbreviations
4	01 G	-	4 Piping Symbols
5	01 G	-	5 Design Criteria
6	01 G	-	6 Overall Site Plan
7	01 G	-	7 Process Schematic
8	01 G	-	8 Hydraulic Profile
9	01 G	-	9 General Structural Notes
10	01 G	-	10 General Mechanical & HVAC Notes
11	01 G	-	11 General Architectural Notes and Schedules
<b>Yard Drawings</b>			
12	01 C	-	1 Yard Area Index and General Yard Notes
13	01 C	-	2 Yard Area A-1 Demolition Plan
14	01 C	-	3 Yard Area A-1 Paving & Grading Plan
15	01 C	-	4 Yard Area A-1 Piping Plan
16	01 C	-	5 Yard Area A-1 Stormwater Plan
17	01 C	-	6 Yard Area A-1 Erosion Control Notes & Details
18	01 C	-	7 Yard Piping Profiles
19	01 C	-	8 Yard Details
20	01 C	-	9 Yard Details
21	01 C	-	10 Yard Landscaping Area Index and General Landscaping Notes
22	01 C	-	11 Yard Landscaping Area 1 Planting Plan
23	01 C	-	12 Yard Landscaping Area 1 Irrigation Plan
24	01 C	-	13 Yard Landscaping Planting and Irrigation Details
<b>Aeration Basins Modifications Drawings</b>			
<b>Demolition Drawings</b>			
25	20 D	-	1 Existing Aeration Basins Demolition Plan
<b>Mechanical Drawings</b>			
26	20 M	-	1 Existing Aeration Basins Modification Plan
27	20 M	-	2 Modification Sections and details
28	20 M	-	3 Blending Pipeline Modifications
<b>Secondary Clarifiers and RAS/WAS Pump Station Modifications</b>			
<b>Demolition Drawings</b>			
29	24 D	-	1 Secondary Clarifier No. 1 and 2 Demolition 1
30	24 D	-	2 Secondary Clarifier No. 1 and 2 Demolition 2
31	24 D	-	3 RAS/WAS/Scum Pump Station Demolition 1
32	24 D	-	4 RAS/WAS/Scum Pump Station Demolition 2
<b>Mechanical Drawings</b>			
33	24 M	-	1 Secondary Clarifier No. 1 and 2 Modification Plan
34	24 M	-	2 Secondary Clarifiers Modification Sections and Details 1
35	24 M	-	3 RAS/WAS Pump Station Modification Plan
36	24 M	-	4 RAS/WAS Pump Station Modification Sections and Details
37	24 M	-	5 RAS/WAS Pump Station Modification Sections and Details





**Preliminary Sheet List**  
**Tryon Creek Wastewater Treatment Plant**  
**Tryon Creek Wastewater Treatment Plant Secondary Processes Improvements**

<b>Digester No. 2 Conversion to WAS Storage Drawings</b>				
<b>Demolition Drawings</b>				
38	55 D	-	1	Digester and Control Building Demolition Plan
39	55 D	-	2	Digester and Control Building Demolition Details
<b>Structural Drawings</b>				
40	55 S	-	1	WAS Storage Tank (Digester No. 2 Conversion) Plan
41	55 S	-	2	WAS Storage Tank (Digester No. 2 Conversion) Sections and Details
42	55 S	-	3	WAS Storage Tank (Digester No. 2 Conversion) Sections and Details
43	55 S	-	4	Blowers Plan
44	55 S	-	5	Blowers Sections and Details
<b>Mechanical Drawings</b>				
45	55 M	-	1	WAS Storage Tank, Pumps, Blowers (Digester No.2 Conversion) Lower Plan
46	55 M	-	2	WAS Storage Tank, Pumps, Blowers (Digester No.2 Conversion) Upper Plan
47	55 M	-	3	WAS Storage Tank, Pumps, Blowers (Digester No.2 Conversion) Section and Details 1
48	55 M	-	4	WAS Storage Tank, Pumps, Blowers (Digester No.2 Conversion) Section and Details 2
49	55 M	-	5	Odor Control Plan
50	55 M	-	6	Odor Control Sections and Details 1
51	55 M	-	7	Odor Control Sections and Details 2
<b>Gravity Belt Thickeners Drawings</b>				
<b>Demolition Drawings</b>				
52	60 D	-	1	Gravity Belt Thickeners Building Demolition Plan 1
53	60 D	-	2	Gravity Belt Thickeners Building Demolition Plan 2
<b>Structural Drawings</b>				
54	60 S	-	1	Gravity Belt Thickeners Building Plan
<b>Mechanical Drawings</b>				
55	60 M	-	1	Gravity Belt Thickeners Building Plan
56	60 M	-	2	Gravity Belt Thickeners Building Sections and Details
<b>Electrical Building Drawings</b>				
<b>Architectural and Structural Drawings</b>				
57	70 A	-	1	Architectural Elevations / Plan
58	70 A	-	2	Architectural Green Roof Plan and Details
59	70 S	-	1	Plans, Sections, and Details
60	70 S	-	2	Plans, Sections, and Details
<b>Mechanical Drawings</b>				
61	70 H	-	1	Legend, Abbreviations, and General Notes
62	70 H	-	2	HVAC Plan, Airflow Schematic and Controls



**Preliminary Sheet List**  
**Tryon Creek Wastewater Treatment Plant**  
**Tryon Creek Wastewater Treatment Plant Secondary Processes Improvements**

<b>Electrical Drawings</b>			
63	01 E	- 1	Legend, Abbreviations, and General Notes
64	01 E	- 2	Hazardous Area Classification Plan
65	01 E	- 3	Abbreviations and ANSI Device Function Numbers
66	01 E	- 4	Control Schematic Symbols
67	01 E	- 5	Electrical Manhole/Handhole Schedule
68	01 E	- 6	Overall Site Plan
69	01 E	- 7	Partial Site Plan 1
70	01 E	- 8	Master Single Line Diagram
71	01 E	- 9	Single Line Diagrams
72	01 E	- 10	Single Line Diagrams
73	01 E	- 11	Single Line Diagrams
74	01 E	- 12	Single Line Diagrams
75	01 E	- 13	Schematic Diagrams
76	01 E	- 14	Schematic Diagrams
77	01 E	- 15	Schematic Diagrams
78	01 E	- 16	Elevations
79	01 E	- 17	Elevations
80	01 E	- 18	Ductbank Sections and Details
81	01 E	- 19	Details
82	01 E	- 20	Details
83	01 E	- 21	Electrical Control Panels
84	01 E	- 22	Electrical Control Panels
85	01 E	- 23	Lighting Fixture Schedule
86	01 E	- 24	Lighting Panel Schedules
87	01 E	- 25	Lighting Panel Schedules
88	01 E	- 26	Circuit and Raceway Schedules
89	01 E	- 27	Circuit and Raceway Schedules
90	20 E	- 1	Aeration Basins Electrical Demolition Plan
91	24 E	- 1	Secondary Clarifiers Nos. 1 and 2 Electrical Demolition Plan
92	24 E	- 2	RAS/WAS PS Electrical Demolition Plan 1
93	24 E	- 3	RAS/WAS PS Electrical Demolition Plan 2
94	55 E	- 1	Digester Electrical Demolition 1
95	55 E	- 2	Digester Building Electrical Demolition 1
96	55 E	- 3	Digester Building Electrical Demolition 2
97	20 E	- 1	Aeration Basins Plan
98	24 E	- 1	Secondary Clarifiers Nos. 1 and 2 Modifications Plan
99	24 E	- 2	RAS/WAS Pump Station Plan
100	55 E	- 1	WAS Storage Tank (Digester No. 2 Conversion) Plan
101	55 E	- 2	Digester Building Plan
102	55 E	- 3	Blowers Plan
103	60 E	- 1	Gravity Belt Thickeners Plan
104	70 E	- 1	Electrical Building Power Plan
105	70 E	- 2	Electrical Building Lighting Plan

<b>Instrumentation and Controls Drawings</b>			
106	01 N	- 1	Legend and General Notes
107	01 N	- 2	Equipment List
108	01 N	- 3	Equipment List
109	01 N	- 4	SCADA Block Diagram
110	01 N	- 5	SCADA Block Diagram
111	01 N	- 6	Fiber Optic Routing Schematic
112	01 N	- 7	Fiber Optic Routing Schematic
113	01 N	- 8	P&ID-Sump Pumps Typical
114	20 N	- 1	P&ID-Aeration Basin No. 1-Liquid Flow
115	20 N	- 2	P&ID-Aeration Basin No. 1-Air Flow
116	20 N	- 3	P&ID-Aeration Basin No. 2-Liquid Flow
117	20 N	- 4	P&ID-Aeration Basin No. 2-Air Flow
118	24 N	- 1	P&ID-Secondary Clarifier No. 1
119	24 N	- 2	P&ID-Secondary Clarifier No. 2
120	24 N	- 3	P&ID-RAS Pump No. 1
121	24 N	- 4	P&ID-RAS Pump No. 2
122	24 N	- 5	P&ID-RAS Pump No. 3
123	24 N	- 6	P&ID-WAS Pump No. 1
124	24 N	- 7	P&ID-WAS Pump No. 2
125	55 N	- 1	P&ID-WAS Storage Tank (Digester No. 2 Conversion) 1
126	55 N	- 2	P&ID-WAS Storage Tank (Digester No. 2 Conversion) 2
127	55 N	- 3	P&ID- Blower No. 1
128	55 N	- 4	P&ID-Blower No. 2
129	60 N	- 1	P&ID-Gravity Belt Thickeners Feed Pump No. 1
130	60 N	- 2	P&ID-Gravity Belt Thickeners Feed Pump No. 2
131	60 N	- 3	P&ID-Gravity Belt Thickeners Feed Pump No. 3



**Preliminary Sheet List**  
**Tryon Creek Wastewater Treatment Plant**  
**Tryon Creek Wastewater Treatment Plant Secondary Processes Improvements**

Typical Details			
132	01 T	- 1	Typical Details
133	01 T	- 2	Typical Details
134	01 T	- 3	Typical Details
135	01 T	- 4	Typical Details
136	01 T	- 5	Typical Details
137	01 T	- 6	Typical Details
138	01 T	- 7	Typical Details
139	01 T	- 8	Typical Details
140	01 T	- 9	Typical Details
141	01 T	- 10	Typical Details





Tryon Creek Wastewater Treatment Plant  
Tryon Creek Wastewater Treatment Plant Secondary Processes Improvements

TASK / DESCRIPTION	CAROLLO LABOR HOURS AND COSTS																							DIRECT EXPENSE	TOTAL COST
	McCormick \$210	Hagstrom \$238	Sr QA \$238	Straub \$190	Conklin \$170	Wicklein \$177	Halleselassie \$135	Lead Prof. \$140	Asst. Prof. \$100	CAD / Graphlos \$125	Document Proc. \$83	Total Hours	Labor Cost	Elcon Associates Labor Cost (Electrical)	SEFT Consultants Labor Cost (Structural)	AKANA Labor Cost (Civil)	Shur Architects Labor Cost (Architectural)	Northwest Geotech, Inc. (Geotech)	Webster Environmental (Odor Control)	Barney & Worth (Public Involvement and Land Use Permitting)	Total Sub Markup (5%)	Total Subs	Other Direct Charges (1)		
Task 100. Preliminary Design	100	28	18	80	110	104	174	126	174	108	20	1,042	\$ 157,946	\$ 43,148	\$ 15,300	\$ 10,225	\$ 8,700	\$ 21,250	\$ 16,507	\$ 4,160	\$ 5,964	\$ 125,254	\$ 4,000	\$ 287,200	
110 Kick-off Meeting	4						8					12	\$ 1,920	\$ 500	\$ -	\$ 40	\$ -	\$ -	\$ -	\$ -	\$ 27	\$ 567		\$ 2,487	
120 Project Management	22							34			4	60	\$ 9,712	\$ 1,240	\$ -	\$ 950	\$ 1,160	\$ 1,525	\$ -	\$ -	\$ 244	\$ 5,119		\$ 14,831	
130 Data Collection and Review	4	2		8	8		8		16	8		54	\$ 7,876	\$ -	\$ 2,600	\$ 1,150	\$ -	\$ 1,405	\$ 2,002	\$ -	\$ 358	\$ 7,515		\$ 15,391	
140 Surveying and Geotechnical Investigation												0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,320	\$ -	\$ -	\$ 916	\$ 19,236		\$ 19,236	
150 Alternatives Evaluation	48	26	8	52	102	104	80	34	58	0	0	512	\$ 85,160	\$ 14,368	\$ 1,100	\$ 2,250	\$ 580	\$ -	\$ 7,190	\$ -	\$ 1,274	\$ 26,761	\$ 2,250	\$ 114,171	
160 30% Design Development	20	0	10	20	0	0	78	58	100	100	16	402	\$ 52,858	\$ 27,040	\$ 11,600	\$ 5,835	\$ 6,380	\$ -	\$ 7,315	\$ -	\$ 2,909	\$ 61,079	\$ 1,750	\$ 115,687	
170 Public Involvement	2											2	\$ 420	\$ -	\$ -	\$ -	\$ 580	\$ -	\$ -	\$ 4,160	\$ 237	\$ 4,977		\$ 5,397	
Task 200. Final Design	171	20	36	60	0	0	245	200	395	443	34	1,607	\$ 219,750	\$ 214,397	\$ 60,390	\$ 40,945	\$ 14,210	\$ -	\$ 13,849	\$ 24,000	\$ 18,390	\$ 386,180	\$ 11,197	\$ 617,168	
210 Project Management	44	0	0	0	0	0	0	58	0	0	8	110	\$ 18,024	\$ 2,760	\$ -	\$ 7,320	\$ 1,450	\$ -	\$ -	\$ -	\$ 577	\$ 12,107		\$ 30,131	
220 60% Design	52	10	10	30	0	0	104	54	160	185	11	615	\$ 82,935	\$ 69,952	\$ 22,150	\$ 17,715	\$ 4,350	\$ -	\$ 5,071	\$ -	\$ 5,962	\$ 125,200	\$ 3,917	\$ 212,052	
230 90% Design	52	10	26	30	0	0	104	54	160	185	11	631	\$ 86,743	\$ 69,802	\$ 22,150	\$ 11,600	\$ 4,350	\$ -	\$ 5,071	\$ -	\$ 5,649	\$ 118,622	\$ 3,640	\$ 209,004	
240 Project Bidding Document Development	19						33	34	75	74	4	238	\$ 30,169	\$ 69,233	\$ 13,650	\$ 2,820	\$ 2,900	\$ -	\$ 3,707	\$ -	\$ 4,615	\$ 96,925	\$ 3,640	\$ 130,734	
250 Permitting Support	4	0	0	0	0	0	8	0	0	0	0	12	\$ 1,920	\$ 2,650	\$ 2,440	\$ 1,490	\$ 1,160	\$ -	\$ -	\$ 24,000	\$ 1,587	\$ 33,327		\$ 35,247	
Task 300. Bidding Phase Support Services	11	0	0	0	0	0	42	4	30	34	14	135	\$ 16,952	\$ 5,440	\$ 1,880	\$ 2,370	\$ 1,160	\$ -	\$ 808	\$ -	\$ 583	\$ 12,241		\$ 29,193	
310 Project Management	2	0	0	0	0	0	0	4	0	0	1	7	\$ 1,063	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 1,063	
320 Attend Pre-Bid Meeting	4	0	0	0	0	0	0	0	0	0	0	4	\$ 840	\$ 460	\$ -	\$ 40	\$ -	\$ -	\$ -	\$ -	\$ 25	\$ 525		\$ 1,365	
330 Provide responses to bidders Questions	3	0	0	0	0	0	16		10	0	0	29	\$ 3,790	\$ 1,840	\$ 500	\$ 580	\$ 580	\$ -	\$ -	\$ -	\$ 175	\$ 3,675		\$ 7,465	
340 Prepare Addenda	2	0	0	0	0	0	10		20	10	5	47	\$ 5,435	\$ 1,840	\$ -	\$ 710	\$ -	\$ -	\$ -	\$ -	\$ 128	\$ 2,678		\$ 8,113	
350 Conform Documents	0	0	0	0	0	0	16	0	0	24	8	48	\$ 5,824	\$ 1,300	\$ 1,380	\$ 1,040	\$ 580	\$ -	\$ 808	\$ -	\$ 255	\$ 5,364		\$ 11,188	
													\$ -	\$ -	\$ -		\$ -	\$ -							
Task 400. Construction Phase Support Services	60	0	0	0	0	0	219	24	544	45	10	902	\$ 106,380	\$ 36,095	\$ 7,875	\$ 5,470	\$ 3,045	\$ -	\$ 2,316	\$ -	\$ 2,740	\$ 57,541		\$ 163,921	
410 Project Management	12	0	0	0	0	0	0	24	0	0	10	46	\$ 6,710	\$ 1,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50	\$ 1,050		\$ 7,760	
420 Submittal Review	5	0	0	0	0	0	45	0	250	0	0	300	\$ 32,125	\$ 4,490	\$ 1,500	\$ 490	\$ 1,740	\$ -	\$ 731	\$ -	\$ 448	\$ 9,399		\$ 41,524	
440 Prepare Design Clarifications	2	0	0	0	0	0	15	0	38	5	0	60	\$ 6,870	\$ 3,750	\$ 1,625	\$ 1,010	\$ 1,305	\$ -	\$ 975	\$ -	\$ 433	\$ 9,098		\$ 15,968	
450 Review Change Orders	2	0	0	0	0	0	10	0	36	0	0	48	\$ 5,370	\$ 4,960	\$ 1,250	\$ 335	\$ -	\$ -	\$ -	\$ -	\$ 327	\$ 6,872		\$ 12,242	
460 Perform Power System Study	2	0	0	0	0	0	0	0	0	0	0	2	\$ 420	\$ 14,550	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 728	\$ 15,278		\$ 15,698	
470 Construction Meetings	20	0	0	0	0	0	20	0	0	0	0	40	\$ 6,900	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ 6,900	
480 Construction Observation	0	0	0	0	0	0	40	0	40	0	0	80	\$ 9,400	\$ 3,125	\$ 2,000	\$ 2,080	\$ -	\$ -	\$ -	\$ -	\$ 360	\$ 7,565		\$ 16,965	
490 Final Inspection	4	0	0	0	0	0	20	0	0	0	0	24	\$ 3,540												
495 CAD Drawing Revision Support	4	0	0	0	0	0	10	0	0	40	0	54	\$ 7,190	\$ -		\$ 580	\$ -	\$ -	\$ -		\$ 29	\$ 609		\$ 7,799	
Task 500. Facility Start-Up and Operation Support Services	14	4	5	0	0	0	66	0	58	0	0	147	\$ 19,792	\$ 18,910	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 946	\$ 19,856		\$ 39,648	
O&M Manual	8	0	5	0	0	0	40		40	0	0	93	\$ 12,270	\$ 3,060	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 153	\$ 3,213		\$ 15,483	
Training	2	0	0	0	0	0	8		8	0	0	18	\$ 2,300	\$ 4,810	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 241	\$ 5,051		\$ 7,351	
Inspection		0	0	0	0	0	8	0	0	0	0	8	\$ 1,080	\$ 3,540	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 177	\$ 3,717		\$ 4,797	
Site Visits	4	4	0	0	0	0	10	0	10	0	0	28	\$ 4,142	\$ 7,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 375	\$ 7,875		\$ 12,017	
TOTAL (100-500)	356	52	55	140	110	104	750	354	1,201	650	78	3,833	\$ 520,861	\$ 317,990	\$ 85,450	\$ 55,010	\$ 27,120	\$ 21,250	\$ 33,490	\$ 28,160	\$ 28,630	\$ 601,073	\$ 15,197	\$ 1,137,130	

1. Other direct charges include travel and production of 20 copies of each deliverable



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

2/2/2017

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

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

<b>PRODUCER</b> Risk Strategies Company 2040 Main Street, Suite 450 Irvine, CA 92614  www.risk-strategies.com CA DOI License No. 0F06675		<b>CONTACT NAME:</b> Risk Strategies Company <b>PHONE (A/C, No, Ext):</b> 949-242-9240 <b>FAX (A/C, No):</b> <b>E-MAIL ADDRESS:</b> syoung@risk-strategies.com	
<b>INSURED</b> Carollo Engineers, Inc. 2700 Ygnacio Valley Road, #300 Walnut Creek CA 94598		<b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A:</b> Massachusetts Bay Insurance Company <b>INSURER B:</b> National Union Fire Insurance Company <b>INSURER C:</b> Continental Casualty Company <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	
		<b>NAIC #</b> 22306 19445 20443	

## COVERAGES

CERTIFICATE NUMBER: 34050528

REVISION NUMBER:

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Deductible \$0 GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	<input checked="" type="checkbox"/>		ZDF8944892	12/31/2016	12/31/2017	EACH OCCURRENCE \$ <b>\$1,000,000</b> DAMAGE TO RENTED PREMISES (Ea occurrence) \$ <b>\$1,000,000</b> MED EXP (Any one person) \$ <b>\$25,000</b> PERSONAL & ADV INJURY \$ <b>\$1,000,000</b> GENERAL AGGREGATE \$ <b>\$2,000,000</b> PRODUCTS - COMP/OP AGG \$ <b>\$2,000,000</b> \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	<input checked="" type="checkbox"/>		ADFA486963	12/31/2016	12/31/2017	COMBINED SINGLE LIMIT (Ea accident) \$ <b>\$1,000,000</b> BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Deductible: Comp/Coll \$ <b>\$1,000</b>
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ <b>10,000</b>			BE084645460	12/31/2016	12/31/2017	EACH OCCURRENCE \$ <b>\$2,000,000</b> AGGREGATE \$ <b>\$2,000,000</b> \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A	WDF8957499	12/31/2016	12/31/2017	<input checked="" type="checkbox"/> PER STATUTE <input checked="" type="checkbox"/> OTH-ER Deductible: \$0 E.L. EACH ACCIDENT \$ <b>\$1,000,000</b> E.L. DISEASE - EA EMPLOYEE \$ <b>\$1,000,000</b> E.L. DISEASE - POLICY LIMIT \$ <b>\$1,000,000</b>
C	Professional Liability Unlimited Prior Acts			AEH288354410	7/4/2016	7/4/2017	Each Claim: \$ <b>\$1,000,000</b> Aggregate: \$ <b>\$3,000,000</b> Deductible: \$ <b>\$400,000</b>

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

Operations as per contract on file with Insured. Tryon Creek Wastewater Treatment Plant Secondary Process Improvements. Carollo Project #: Not yet assigned. City of Portland and its bureaus/divisions, officers, agents and employees are included as additional insureds on a primary & non-contributory basis with respects to General & Auto Liability.

## CERTIFICATE HOLDER

City of Portland  
 Bureau of Environmental Services  
 1120 SW 5th Avenue, Room 1000  
 Portland OR 97204

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Michael Christian

© 1988-2015 ACORD CORPORATION. All rights reserved.

ACORD 25 (2016/03)

The ACORD name and logo are registered marks of ACORD

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## COMMERCIAL GENERAL LIABILITY BROADENING ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

### SUMMARY OF COVERAGES

1.	Additional Insured by Contract, Agreement or Permit	Included
2.	Additional Insured – Primary and Non-Contributory	Included
3.	Blanket Waiver of Subrogation	Included
4.	Bodily Injury Redefined	Included
5.	Broad Form Property Damage – Borrowed Equipment, Customers Goods & Use of Elevators	Included
6.	Knowledge of Occurrence	Included
7.	Liberalization Clause	Included
8.	Medical Payments – Extended Reporting Period	Included
9.	Newly Acquired or Formed Organizations - Covered until end of policy period	Included
10.	Non-owned Watercraft	51 ft.
11.	Supplementary Payments Increased Limits	
	- Bail Bonds	\$2,500
	- Loss of Earnings	\$1000
12.	Unintentional Failure to Disclose Hazards	Included
13.	Unintentional Failure to Notify	Included

This endorsement amends coverages provided under the Commercial General Liability Coverage Part through new coverages, higher limits and broader coverage grants.

#### 1. Additional Insured by Contract, Agreement or Permit

The following is added to **SECTION II – WHO IS AN INSURED**:

##### Additional Insured by Contract, Agreement or Permit

- a. Any person or organization with whom you agreed in a written contract, written agreement or permit that such person or organization to add an additional insured on your policy is an additional insured only with respect to liability for "bodily injury", "property damage", or "personal and advertising injury" caused, in whole or in part, by your acts or omissions, or the acts or omissions of those acting on your behalf, but only with respect to:

- (1) "Your work" for the additional insured(s) designated in the contract, agreement or permit;

- (2) Premises you own, rent, lease or occupy; or

- (3) Your maintenance, operation or use of equipment leased to you.

- b. The insurance afforded to such additional insured described above:

- (1) Only applies to the extent permitted by law; and

- (2) Will not be broader than the insurance which you are required by the contract, agreement or permit to provide for such additional insured.



- (3) Applies on a primary basis if that is required by the written contract, written agreement or permit.
  - (4) Will not be broader than coverage provided to any other insured.
  - (5) Does not apply if the "bodily injury", "property damage" or "personal and advertising injury" is otherwise excluded from coverage under this Coverage Part, including any endorsements thereto.
- c. This provision does not apply:
- (1) Unless the written contract or written agreement was executed or permit was issued prior to the "bodily injury", "property damage", or "personal injury and advertising injury".
  - (2) To any person or organization included as an insured by another endorsement issued by us and made part of this Coverage Part.
  - (3) To any lessor of equipment:
    - (a) After the equipment lease expires; or
    - (b) If the "bodily injury", "property damage", "personal and advertising injury" arises out of sole negligence of the lessor
  - (4) To any:
    - (a) Owners or other interests from whom land has been leased which takes place after the lease for the land expires; or
    - (b) Managers or lessors of premises if:
      - (i) The occurrence takes place after you cease to be a tenant in that premises; or
      - (ii) The "bodily injury", "property damage", "personal injury" or "advertising injury" arises out of structural alterations, new construction or demolition operations performed by or on behalf of the manager or lessor.
  - (5) To "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services.
- This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage" or the offense which caused the "personal and

advertising injury" involved the rendering of or failure to render any professional services by or for you.

- d. With respect to the insurance afforded to these additional insureds, the following is added to **SECTION III – LIMITS OF INSURANCE**:

The most we will pay on behalf of the additional insured for a covered claim is the lesser of the amount of insurance:

- 1. Required by the contract, agreement or permit described in Paragraph a.; or
- 2. Available under the applicable Limits of Insurance shown in the Declarations.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

## 2. Additional Insured – Primary and Non-Contributory

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**, Paragraph 4. Other insurance:

### Additional Insured – Primary and Non-Contributory

If you agree in a written contract, written agreement or permit that the insurance provided to any person or organization included as an Additional Insured under **SECTION II – WHO IS AN INSURED**, is primary and non-contributory, the following applies:

If other valid and collectible insurance is available to the Additional Insured for a loss covered under Coverages A or B of this Coverage Part, our obligations are limited as follows:

#### a. Primary Insurance

This insurance is primary to other insurance that is available to the Additional Insured which covers the

Additional Insured as a Named Insured. We will not seek contribution from any other insurance available to the Additional Insured except:

- (1) For the sole negligence of the Additional Insured;
- (2) When the Additional Insured is an Additional Insured under another primary liability policy; or
- (3) when b. below applies.

If this insurance is primary, our obligations are not affected unless any of the other insurance is also primary. Then, we will share with all that other insurance by the method described in c. below.

## **b. Excess Insurance**

(1) This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis:

- (a) That is Fire, Extended Coverage, Builder's Risk, Installation Risk or similar coverage for "your work";
- (b) That is Fire insurance for premises rented to the Additional Insured or temporarily occupied by the Additional Insured with permission of the owner;
- (c) That is insurance purchased by the Additional Insured to cover the Additional Insured's liability as a tenant for "property damage" to premises rented to the Additional Insured or temporarily occupied by the Additional Insured with permission of the owner; or
- (d) If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to Exclusion g. of **SECTION I – COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY**.

(2) When this insurance is excess, we will have no duty under Coverages A or B to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

(3) When this insurance is excess over other Insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:

- (a) The total amount that all such other insurance would pay for the loss in the absence of this insurance; and
- (b) The total of all deductible and self insured amounts under all that other insurance.

We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance shown in the Declarations of this Coverage Part.

## **c. Method Of Sharing**

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each

insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first. If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers

## **3. Blanket Waiver of Subrogation**

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**, Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us**:

We waive any right of recovery we may have against any person or organization with whom you have a written contract that requires such waiver because of payments we make for damage under this coverage form. The damage must arise out of your activities under a written contract with that person or organization. This waiver applies only to the extent that subrogation is waived under a written contract executed prior to the "occurrence" or offense giving rise to such payments.

## **4. Bodily Injury Redefined**

**SECTION V – DEFINITIONS**, Definition 3. "bodily injury" is replaced by the following:

3. "Bodily injury" means bodily injury, sickness or disease sustained by a person including death resulting from any of these at any time. "Bodily injury" includes mental anguish or other mental injury resulting from "bodily injury".

## **5. Broad Form Property Damage – Borrowed Equipment, Customers Goods, Use of Elevators**

a. **SECTION I – COVERAGES, COVERAGE A – BODILY INJURY AND PROPERTY DAMAGE LIABILITY**, Paragraph 2. **Exclusions** subparagraph j. is amended as follows:

Paragraph (4) does not apply to "property damage" to borrowed equipment while at a jobsite and not being used to perform operations.

Paragraphs (3), (4) and (6) do not apply to "property damage" to "customers goods" while on your premises nor do they apply to the use of elevators at premises you own, rent, lease or occupy.

b. The following is added to **SECTION V – DEFINITIONS**:

24. "Customers goods" means property of your customer on your premises for the purpose of being:



- a. worked on; or
- b. used in your manufacturing process.
- c. The insurance afforded under this provision is excess over any other valid and collectible property insurance (including deductible) available to the insured whether primary, excess, contingent

#### 6. Knowledge of Occurrence

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**, Paragraph 2. **Duties in the Event of Occurrence, Offense, Claim or Suit:**

- e. Notice of an "occurrence", offense, claim or "suit" will be considered knowledge of the insured if reported to an individual named insured, partner, executive officer or an "employee" designated by you to give us such a notice.

#### 7. Liberalization Clause

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS:**

##### Liberalization Clause

If we adopt any revision that would broaden the coverage under this Coverage Form without additional premium, within 45 days prior to or during the policy period, the broadened coverage will immediately apply to this Coverage Part.

#### 8. Medical Payments – Extended Reporting Period

- a. **SECTION I – COVERAGES, COVERAGE C – MEDICAL PAYMENTS**, Paragraph 1. **Insuring Agreement**, subparagraph a.(3)(b) is replaced by the following:

- (b) The expenses are incurred and reported to us within three years of the date of the accident; and

- b. This coverage does not apply if **COVERAGE C – MEDICAL PAYMENTS** is excluded either by the provisions of the Coverage Part or by endorsement.

#### 9. Newly Acquired Or Formed Organizations

**SECTION II – WHO IS AN INSURED**, Paragraph 3.a. is replaced by the following:

- a. Coverage under this provision is afforded until the end of the policy period.

#### 10. Non-Owned Watercraft

**SECTION I – COVERAGES, COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY**, Paragraph 2. **Exclusions**, subparagraph g.(2) is replaced by the following:

##### g. Aircraft, Auto Or Watercraft

- (2) A watercraft you do not own that is:

- (a) Less than 51 feet long; and
- (b) Not being used to carry persons or property for a charge;

This provision applies to any person who, with your consent, either uses or is responsible for the use of a watercraft.

#### 11. Supplementary Payments Increased Limits

**SECTION I – SUPPLEMENTARY PAYMENTS COVERAGES A AND B**, Paragraphs 1.b. and 1.d. are replaced by the following:

- 1.b. Up to \$2,500 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.

- 1.d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to \$1000 a day because of time off from work.

#### 12. Unintentional Failure to Disclose Hazards

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**, Paragraph 6. **Representations:**

We will not disclaim coverage under this Coverage Part if you fail to disclose all hazards existing as of the inception date of the policy provided such failure is not intentional.

#### 13. Unintentional Failure to Notify

The following is added to **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**, Paragraph 2. **Duties in the Event of Occurrence, Offense, Claim or Suit:**

Your rights afforded under this policy shall not be prejudiced if you fail to give us notice of an "occurrence", offense, claim or "suit", solely due to your reasonable and documented belief that the "bodily injury" or "property damage" is not covered under this policy.

ALL OTHER TERMS, CONDITIONS, AND EXCLUSIONS REMAIN UNCHANGED.



## NOTICE OF CANCELLATION TO DESIGNATED ENTITY(S) (Including Nonpayment of Premium)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
COMMERCIAL PROPERTY COVERAGE PART

### SCHEDULE

Name of Designated Entity	Mailing Address or Email Address	Thirty (30) Days Notice
City of Portland Bureau of Environmental Services 1120 SW 5th Avenue, Room 1000 Portland OR 97204		

*Information required to complete this Schedule, if not shown above, will be shown in the Declarations.*

If we cancel this policy for any reason, including nonpayment of premium, we will give written notice of such cancellation to the Designated Entity(s) shown in the Schedule. Such notice may be delivered or sent by any means of our choosing. The notice to the Designated Entity(s) will state the effective date of cancellation.

Unless otherwise noted in the Schedule above, such notice will be provided to the Designated Entity(s) no less than the number of days in advance of the effective date of cancellation that we are required to provide to the Named Insured for such cancellation. If the reason for cancellation is nonpayment of premium, however, we will provide ten days notice.

Such notice of cancellation is solely for the purpose of informing the Designated Entity(s) of the effective date of cancellation and does not grant, alter, or extend any rights or obligations under this policy.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.



Authorized Representative or  
countersignature (where required by law)

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## BLANKET ADDITIONAL INSURED – PRIMARY AND NON-CONTRIBUTORY

This endorsement modifies insurance provided under the following:

### BUSINESS AUTO COVERAGE FORM

**A. The following is added to SECTION II – LIABILITY COVERAGE, Paragraph A.1. Who Is An Insured:**

**Additional Insured if Required by Contract**

If you agree in a written contract, written agreement or written permit that a person or organization be added as an additional "insured" under this Coverage Part, such person or organization is an "insured"; but only to the extent that such person or organization qualifies as an "insured" under paragraph A.1.c. of this Section.

If you agree in a written contract, written agreement or written permit that a person or organization be added as an additional "insured" under this Coverage Part, the most we will pay on behalf of such additional "insured" is the lesser of:

- (1) The Limits of Insurance for liability coverage specified in the written contract, written agreement or written permit; or
- (2) The Limits of Insurance for Liability Coverage shown in the Declarations applicable to this Coverage Part.

Such amount shall be part of and not in addition to the Limits of Insurance shown in the Declarations applicable to this Coverage Part. Regardless of the number of covered "autos", "insureds", premiums paid, claims made or vehicles involved in the "accident", the most we will pay for the total of all damages and "covered pollution cost or expense" combined resulting from any one "accident" is the Limit of Insurance for Liability Coverage shown in the Declarations.

**B. The following is added to SECTION IV – BUSINESS AUTO CONDITIONS, Paragraph B. General Conditions, subparagraph 5. Other Insurance:**

**Primary and Non-Contributory**

If you agree in a written contract, written agreement or written permit that the insurance provided to a person or organization who qualifies as an additional "insured" under SECTION II – LIABILITY COVERAGE, Paragraph A.1. Who Is An Insured, subparagraph Additional Insured if Required by Contract is primary and non-contributory, the following applies:

The liability coverage provided by this Coverage Part is primary to any other insurance available to the additional "insured" as a Named Insured. We will not seek contribution from any other insurance available to the additional "insured" except:

- (1) For the sole negligence of the additional "insured"; or
- (2) For negligence arising out of the ownership, maintenance or use of any "auto" not owned by the additional "insured" or by you, unless that "auto" is a "trailer" connected to an "auto" owned by the additional "insured" or by you; or
- (3) When the additional "insured" is also an additional "insured" under another liability policy.

**C. This endorsement will apply only if the "accident" occurs:**

1. During the policy period;
2. Subsequent to the execution of the written contract or written agreement or the issuance of the written permit; and
3. Prior to the expiration of the period of time that the written contract, written agreement or written permit requires such insurance to be provided to the additional "insured".

**D. Coverage provided to an additional "insured" will not be broader than coverage provided to any other "insured" under this Coverage Part.**

ALL OTHER TERMS, CONDITIONS, AND EXCLUSIONS REMAIN UNCHANGED.

# NOTICE OF CANCELLATION TO DESIGNATED ENTITY(S)

INSURED: Carollo Engineers, Inc.

POLICY NO.: ADFA486963

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

COMMERCIAL LIABILITY UMBRELLA COVERAGE PART

COMMERCIAL PROPERTY COVERAGE PART

BUSINESS AUTO COVERAGE FORM

BUSINESSOWNERS COVERAGE FORM

## SCHEDULE

Name of Designated Entity	Mailing Address or Email Address	Number Days Notice
City of Portland Bureau of Environmental Services	1120 SW 5th Avenue, Room 1000 Portland OR 97204	30

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

If we cancel this policy for any reason other than nonpayment of premium, we will give written notice of such cancellation to the Designated Entity(s) shown in the Schedule. Such notice may be delivered or sent by any means of our choosing. The notice to the Designated Entity(s) will state the effective date of cancellation.

Unless otherwise noted in the Schedule above, such notice will be provided to the Designated Entity(s) no less than the number of days in advance of the effective date of cancellation that we are required to provide to the Named Insured for such cancellation.

Such notice of cancellation is solely for the purpose of informing the Designated Entity(s) of the effective date of cancellation and does not grant, alter, or extend any rights or obligations under this policy.

Failure to provide notice in accordance with the terms of this endorsement does not:

- Alter the effective date of policy cancellation;
- Render such cancellation ineffective;
- Grant, alter, or extend any rights or obligations under this policy; or
- Extend the insurance beyond the effective date of cancellation.

ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.

# NOTICE OF CANCELLATION TO DESIGNATED ENTITY(S)

## (Including Nonpayment of Premium)

This endorsement modifies insurance provided under the following:

**WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE POLICY**

### SCHEDULE

Name of Designated Entity	Mailing Address or Email Address	Number Days Notice
City of Portland Bureau of Environmental Services	1120 SW 5th Avenue, Room 1000	30
	Portland	
	OR 97204	

*Information required to complete this Schedule, if not shown above, will be shown in the Declarations.*

If we cancel this policy for any reason, including nonpayment of premium, we will give written notice of such cancellation to the Designated Entity(s) shown in the Schedule. Such notice may be delivered or sent by any means of our choosing. The notice to the Designated Entity(s) will state the effective date of cancellation.

Unless otherwise noted in the Schedule above, such notice will be provided to the Designated Entity(s) no less than the number of days in advance of the effective date of cancellation that we are required to provide to the Named Insured for such cancellation. If the reason for cancellation is nonpayment of premium, however, we will provide ten days notice.

Such notice of cancellation is solely for the purpose of informing the Designated Entity(s) of the effective date of cancellation and does not grant, alter, or extend any rights or obligations under this policy.

Failure to provide notice in accordance with the terms of this endorsement does not:

- a. Alter the effective date of policy cancellation;
- b. Render such cancellation ineffective;
- c. Grant, alter, or extend any rights or obligations under this policy; or
- d. Extend the insurance beyond the effective date of cancellation.

**ALL OTHER TERMS AND CONDITIONS OF THIS POLICY REMAIN UNCHANGED.**

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.  
(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 12/31/2016

Policy No.: WDF8957499

Endorsement No: N/A

Insured:

Insurance Company:

Carroll Engineers, Inc.

Massachusetts Bay Insurance Company



Authorized Representative





PROFESSIONAL LIABILITY AND POLLUTION  
INCIDENT LIABILITY INSURANCE POLICY

For All the Commitments you Make

INSURED: Carollo Engineers, Inc.

Policy AEH288354410

Effective 7/4/2016

Endorsement Number

NOTICE ENDORSEMENT -  
CANCELLATION OR NON-RENEWAL

We agree with **you** that **your** Policy is amended to include the following additional provisions.

1. **Your** Policy will not be:

XX Cancelled by us until we provide at least:

10 days prior written notice if we cancel **your** Policy for  
Non-payment of Premium;

30 days prior written notice if we cancel **your** Policy for  
The following reasons:

Any reason other than non-payment of premium.

\_\_\_ Non-renewed by us until at least \_\_\_ days prior written notice  
is given to the person or entity named in 2. below.

2. Person or Entity:

City of Portland  
Bureau of Environmental Services  
1120 SW 5th Avenue, Room 1000  
Portland OR 97204

All other terms and conditions of the Policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the Policy issued by the designated Insurers, takes effect on the effective date of said Policy at the hour stated in said Policy and expires concurrently with said Policy unless another effective date is shown above.

By Authorized Representative James F. Willging  
(No signature is required if issued with the Policy or if it is effective on the Policy Effective Date)

James F. Willging

Countersigned by Authorized Representative

256423

(Ed. 10/05)