

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

CONTRACT NUMBER [Click Here and Type](#)

**TITLE OF WORK PROJECT
Columbia Boulevard Wastewater Treatment Plant (CBWTP)
Main Substation (MASU) Replacement**

This Contract is between the City of Portland ("City," "BES", or "Bureau") and Tetra Tech, Inc., hereafter called Consultant. The City's Project Manager for this Contract is Clarence Thompson, P.E.

Effective Date and Duration

This Contract shall become effective on 02 February 2018. This Contract shall expire, unless otherwise terminated or extended, on 4 May 2021.

Consideration

- (a) City agrees to pay Consultant a sum not to exceed \$650,629 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): Tetra Tech, Inc.

Address: 15350 SW Sequoia Parkway, Suite 220, Portland, OR 97224

Employer Identification Number (EIN): 95-4148514

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

City of Portland Business Tax Registration Number: 347000

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 calendar 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. In connection with its activities under this Contract, the Consultant shall comply with all applicable Grant Terms and conditions. This includes all terms and conditions contained in this Contract and, for a Contract involving a grant, the Grant Terms and Conditions.

8. Indemnification for Property Damage and Personal Injury

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

9. Insurance

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

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

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

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

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

☒ 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.

☒ 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) calendar 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. The City's alteration of Work Product or City's use of Work Product for any other purpose than the purpose for which Work Product was produced under this contract shall be at the City's sole risk.

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

The Consultant must be certified prior to Contract execution, as Equal Employment Opportunity Affirmative Action Employers as prescribed by Chapter 5.33.076 of the Code of the City of Portland.

12. Equal Benefits

Consultant must certify prior to Contract execution, that they do not discriminate by policy or practice in the provision of employee benefits between employees with domestic partners and employees with spouses as prescribed by Chapter 5.33.077 of the Code of the City of Portland.

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

24. Electronic Signatures

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

25. Merger Clause

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

26. Dispute Resolution/Work Regardless of Disputes

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

27. Progress Reports: ☒ Applicable ☐ Not Applicable

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

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

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

29. Subconsultants

The Consultant shall use the subconsultants identified in its proposals. The Consultant shall not change subconsultant's assignments without the prior written consent of the Chief Procurement Officer. The City will enforce all social equity Contracting and Disadvantaged, Minority, Women and Emerging Small Business (D/M/W/ESB) subcontracting commitments submitted by the Consultant in its proposals. Failure to use the identified D/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. Contact the PTE Contract Compliance Specialist for submission guidelines.

30. Third Party Beneficiaries

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

31. Conflict of Interest

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

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 consultants, vendors or consultants who provide services to the City of Portland. By signing this Contract/Agreement, the Consultant indicates compliance with all terms and conditions contained in this Contract including HR 2.02.

STATEMENT OF THE WORK AND PAYMENT SCHEDULE

SCOPE OF WORK

The purpose of this project is to replace the existing Main Substation at the Columbia Boulevard Wastewater Treatment. The scope also includes the following:

- Testing and repair as required of the substation grounding grid
- Segregation of the two primary PGE feeders into two underground pull boxes instead of one as they are currently
- Site civil improvements required for the following:
 - a. To protect the new substation from damage resulting from Plant vehicle traffic to the northwest and southwest
 - b. To protect the new substation from failure of the railroad embankment to the northwest.
 - c. To provide required site drainage upgrades and upgrades to the site stormwater collection system to prevent flooding of the substation and vicinity.

The scope of services has been broken down into four major tasks, 100 through 400, as follows:

- Task 100: Pre-Design
- Task 200: Design
- Task 300: Advertisement
- Task 400: Engineering Services During Construction

Task 100 Preliminary Design Phase

Objective To evaluate potential solutions to correct the deficiencies of the current substation and switchyard while enhancing system reliability, and to develop a predesign report that recommends the most appropriate solution.

Activities The following activities are included:

- Subtask 100.010 Project Management: To assemble, manage, and lead a cohesive project team to meet budget, schedule, and technical objectives by performing the following activities:
 - Use the City's project management system, Heron (based on e-Builder Enterprise), for all project communications, invoices, document management, deliverable transmittal and review processes, and project execution.
 - Develop and maintain a project schedule and budget using the Work Breakdown Structure (WBS) developed during contract negotiations.
 - Manage and coordinate consultant resources and sub-consultants to provide quality- assured deliverables within the approved project schedule and budget.
 - Meet with the City project team at a kickoff meeting to review and confirm project scope, schedule, and approach during the first preliminary design workshop.
 - Prepare and submit monthly invoices for progress payments and monthly subcontractor payment and utilization reports.
 - Document and track project decisions and risks, and manage change commensurate with project risks.
 - Meet every 2 weeks with the City's Project Manager to review status of WBS activities and deliverables in progress, activities planned for the next 3 weeks, project risks, decisions, and pending/potential changes. Leads for activities in progress and activities planned for the next 3 weeks shall participate in the meeting in person or via teleconference if relevant to the meeting agenda. Provide overall quality control of project, using independent reviewers not on project team.
- Subtask 100.011 Information Gathering:
 - Compile available information pertaining to the project including as-built drawings, geotechnical investigation results provided by the City, existing protective device relaying scheme, existing Plant cogeneration scheme, and existing Portland General Electric Service Requirements and protective relaying coordination requirements.
 - After the alternatives analysis and per Subtask 100.012, create AutoCAD drawings of existing facilities that are expected to remain and system single-line drawings and associated diagrams based on Adobe Acrobat .pdf format as-built drawings and field verification of existing conditions where such conditions are visible for inspection.
- OPTIONAL Subtask 100.012 Existing Structure Record: Field measure and create record drawings of the existing substation, concrete pads and underground pull boxes. This may not be required as the proposed approach would demolish the existing structure. Demolition of the structure and unused items could be depicted using photographs.
- Subtask 100.013 Alternatives Evaluation:
 - Conduct two alternatives workshops to discuss options for new switchgear layout, new site layout (including options for reuse of equipment mounting pads and underground pull boxes and conduit), potential need to raise new substation above potential flood level, maintaining of Plant power during replacement of existing switchgear and transformers, substation backup power systems, and methods of automatic monitoring and failure detection in the substation grounding grid.
 - Workshop 1 will address site and general construction coordination issues
 - Workshop 2 will be a technical topic session addressing electrical design issues, electrical phasing of construction, and temporary facilities needed to facilitate construction phasing
 - Provide an analysis of construction sequencing and constructability, including discussion regarding pre-purchasing of equipment and maintenance of medium-voltage Plant power distribution during construction, for up to two alternatives.
 - Document the alternatives analysis in a section in the technical memorandum.
- Subtask 100.014 Design Criteria and Standards: Establish facility design criteria and standards to be used for project design including:
 - Drafting Requirements: Use the City's established CADD standards available at <https://www.portlandoregon.gov/bes/53917>.
 - Applicable electrical, civil, geotechnical, and structural design criteria

- Generally accepted standards of practice for the design, construction, operation, and maintenance of municipal wastewater treatment facilities, as applicable to the CBWTP.
- Compile basis of design data in a concise basis of design technical memorandum (TM).
- Subtask 100.016 Predesign Workshops: Conduct and facilitate two predesign workshops with City staff to solicit focused City input on alternatives evaluations that are necessary for the development of the detailed design. A streamlined design review process is defined in the general assumptions of this document.
- Subtask 100.016 Predesign QA/QC: Submit QA/QC plan for review and approval. Perform discipline-coordinated Quality Assurance/Quality Control (QA/QC).

Deliverables The following work products will be delivered under this task:

- Project Management deliverables:
 - Project schedule using the WBS developed during contract negotiations
 - Project budget by WBS element
 - Project 3-week look ahead schedule (every two weeks)
 - Methodology to be used for tracking and documenting project risks, issues, decisions, consultant's internal quality control, records and change management
 - Decisions, issues, changes log (every two weeks), and risk management plan that identifies project-specific activities that create risk, including but not limited to the following:
 - o Loss of use – Risk of physical damage to existing equipment or infrastructure during on-site investigations
 - o Extended outages – Risk of unanticipated complications during electrical cut-overs
 - o Financial – Risks due to unknowns and/or poor bidding climate
 - o Time – Schedule risks associated with equipment lead times, permitting, inspections, construction changes, reliance on work by others (such as PGE), etc.
 - Invoice, budget status report by WBS element, and monthly subcontractor payment and utilization report by the 15th of each month
- Preliminary design workshop agenda, materials, summary notes.
- Preliminary Design Submittal including the following:
 - Provide a draft and final version of the Preliminary Design Technical Memorandum (TM) that summarizes technical criteria and assumptions used for the design and includes technical memoranda addressing the following topics:
 - o A discussion of grounding mat evaluation, repair and monitoring options;
 - o Evaluation of Substation Condition Assessment Report
 - o Lead-acid battery (station power) alternatives
 - o Cogeneration conditions of use
 - o Evaluation of geotechnical information
 - o Evaluation of hillside stabilization methods
 - o Physical barrier options for protection against vehicle contact
 - o Seismic performance criteria and importance factors
 - o A discussion of options for transformers and switchgear components
 - o A discussion of site-civil development
 - o Identification of long-lead items which will be incorporated into a procurement bid package which is separate from the Construction Bid package
 - A drawing index that reflects the total number of drawings anticipated for the completed project
 - Preliminary CAD plans containing the following:
 - o Cover sheet
 - o Area and vicinity map
 - o Civil site schematic layout plan
 - o Electrical symbols and abbreviations
 - o Preliminary electrical layout plans
 - o Preliminary single line distribution diagram
 - o Preliminary structural plans

- Provide a seismic evaluation report utilizing site-specific soil conditions and current research related to the potential impacts of a 9.0 magnitude Cascade Subduction Zone Earthquake (full rupture), and measures recommended to prevent equipment overturning or otherwise sustaining major structural damage.
- Preliminary table of contents for the technical specifications
- Preliminary equipment list that allows basic verification of equipment name, loop number (where applicable), equipment size, equipment power ratings, and basic protective relaying scheme, and basic controls and operating strategies.
- Preliminary protective device function list for every circuit breaker in the new switchgear.
- Preliminary design of sequence of construction.
- Construction Cost Estimate in sufficient detail to provide the expected range of accuracy of an Association for the Advancement of Cost Engineering (AACE) International Class 3 estimate: - 20% to +30%.
- The proposed approach to resolve each comment received as part of the workshops and design deliverables.

Task 200 Design

Objective To develop and produce final design documents for permitting and construction.

Activities The following activities are included:

- Subtask 200.010 Project Management: To assemble, manage, and lead a cohesive project team to meet budget, schedule, and technical objectives by performing the following activities:
 - Use the City's project management system, Heron (based on e-Builder Enterprise), for all project communications, invoices, document management, deliverable transmittal and review processes, and project execution.
 - Develop and maintain a project schedule and budget using the Work Breakdown Structure (WBS) developed during contract negotiations.
 - Manage and coordinate consultant resources and sub-consultants to provide quality-assured deliverables within the approved project schedule and budget.
 - Prepare and submit monthly invoices for progress payments and monthly subcontractor payment and utilization reports.
 - Document and track project decisions and risks, and manage change commensurate with project risks.
 - Meet every 2 weeks with the City's Project Manager to review status of WBS activities and deliverables in progress, activities planned for the next 3 weeks, project risks, decisions, and pending/potential changes. Leads for activities in progress and activities planned for the next 3 weeks shall participate in the meeting in person or via teleconference if relevant to the meeting agenda.
- Subtask 200.011 Design Workshops: Conduct design workshops as needed with City staff to solicit City input into the development of the 60% and 90% Design Submittal and to clarify City review comments and issues as required.
- Subtask 200.020 60% Design Submittal: Prepare the 60% Design Submittal as described in the Deliverables list below.
- Subtask 200.030 90% Design Submittal: Prepare the 90% Design Submittal as described in the Deliverables list below.
- Subtask 200.035 Pre-procurement package for long-lead items will be developed to 100% completion during this 90% project phase.
- Subtask 200.040 Final Design Submittal: Prepare sealed Final Design Submittal documents, and calculations for a building permit from the City's Bureau of Development Services (BDS). City staff will submit the building permit application and pay permit and plan review fees directly to BDS.

- Subtask 200.050 QA/QC: Perform discipline-coordinated QA/QC, constructability, and BES Project Manager 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. Perform discipline-coordinated QA/QC, constructability, and BES Project Manager 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.

Deliverables The following work products will be delivered under this task:

- Design workshop agenda, materials, and summary notes.
- Checklist to be used for completeness checking of the 30%, 60% and 90% Design Submittals, using the BES 30%, 60%, and 90% Best Practices for Milestone Reviews. This checklist is included as a reference.
- 60% Design Submittal including, but not limited to, the following:
 - Title sheet, drawing index, location and vicinity map essentially complete.
 - General symbols, legends and abbreviations essentially complete.
 - Design data and criteria essentially complete.
 - Site civil drawings showing stormwater and sedimentation control provisions and details, and preliminary physical features to protect the substation against landslides and vehicle contact. Include Contractor lay-down and staging area limits on the Civil plans
 - Electrical site plans showing the following:
 - o Grounding system improvements
 - o Electrical equipment footprints
 - o Location of temporary power distribution equipment required for cut-over of feeders from existing switchgear to new switchgear
 - o Location of new PGE underground vault
 - o Extents of underground extension for loops and feeders
 - o Extents of network media extension and tie-in locations
 - Structural plans, sections and details coordinated with other design disciplines. Seismic requirements including dimensional information and structural member sizes.
 - Details of pavement and trench sections, and other civil details, as applicable.
 - Mechanical plans showing HVAC equipment selection, along with mechanical calculations for ambient conditions, internal heat generation within the enclosures, and equipment operating ranges.
 - Single line distribution diagram, including CT/PT locations and conceptual protective device functions throughout the substation.
 - One or more single line diagrams showing temporary configurations and equipment needed for temporary power and cut-over of existing components to new permanent components.
 - Detailed plan layouts for each equipment enclosure, including layout of ancillary lighting, panels and equipment items located within, with provisions for spare electrical distribution capacity.
 - Preliminary enclosure interior equipment elevations.
 - Conceptual schematics for DC station power and backup power provisions.
 - Proposed lighting plan, if required.
 - Draft Specifications of Divisions 1 through 46 coordinated such that project specific information is included and non-pertinent information removed. First draft of construction sequence, milestones and constraints.
 - Equipment list that includes equipment number, equipment size, equipment power requirements, basic controls and operating strategies for all equipment anticipated on the project.
 - Product data sheets for major electrical equipment, instruments, transformers, gear, fixtures, panels, overcurrent devices and protective relays for inclusion in the Final Basis of Design TM.

- Conceptual network block diagram for iFIX SCADA interface, including fiber and copper segments, networking equipment and end-use devices for monitoring.
- Final Basis of Design TM that summarizes technical criteria and assumptions used for the design and includes an evaluation of code interpretation and permit requirements for the Project. Also include an evaluation of safety considerations for equipment access, facility access and egress, and daily maintenance considerations.
- Update to the Construction Cost Estimate in sufficient detail to provide the expected accuracy range of an AACE Class 2 estimate: -15% to + 20%.
- Responses to 30% City Design Review Comments
- 90% Design Submittal including the following (but not limited to):
 - Signed drawings for submission to Portland BDS.
 - Title Sheet, Drawing Index, Location and Vicinity Map complete.
 - General Symbols, Legends and Abbreviations complete.
 - Design Data and Criteria complete, including complete final electrical load calculations and power system analysis (short-circuit, protective device coordination, and arc flash analysis)
 - Complete coordinated site plans related to site access routing, contractor laydown and staging areas, and space for temporary electrical equipment for each cut-over phase.
 - Complete structural and civil plans and details for physical protection of the substation, including fence installation and/or repair as required.
 - Complete conduit and cable schedules.
 - Complete enclosure power plans, showing branch-circuit wiring within the equipment enclosures.
 - Complete panel schedules.
 - Detailed schematics for vacuum breaker cubicles and tie-ins to integrated protective relay terminals and instrument transformers.
 - Exterior substation elevation and section views to coordinate routing of new underground ducts and pull boxes as required between substation equipment enclosures.
 - Final schematics for the grounding system integrity monitoring system and associated alarming.
 - Narrative sequence of operation for both automatic and manual functions of substation equipment. The sequence of operation shall also address tie-in control of the on-site cogeneration system upon loss of utility power and upon restoration of utility power after an outage.
 - Complete SCADA network/telemetry infrastructure drawings showing end-use network devices, station wiring, network switching equipment, and communication protocols being used for each network segment (IP addresses defined by BES will be included in the 90% documents.)
 - Final lighting plan.
 - Final erosion control plan
 - Final version of Specifications Divisions 1 through 46 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.
 - Equipment list that includes equipment number, equipment size, equipment power requirements, and basic controls and operating strategies for all equipment on the project.
 - TM evaluating Construction Contract Time.
 - Responses to 60% City Design Review Comments.

- Update to the Construction Cost Estimate in sufficient detail to provide the expected accuracy range of an AACE Class 2 estimate: -15% to + 20%
- Pre-procurement Bid Package for long-lead items identified in the Preliminary Design phase including:
 - Plan drawings, elevations and details of equipment to be pre-purchased
 - Supply-specific procurement specifications addressing the material, delivery and chain of custody aspects of pre-purchased equipment. This will include requirements for factory testing and documentation.
 - Procurement packages will be submitted to competing electrical equipment suppliers for competitive bidding.
- Final Design Document Submittal and Permitting Documents including the following:
 - Sealed project plans, specifications, structural calculations, and other reports and documents required for a complete Building Permit Application from BDS in searchable Adobe Acrobat .pdf electronic format.
 - Responses to BDS check sheets, including revised project plans, structural calculations, and other reports and documents, as required by BDS, to successfully complete the BDS Building Permit Application process. All submittals shall be in searchable Adobe Acrobat .pdf electronic format.
- Project Bidding Documents Submittal including the following:
 - Construction Cost Estimate in sufficient detail to provide the expected accuracy range of an AACE International Class 1 estimate: -10% to +15%.
 - Sealed project plans, specifications, structural calculations and other reports and documents required for a complete Building Permit Application from BDS in searchable Adobe Acrobat .pdf and AutoCAD/MS Word with no password protection.
 - Responses to BDS check sheets, including revised project plans, structural calculations, and other reports and documents, as required by BDS, to successfully complete the BDS Building Permit Application process. All submittals shall be in Adobe Acrobat .pdf electronic format.

Task 300 Advertisement

- Objective** To provide support services to the City while the project is advertised for bid.
- Activities** The following tasks are included in Task 300:
- Attend the project pre-bid conference.
 - Provide responses to bidder's questions.
 - Prepare addenda to clarify and or modify the Final Project Bidding documents sealed by the design professional of record.
- Deliverables** The following work products will be delivered under this task:
- Provide responses to Bidder questions as requested by the City.
 - Addenda materials sealed by the design professional of record including revised plans and specifications as requested by the City to clarify the documents and to answer bidder questions.

Task 400 Engineering Services During Construction

- Objective** To provide support services to the City during project construction.
- Activities** The following activities are included in Task 400:
- Subtask 400.010 Project Management: To assemble, manage, and lead a cohesive project team to meet budget, schedule, and technical objectives by performing the following activities:

- Use the City's project management system, Heron (based on e-Builder Enterprise), for all project communications, invoices, document management, deliverable transmittal and review processes, and project execution.
- Manage and coordinate consultant resources and sub-consultants to within the approved project schedule and budget.
- Prepare and submit monthly invoices for progress payments and monthly subcontractor payment and utilization reports.
- Subtask 400.011 Basic Services Site Meetings and Observations:
 - Attend the preconstruction conference.
 - Attend four select construction progress meetings as requested by the BES Project Manager (see the Assumptions Section for hours available).
 - Perform the duties of the Registered Design Professional in Responsible Charge of the project as required by the Building Official and the Oregon Structural Specialty Code.
 - Provide periodic construction observation.
- Subtask 400.012 As-authorized services for additional site meetings requested beyond the five meetings identified under Task 400.011 - Basic Services Site Meetings. This contingency Task will allow the Design Team to attend up to eleven additional meetings, beyond those identified under basic services, for a total of sixteen meetings combined. These services will only be provided when specifically pre-authorized by the BES Project Representative.
- Subtask 400.013 Submittal Review: Review submittals for compliance with the plans, specifications and design intent. Consultant's reviews do not include review of product data, verifying the accuracy of dimensions or quantities, coordinating shop drawings or other submittals with other shop drawings or submittals provided by the contractor, or approval of Contractor's means and methods.
- Subtask 400.014 Requests for Information: Evaluate and respond to Requests for Information. Identify changes to design documents, if applicable.
- Subtask 400.015 Design Clarifications: Prepare Design Clarifications to modify the contract documents sealed by the design professional of record. Clarifications and interpretations will be consistent with the intent of and reasonably inferable from the contract documents. Prepare cost estimates.
- Subtask 400.016 Change Orders: Provide assistance to evaluate Contractor change order requests, notices of change, and associated cost estimates.
- Subtask 400.017 Facility Startup and Ops Support: 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:
 - Visit the CBWTP site to observe system operation.
 - Participate in teleconferences, respond to email inquiries, evaluate operational data and procedures.
 - Provide recommendations for operational and other system changes to improve system.

Deliverables The following work products will be delivered under this task:

- Submittal review responses.
- Review, stamp, and submit Deferred Submittals as required by the Building Official and the **Oregon Structural Specialty Code (OSSC)**.
- Design Clarifications sealed by the design professional of record including sketches, drawing revisions, specifications, supporting calculations, quantity take-offs, and cost estimates for the work included in the design clarification.
- 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.
- Field Observation Reports as required by the City's Building Official.
- Letters, reports, and forms to the Building Official and other regulatory agencies as required for permit closeout.
- Site Visit Summary Reports with recommendations to improve facility performance.

Assumptions

The following assumptions further clarify the scope of work.

Project Management Assumptions. This project is expected to follow a streamlined process including:

- Group meetings to shorten the design review period with representatives from the following BES groups: Operations, Maintenance, Electrical and Instrumentation, Engineering, Inspection, and Construction Management.
- The content for the 30% design will be presented at design workshops, as the design progresses. There will be a predesign submittal consisting of a technical memorandum associated with the basis of design and alternatives selection.
- BES staff will assemble material for their internal 30RC review.
- Prior to design review meetings, Tetra Tech will review a draft agenda with the BES Project Manager (Agenda to include a list of key assumptions and needed decisions).
- Communicate the key decisions needed for the review meeting in advance of the meetings.

Preliminary and Design Assumptions

- The design effort assumes that all new and replacement substation components are installed within the footprint of the existing substation.
- Any design coordination, site visits, or other face-to-face meetings between BES staff and the design team will be performed by the discipline-specific Engineers of Record (EOR's) on the design team. No proxies who are not EOR's will perform these tasks.
- The scope of work is based on replacement of the 15 kV main switchgear, the two 4.16 kV switchgear, and the two substation transformers.
- The design review checklists are a comprehensive list of requirements intended to confirm the design is appropriately detailed, and is not intended to add scope not already included in this document.
- Existing CAD background information is available for the purposes of creating a site plan to show the vicinity of the work area.
- A minimal effort is estimated for the record drawing task, as the design approach is expected to demolish the existing 15 kV and 4.16 kV switchgear. An optional task allowance is included if more extensive record drawings are required.
- The scope of this project does not include increasing the ampacity of any existing medium-voltage distribution feeders. Review of data, and estimating future peak electrical demand may find that some existing medium voltage feeders are undersized to supply future loads. The scope of this project does not address potential system capacity issues.
- Develop and evaluate at least two best choice alternatives for the design of the substation replacement.
- Seismic analysis for Preliminary design (to 30% CD's) will be based on currently available information regarding ground motion associated with a 9.0 magnitude Cascade Subduction Zone Earthquake. Design and specifications will use this data to design structures and equipment which are resistant to overturning and severe damage under these presumed conditions.
- Develop one of the two alternatives (or a variation of the alternatives) to a 60, 90 and 100 percent design level.
- All existing switchgear structures will be demolished.
- Project site is flood-protected by a River Levee system, and flooding risk to the substation site will be low. Minor adjustments in concrete equipment pad elevations are assumed to be sufficient to mitigate surface run-off flood risk. An evaluation of flooding risk will be included in the Basis of Design Document; however it is not anticipated that these findings will have any significant impact to the overall site design.
- BES will provide the final equipment names and instrument loop numbers for the 30% level of design.
- New fire alarm system elements are not required.
- New access control system elements are not required.
- Division 0 specifications will be completed by BES, except for the bid form and payment and measurement specifications. The consultant will produce the bid form and payment and measurement specifications.
- Division 1 specifications will be substantially produced by BES with the consultant providing input on the Summary of Work and Work Sequence sections. Consultant will provide formatting and review of Division 1 specifications.
- Public involvement is not anticipated for this project. The Owner's Representative will provide updates to the Citizens Advisory Committee.

Permitting Assumptions

- The City will submit the Final Project Bidding Documents to Oregon DEQ for review of plans and specifications as required by Oregon Administrative Rules (OAR) Section 340-052 - Review of Plans and Specifications.
- The City will submit the reports, drawings, specifications, calculations and permit application materials prepared by the Consultant and required for Building Official review of the project compliance with applicable code requirements.
- An allowance of 14 hours is included to support BES permitting efforts.

Advertisement Assumptions

- The City'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.
- A single addendum related to the scope of work is expected. Addenda related to additional scope or new design preferences may not be covered by the assumed hours for this task.

Construction Assumptions

- A construction manager from the City's BES Treatment and Pumping Systems Engineering Division will perform construction management and inspection of the construction work to ensure compliance with the plans and specifications.
- The City's BES Engineering Project Manager will perform initial review of contractor correspondence to screen incomplete or unclear communications. Additionally, some request for clarifications, and submittals will be identified for City review. Submittals to be reviewed by the City will be identified during design.
- The construction duration from notice to proceed to substantial completion is expected to be 13 months.
- Construction will involve a sequenced phased cut-over where portions of the existing MASU will remain operational; while replacement counterparts are constructed. Temporary provisions for maintaining continuity of facility power are anticipated and will be included into the design as required to support essential operations and processes. Short-duration outages will occur during substation cut-over activities, but will be kept within reasonably acceptable process ride-through time limits. Contingency plans will be developed and/or specified to recover facility operations should complications arise during high-exposure activities such as cut-overs.
- The City will engage and pay for a specialty inspection firm to conduct specialty inspection and testing services required by the building code. These requirements will be clearly stated in the final plans and specifications prepared for the construction project.
- The City will manage post construction efforts on warranty, performance, or defective work issues.
- BES will review and respond to all submittals and requests related to Division 0 and Division 1 except for the following specific specification sections which Tetra Tech will review:
 - Summary of Work
 - Work Sequence
 - Structural Design and Anchorage Requirements for Nonstructural Components
- The City's BES Wastewater Group staff will perform the PLC programming and Supervisory Control and Data Acquisition (SCADA) programming required for the new facilities. The Contractor, equipment manufacturers and suppliers will perform the operator training required. BES will prepare Record Drawings.
- The level of effort for services during construction tasks is based on the following estimations:
 - Attend up to 16 in-person site visit meetings at 2 hours per meeting with an average attendance of 5 Consultant Team members (Approximately 300 hours for the entire Team, inclusive of time for travel, preparation of Agendas, follow-up report writing and meeting minute publications and other support activities related to on-site meetings and site observations.) Site visit meetings are all-inclusive and fall under the price proposal line item titled, "Site observations and reports." The first five meetings are included under basic services, whereas additional meetings (up to eleven additional meetings) will be performed on an as-authorized basis under a separate contingency task.
 - Participate in up to 8 telephone meetings of 60 minutes each.
 - Review of 14 submittals at an average of 6 hours per submittal, with 33 percent of the submittals requiring a resubmittal at an average of 6 hours per resubmittal. (112 total Team hours)

- A maximum of 2 equipment substitution requests requiring a total of 15 hours to review.
- Responses to 40 requests for information, at an average of 2.8 hours each, has been assumed to establish the Team budget for this task. (112 hours.) The justification for this lower than usual RFI quantity considers the pre-purchasing of equipment, and the low probability of running into unforeseen conditions within the dedicated equipment yard.
- A maximum of 6 Design Changes requiring an average of 9.5 hours of effort each. (57 Team hours)
- An allowance of 11 hours to provide assistance evaluating Change Orders from a design standpoint. Cost reviews will be performed by the City.
- A maximum of 32 hours is assumed for Facility Startup and Operations Support.

General Assumptions

- BES review of design submittals will be comprehensive and coordinated with the previous design submittal reviews.
- The time required for City review of design submittals is expected to be three weeks for the 60 and 90 percent submittals. Additional review feedback will be recorded as notes at the workshops, and distributed for a 1-week review period, and finalized to document key decisions, and direct the design.
- Project reviews for permits are required from City's BDS, Oregon DEQ, and other regulatory agencies and will be submitted by BES.
- All deliverables resulting from this contract will become the property of the City. As such, the Contractor and any Subcontractors grant the City the right to copy and distribute (in any and all media and formats) project deliverables for regulatory, project certification/recognition, program development, public education, and/or for any purposes at the sole discretion of the City.
- Work to be Performed by the City:
 - Provide electronic copies of available as-built drawings, plant Discharge Monitoring Reports, and other available documents and records requested by the successful Proposer.
 - Print and distribute deliverables to City reviewers.
 - Compile, coordinate, and vet City review comments.
 - Survey Services: The City will provide utility locations for design, and surveys required for project design and establish benchmarks and survey control monuments.
 - The City will submit the Final Project Bidding Documents to Oregon DEQ for review of plans and specifications as required by OAR 340-052.
 - Provide the City's Division 00 and Division 01 specifications for review and incorporation into the Final Bid Documents by the Consultant.
 - Print Bid Documents.
 - Advertise Bids
 - Plan and administer on-site pre-bid walk-throughs for Bidders; outlining key procurement provisions, Contract terms and conditions, providing site access, and presenting general bidding procedures. Additionally, publish attendees lists and answers to Contractor questions raised during walkthroughs; publishing these in one or more Addenda. Consultant will support this effort by attending the walk-throughs and presenting a technical summary of each disciplines work, and providing follow-on answers to technical Contractor questions in preparation for Addenda.
 - Evaluate Bids.
 - Provide construction management and inspection services.
 - Provide PLC and SCADA Graphical User Interface Automation Programming.
 - Prepare as-built drawings.
 - Perform public involvement activities, if required.
 - Perform Land Use Review, if required.
 - The progress of the work will be managed by the City's Project Manager.
 - The City's Project Manager will oversee review of deliverables by BES and plant operations and maintenance staff for all submittals identified as "Deliverables" for compliance with the intent of the project.

- The City's Project Manager as the City's representative, will resolve competing interests of internal City Stakeholders, providing clear and timely program-related decisions to the Consultant.

CONSULTANT PERSONNEL

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

| NAME | ROLE ON PROJECT |
|------------------------------|---|
| Kevin Dour, P.E. | Principal in Charge |
| John Rice, P.E. | Project Manager |
| | Instrumentation/Controls Engineer of Record |
| David Burger, P.E. | Technical Advisor/Quality Control |
| Randy Fritch, P.E. | Instrumentation and Controls Engineer |
| Hunter Bennett-Daggett, P.E. | Civil Engineer of Record |
| Erik Nordholm, P.E. | Civil Engineer |
| Bruce Johnson, ASLA | Landscape Architect |
| Brad Frayo | Controls Designer |
| Brian Thomasy | CADD Manager |

SUBCONSULTANTS

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

| NAME | DMWESB CERTIFICATION TYPE | ROLE ON PROJECT | SUBCONTRACT AMOUNT |
|--|---------------------------------|-------------------------------|-----------------------|
| Mee Lun Chau, P.E. (MLC Engineering, LLC) | MBE/WBE/ESB #420 | Electrical Engineer of Record | \$247,550 |
| Paul Kluvers, P.E., S.E. (Akana) | DBE/MBE #588 | Structural Engineer of Record | \$61,135 |
| Christopher Boyd, P.E. (Cundiff Engineering, Inc.) | ESB # 9369 | Mechanical Engineer of Record | \$21,325 |
| Maria Rivero (Rivero Design) | DBE/ESB/MBE/WBE #5175 | CAD Design | \$12,410 |

The City will enforce all social equity Contracting and Disadvantaged, Minority, Women and Emerging Small Business (D/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. Contact the PTE Contract Compliance Specialist for submission guidelines.

COMPENSATION

The maximum that the Consultant can be paid on this Contract is \$650,629 (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, and pursuant to per-task limitations tabulated 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.

PER-TASK LIMITATIONS

| | |
|--------------------------|-----------|
| Task 100 – Pre-design | \$177,412 |
| Task 200 – Design | \$280,790 |
| Task 300 – Advertisement | \$14,836 |
| Task 400 – CA Support | \$177,589 |

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:

| Tetra Tech, Inc. | | |
|------------------------------|---------------------------------|--------------------|
| NAME | ROLE ON PROJECT | HOURLY RATE |
| Kevin Dour, P.E. | Principal-In-Charge | \$238.00 |
| David Burger, P.E. | Senior Engineer | \$224.00 |
| John Rice, P.E. | Management IV | \$206.00 |
| Gordon Munro, P.E. | Senior Project Manager | \$220.00 |
| Randy Fritch, P.E. | Electrical Engineer | \$167.00 |
| Brad Frayo | Designer | \$156.00 |
| Erik Nordholm, P.E. | Civil Engineer IV | \$146.00 |
| Brian Thomasy | CAD Management II | \$135.00 |
| Hunter Bennett-Daggett, P.E. | Civil Engineer III | \$129.00 |
| Dan Portman | Editor/Graphics | \$128.00 |
| Becky Connelly | Administrative Professional III | \$119.00 |

| Akana | | |
|----------------------------------|----------------------------|--------------------|
| NAME | ROLE ON PROJECT | HOURLY RATE |
| Paul Kluvers, P.E., S.E. | Principal Structural | \$190.00 |
| Ian Scott/Josh Southall | Associate Architects | \$135.00 |
| Marilyn Andreason | CAD Designer | \$95.00 |
| MLC Engineering, LLC | | |
| NAME | ROLE ON PROJECT | HOURLY RATE |
| Mee Lun Chau, P.E. | Senior Electrical Engineer | \$170.00 |
| Chung Lam | CAD Designer | \$135.00 |
| Cundiff Engineering, Inc. | | |
| NAME | ROLE ON PROJECT | HOURLY RATE |
| Lee Cundiff | Principal Mechanical | \$160.00 |
| Pat Walsh/Chris Boyd | Associate Engineer | \$150.00 |
| Kalin Hollingbery | Designer | \$125.00 |
| Lisa Kenny | Administrative | \$75.00 |
| Rivero Design | | |
| NAME | ROLE ON PROJECT | HOURLY RATE |
| Maria Rivero | CAD Designer | \$85.00 |

The hourly billing rates include a multiplier applied to salaries. This multiplier shall not exceed 3.1 and shall include the following non-reimbursable expenses: fringe benefits, payroll bonuses, autos and other defined perquisites, telecommunications, facsimile services, overhead expenses including but not limited to local and long distance telephone, parking, delivery/courier, general business and professional liability insurance, advertising costs, postage, internal copying, lease of office equipment, mileage and other local travel costs (travel within a 100-mile radius of Consultant's project office), information technology (including computer time and CAD services and other related highly specialized equipment), all other direct costs not identified as reimbursable, other indirect costs and profit.

Standard Reimbursable Costs

The following costs will be reimbursed without mark-up:

- Out-of-Town Travel. Travel (transportation, lodging and per diem) of Consultant and/or experts when specified in the contract or requested by BES, directly attributed to specific project tasks and when to a location outside a 100-mile radius of Consultant's project office. Travel will be preapproved by the City's Project Manager and travel costs will be reimbursed in accordance with the City's Travel Expense Guidelines.
- Photocopying/Reproduction Costs. Copying and reproduction of documents that cannot be handled by Consultant in-house and are sent to an outside vendor.
- Special fees, insurance, permits, and licenses applicable to the work.
- Outside computer processing, computation, and proprietary programs purchased for the work.
- Rates for professional staff for legal proceedings or as expert witnesses will be at a rate of \$300 per hour.

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 then-current average inflation rate for the Portland Metropolitan Area (as determined from the US Department of Labor statistics);
- Rate increases shall not be retroactive.

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

Progress Payments

On or before the 15th of each month, the Consultant shall submit to the City's Project Manager an invoice for work performed by the Consultant during the preceding month. The invoice shall contain the City's Contract Number and set out all items for payment including, but not limited to: the name of the individual, labor category, direct labor rate, 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 calendar 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, Consultant shall execute the City's standard ACH Vendor Payment Authorization Agreement.

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, CONSULTANT 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.

Consultant Signature: _____ Date: _____ Entity: _____

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

As an independent Consultant, 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 Consultant 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. Consultant: 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.

Consultant Signature

Date

FOR CITY USE ONLY

PROJECT MANAGER-COMplete ONLY IF CONSULTANT DOES NOT HAVE WORKER'S COMPENSATION INSURANCE
ORS 670.600 Independent Consultant 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 consultant" 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

189054

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 Chapters 5.33.076 and 5.33.077 of Code of the City of Portland; and hereby certify I am an independent consultant as defined in ORS 670.600.

TETRA TECH, INC.

BY: _____ Date: _____

Name: _____

Title: _____

189054

CONTRACT NUMBER: _____

CONTRACT TITLE: CBWTP Main Substation Replacement

CITY OF PORTLAND SIGNATURES:

By: _____
Bureau Director

Date: _____

By: _____
Chief Procurement Officer

Date: _____

By: _____
Elected Official

Date: _____

Approved:

By: _____
Office of City Auditor

Date: _____

Approved as to Form:

By: _____
Office of City Attorney

Date: _____