

RESOLUTION NO. 5262-15

A RESOLUTION TO AWARD A PROFESSIONAL SERVICES CONTRACT TO OBEC CONSULTING ENGINEERS FOR DESIGN OF THE MYSLONY BRIDGE PROJECT AND AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT

WHEREAS, the Request for Proposals was advertised in the Daily Journal of Commerce on August 17, 2015; and

WHEREAS, three proposals were received on September 16, 2015 and subsequently evaluated on a qualifications basis; and

WHEREAS, a Notice of Intent to Award was issued to OBEC Consulting Engineers on October 12, 2015; and

WHEREAS, City staff entered into and completed negotiations with OBEC Consulting Engineers on the scope of work and fee estimate for a time and materials contract; and

WHEREAS, the procurement complies with the City's public contracting requirements; and

WHEREAS, this project is identified in the 2015/2016 Capital Improvement Program; and

WHEREAS, funds are available for this project in the 2015/2016 Budget in the Transportation Improvement Fund;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TUALATIN, OREGON, that:

Section 1. The City Manager is authorized to execute a Professional Service Agreement with OBEC Consulting Engineers, which is attached as Exhibit 1 and incorporated by reference.

Section 2. The City Manager is authorized to approve changes to contract scope and may make modifications to the contract price up to an addition 10 percent of the total contract amount.

Section 3. This resolution is effective upon adoption.

Adopted by the City Council this 14th day of December, 2015.

CITY OF TUALATIN, OREGON

BY  _____
Mayor

APPROVED AS TO FORM

BY  _____
City Attorney

ATTEST:

BY  _____
City Recorder

CITY OF TUALATIN PROFESSIONAL SERVICES AGREEMENT

THIS PROFESSIONAL SERVICES AGREEMENT is entered into as of the date first indicated on the signature page by and between the City of Tualatin, a municipal corporation of the State of Oregon ("City"), and OBEC Consulting Engineers ("Contractor").

Section 1. Contract Documents. The Contract Documents, which together form the complete Agreement between the parties, consists of the following documents in descending order of precedence: (i) this Agreement; (ii) any documents specifically referenced in this Agreement; and (iii) the attached Scope of Work (Exhibit A); (iv) the attached hourly rate schedule (Exhibit B); (v) the invitation to bid/propose; (vi) the Tualatin Public Works Design Standards; and (vi) Contractor's bid/response. To the extent there is any conflict between the Contract Documents, the conflict is resolved by the order of precedence above. There are no other Contract Documents other than those listed.

Section 2. Work.

- A. **Completion.** Contractor must complete all Work that is generally described as set forth in Exhibit A, which is incorporated into this Agreement as if fully set forth.
- B. **Authenticity by Contractor.** All written documents, drawings, and plans submitted by Contractor in completing the Work must be stamped with the engineer, land surveyor, architect, or design professional's professional stamp and bear that professional's signature or initials.
- C. **Qualified Professionals.** All Work must be performed by qualified engineers and other professionals that are properly licensed under the laws of the State of Oregon.
- D. **City Standards.** All design work must be according to City of Tualatin standards, including but not limited to, the Tualatin Municipal Code and Tualatin Public Works Standards, applicable Master plans, and all other applicable documents referenced in any of these documents.
- E. **Solely Responsible.** Contractor is solely responsible for all Work under this Agreement, including all services, labor, materials and supplies, documents, permits and other requirements to complete the Work, whether produced by Contractor or any of Contractor's subcontractors or Contractors, except for those items identified as the responsibility of the City.
- F. **Sufficient Plans.** Contractor warrants that the Agreement specifications and plans, if any, prepared by Contractor will be adequate and sufficient to accomplish the purposes of the project and that review or approval by the owner of the plans and specifications does not diminish the warranty of adequacy.
- G. **Project Costs.** In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, given the uncertainty with such projections, City acknowledges Contractor makes no warranty that City's actual project costs, financial aspects, economic feasibility, or schedules will not vary from Contractor's opinions, analyses, projections, or estimates.
- H. **Subsurface Investigations.** City acknowledges Contractor makes no warranty about subsurface conditions and cost/execution effects, even if analyzed, as soils, foundation, ground water, and other subsurface investigations may vary significantly between successive test points and sample intervals.
- I. **Record Drawings.** Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Engineer is not responsible for errors or omissions in the information from others that are incorporated into the record drawings.
- J. **Additional Work.** If City requests. Contractors to provide additional services not included in the Work described on Exhibit A, the parties will enter into a written amendment to include such Work. The Agreement price for such additional Work will not exceed Contractor's hourly rate as agreed to in Exhibit A. No compensation for additional services will be paid or owing unless both parties specifically agree in writing to such additional compensation and services.

Section 3. Effective Date. The effective date of this Agreement is the date both Parties sign this Agreement ("Effective Date"). If the parties sign on separate dates, the date of the last signature is the Effective Date.

Section 4. Time is of the Essence. Contractor agrees that time is of the essence under this Agreement.

Section 5. Standard of Care. In the performance of its professional or technical services, Contractor must use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the Portland Metropolitan Area. Contractor will reperform any services not meeting this standard without additional compensation. Contractor's reperformance of any services, even if done at City's request, will not be considered as a limitation or waiver by City of any other remedies or claims it may have arising out of Contractor's failure to perform in accordance with the applicable standard of care or this Agreement.

Section 6. Duty to Inform. If during the performance of this Agreement or in the future, Contractor becomes aware of actual or potential problems, faults, or defects in the projects, any nonconformance with the federal, state or local law, rule, or regulation, or has any objection to a decision or order made by City with respect to such laws, rules, or regulations, Contractor must give prompt written notice to City's Project Manager.

Section 7. Independent Contractor; Responsibility for Taxes and Withholding.

- A. **Independent Contractor.** Contractor will perform all Work as an independent Contractor. The City reserves the right (i) to determine and modify the delivery schedule for the Work and (ii) to evaluate the quality of the Work Product; however, the City may not and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the Work.
- B. **Not an Officer, Employee or Agent.** Contractor is not an "officer", "employee", or "agent" of the City, as those terms are used in ORS 30.265.
- C. **Federal and State Taxes.** Contractor is responsible for all federal or state taxes applicable to compensation or payments paid to Contractor under this Agreement and, unless Contractor is subject to backup withholding, City will not withhold from such compensation or payments any amount(s) to cover Contractor's federal or state tax obligations. Contractor is not eligible for any social security, unemployment insurance or workers' compensation benefits from City under this Agreement. Contractor is not entitled to, and expressly waives all claims to City benefits, including but not limited to health and disability insurance, paid leave, and retirement.

Section 8. Subcontracting. Except for those subcontracts identified in Exhibit A, Contractor's services are unique and as such, will not enter into any subcontracts for any of the Work required by this Agreement without City's prior written consent. Any subcontract will not relieve Contractor of any of its duties or obligations under this Agreement. All subcontracts for services must be issued under written agreements that include all provisions required under Oregon Public Contracting law. Upon request by the City, Contractor must provide City a copy of all agreements with subcontractors who are performing work under this Agreement.

Section 9. Agreement Price.

- A. **Hourly Rate.** City agrees to pay Consultant on an hourly basis for actual hours worked on this project. The hourly rate is shown on Exhibit B, which is attached hereto and incorporated into this Agreement as if fully set forth.
- B. **Maximum Fee.** In no event will City pay Contractor a price not to exceed \$418,459.50, which is inclusive of all hours necessary to complete the Work.

Section 10. City Funds for Payment. (Check One Below)

- City certifies that it has sufficient funds currently authorized to finance the full costs of this Agreement.
- Contractor understand and agrees that City's payment of amounts under this Agreement is contingent on City receiving appropriations, limitations, allotments or other expenditure authority sufficient to allow City, in the exercise of its reasonable administrative discretion, to continue to make payments under this Agreement.

Section 11. Payment Process.

- A. **Invoices.** Contractor must furnish City an invoice for services on a monthly basis. The invoice must contain an itemized statement showing the number of hours worked on the project by Contractor and the specific Work or portions of the Work performed.
- B. **Reimbursable Expenses.** City's Payment for reimbursable expenses is limited to those reimbursable expenses set forth on Exhibit A, which are actually incurred by Contractor and itemized on Contractor's invoice for services.

- C. **Payment for Services.** City will pay Contractor for services invoiced within thirty (30) days of receiving an itemized invoice ("net thirty"), unless City disputes the invoice, in which case City will only pay for those services not in dispute.

Section 12. Contractor's Representations.

- A. In order to induce City to enter into this Agreement Contractor makes the following representations and warranties:
- (i) Contractor has the power and authority to enter into and perform his Agreement;
 - (ii) This Agreement, when executed and delivered, is a valid and binding obligation of Contractor enforceable in accordance with its terms;
 - (iii) Contractor has examined and carefully studied all Contract Documents and the other related data identified in the Contract Documents;
 - (iv) Contractor has become familiar with all conditions that may affect cost, progress, and performance of the Work;
 - (v) Contractor has the skill and knowledge possessed by well informed members of its industry, trade or profession and Contractor will apply that skill and knowledge with care and diligence to perform the Work in a professional manner and in accordance with standards prevalent in Contractor's industry, trade or profession;
 - (vi) Contractor must, at all times during the term of this Agreement, be qualified, professionally competent, and duly licensed to perform the Work; and
 - (vii) Contractor prepared its proposal related to this Agreement, if any, independently from all other proposers, and without collusion, fraud, or other dishonesty.
- B. **Warranties Cumulative.** The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided.

Section 13. Suspension of Work. The City may suspend work by causing a written "stop work order" to be sent to Contractor as provided in the notice provisions of this Agreement and documenting the reasons for stopping the work. Contractor must stop all work upon receiving the "stop work order."

Section 14. Notice to Parties. Except as otherwise expressly provided in this Agreement, any communications between the parties hereto or notices to be given hereunder must be given in writing by personal delivery, mail facsimile, or email.

- A. **Notice by Personal Delivery.** Any communication or notice given by personal delivery is effective when actually delivered.
- B. **Notice by Mail.** Notice given by mail must be by postage prepaid, to Contractor or City at the address, set forth herein, or to such other addresses or numbers as either party may indicate pursuant to this Section. Any communication or notice so addressed and mailed is effective five (five) days after mailing.
- C. **Notice by Email.** Any communication or notice given by email is effective upon the sender's receipt of confirmation generated by the recipient's email system that the notice has been received by the recipient's email system.
- D. **Party to be Notified.** Unless otherwise notified in writing as set forth above, notices must be given to the Project Managers. If a Party's Project Manager is changed, notification of the change must be promptly made in writing to the other party. If a party receives a communication from the other party not executed by the Project Manager, the party may request clarification by the other party's Project Manager, which must be promptly furnished.
1. **City's Project Manager: Dominique Huffman, Project Engineer, 18880 SW Martinazzi Ave Tualatin OR 97062-7092, Fax: 503-629-0147, Office: 503-691-3036**
 2. **Contractor's Project Manager, Nick Robertson, Structural Division Manager, 5000 Meadows Road, Suite 420 Lake Oswego, OR 97035-2224, Fax: 503-620-8416, Office: 971-634-2020**

Section 15. City's Obligations. In addition to obligations of City described in other parts of the Agreement Documents, City is responsible for providing the following:

- A. **Timely Response.** City will respond in a timely manner to all properly submitted requests from Contractor.
- B. **Cooperation.** City will cooperate with Contractor to promptly review, comment on and approve all proposals and work that comply with the requirements of this Agreement.

Section 16. Assignment of Agreement. No assignment of any rights, duties, responsibilities, or interests in the Agreement will be binding on the other party without the written consent of the party sought to be bound. No assignment will release or discharge the assignor from any duty or responsibility under the Agreement Documents.

Section 17. Successors and Assigns. The provisions of this Agreement are binding upon and inure to the benefit of the parties, their respective successors, and permitted assigns.

Section 18. Severability. If any term or provision of this Agreement 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 will not be affected, and the rights and obligations of the parties must be construed and enforced as if the Agreement did not contain the particular term or provision held to be invalid.

Section 19. Merger Clause; Waiver. This Agreement and attached exhibits constitute the entire agreement between the parties on the subject matter hereof. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Agreement. No waiver, consent, modification or change of terms of this Agreement will bind the parties unless in writing and signed by both parties and all necessary City approvals have been obtained. Such waiver, consent, modification or change, if made, is effective only in the specific instance and for the specific purpose given.

Section 20. Agreement Construction. This Agreement shall not be construed against either party regardless of which party drafted it. Other than as modified by this Agreement, the applicable rules of Agreement construction and evidence will apply.

Section 21. Ownership of Intellectual Property.

- A. **Original Works.** All Work Product created by Contractor pursuant to the Work shall be the exclusive property of City. City and Contractor agree that such original works of authorship are "work made for hire" of which City is the author within the meaning of the United States Copyright Act. If for any reason the original Work Product created pursuant to the Work is not "work made for hire," Contractor hereby irrevocably assigns to City any and all of its rights, title, and interest in all original Work Product created pursuant to the Work, whether arising from copyright, patent, trademark, trade secret, or any other state or federal intellectual property law or doctrine. Upon City's reasonable request, Contractor will execute such further documents and instruments necessary to fully vest such rights in City. Contractor forever waives any and all rights relating to original Work Product created pursuant to the Work, including without limitation, any and all rights arising under 17 USC §106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.
- B. **Contractor Intellectual Property.** All pre-existing trademarks, service marks, patents, copyrights, trade secrets, and other propriety rights of Contractor are and will remain the exclusive property of Contractor. Notwithstanding the foregoing, Contractor hereby grants to City an irrevocable, nonexclusive, perpetual, royalty free license to use, reproduce, prepare derivative works based upon, distribute copies of, perform and display the Contractor Intellectual Property, and to authorize others to do the same on City's behalf. As a condition to the reuse of the Contractor's Intellectual Property, the City agrees to defend, indemnify and hold harmless the Contractor against any damages, liabilities or costs arising from the City's reuse or modification of the Contractor's Intellectual Property.

Section 22. Records Maintenance; Access. Contractor must maintain all financial records relating to this Agreement in accordance with generally accepted accounting principles, and any other records pertinent to this Agreement in such a manner as to clearly document Contractor's performance, for a minimum of three (3) years following final payment or termination of this Agreement. City may have access to all, documents, whether in paper, electronic or other form, to perform examinations and audits and make excerpts and transcripts.

Section 23. No Third-Party Beneficiaries. There are no intended third-party beneficiaries to this Agreement. Contractor and the City are the only parties to this Agreement and are intended to be the only entities entitled to exercise and enforce the rights and obligations created by this Agreement.

Section 24. Nondiscrimination; Compliance with Applicable Law. Contractor agrees that no person shall, on the grounds of race, color, religion, sex, marital status, familial status, domestic partnership, national origin, age, mental or physical disability, sexual orientation, gender identity, source of income, or veteran status suffer discrimination in the performance of this Agreement. Contractor must comply with all federal, state and local laws, regulations, executive orders

and ordinances applicable to the Work under this Agreement.

Section 25. Public Contracting Requirements. Contractor must comply with provisions of ORS 279A.110; 279B.220, 279B.225, 279B.230, and 279B.235, which are incorporated by reference herein. City's performance under the Agreement is conditioned upon Contractor's compliance.

Section 26. Certification of Compliance with Tax Laws. As required by ORS 279B.110(2)(e), Contractor represents and warrants that Contractor has complied with the tax laws of this state, the City, and applicable political subdivisions of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317 and 318, hereafter ("Tax Laws"). Contractor further covenants to continue to comply with the Tax Laws during the term of this Agreement and Contractor covenants and acknowledges that the failure to comply with the Tax Laws is a default for which City may terminate this Agreement and seek damages.

Section 27. Registered in Oregon and City of Tualatin. If Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor must promptly provide to the Oregon Department of Revenue and the Secretary of State Corporation Division all information required by those agencies relative to this Agreement. Contractor must demonstrate its legal capacity to perform the Work under this Agreement in the State of Oregon prior to entering into this Agreement. Contractor must have or acquire a City business license prior to executing this Agreement.

Section 28. Use of Recycled Products. Contractor shall, to the maximum extent economically feasible in the performance of this Contract, use recycled paper (as defined in ORS 279A.010(1)(ee)), recycled PETE products (as defined in ORS 279A.010(1)(ff)), and other recycled products (as "recycled product" is defined in ORS 279A.010(1)(gg)).

Section 29. Force Majeure. Neither City nor Contractor will be held responsible for delay or default caused by fire, riot, acts of God, terrorist acts, or other acts of political sabotage, or war where such cause was beyond the reasonable control of City or Contractor, respectively. Contractor must make all reasonable efforts to remove or eliminate such a cause of delay or default and must diligently pursue performance of its obligations under this Contract.

Section 30. Survival. All rights and obligations of the parties will cease upon termination or expiration of this Contract, except for the rights and obligations of a party for payment of completed Work, indemnity, dispute resolution, maintenance of insurance, and those provisions, including, but not limited to, provisions concerning property rights and governing laws which, by their nature, must survive termination to accomplish the intent of the parties as expressed in this Contract.

Section 31. Joint and Several Liability. In the event Contractor includes more than one person or entity, all such persons or entities will be jointly and severally liable for all conditions herein.

Section 32. Indemnification.

- A. **General Indemnity.** Contractor must defend, save, hold harmless, and indemnify the City, its officers, employees and agents from and against all claims, suits, actions, losses, damages, liabilities, costs and expenses of any nature whatsoever, including attorneys' fees, resulting from, arising out of, or relating to the activities of Contractor or its officers, employees, subcontractors, or agents under this Agreement. Notwithstanding the foregoing, Contractor's indemnity and defense obligations arising out of professional errors and omissions is on a negligence basis.
- B. **Control of Defense and Settlement.** Contractor will have control of the defense and settlement of any claim that is subject to this Section; however, neither Contractor nor any attorney engaged by Contractor will defend the claim in the name of the City, nor purport to act as legal representative of the City or any of its officers, employees, or agents without first receiving from the City, in a form and manner determined appropriate by the City, authority to act as legal counsel for the City, nor will Contractor settle any claim on behalf of the City without the approval of the City. The City may, at its election and expense, assume its own defense and settlement in the event that the City determines that the Contractor is prohibited from defending the City, or is not adequately defending the City's interests, or that an important governmental principle is at issue and the City desires to assume its own defense.

Section 33. Insurance. Contractor must provide City with evidence of the following insurance coverage's prior to execution of this Agreement. A copy of each insurance policy, issued by a company currently licensed in the State of Oregon and certified as a true copy by an authorized representative of the issuing company or a certificate in a form satisfactory to City certifying to the issuance of such insurance, must be furnished to City. Unless specifically set forth on Exhibit A, insurance and related costs must be borne by Contractor. All policies must be written on an "occurrence basis," except for Contractor's Professional Liability Insurance which may be written on a "claims made" basis, and maintained in full force for not less than three (3) years following Contractor's performance under this Agreement. All policies must provide for not less than 30 days' written notice to City before they may be revised, non-renewed, canceled, or coverage reduced. Excepting professional liability and worker's compensation coverage, all policies must provide an endorsement naming the City, its officers, employees, and agents as additional insureds. If the policy lapses during performance, City may treat said lapse as a

breach; terminate this Agreement and seek damages; withhold progress payments without impairing obligations of Contractor to proceed with work; pay an insurance carrier (either Contractor's or a substitute) the premium amount and withhold the amount from payment to Contractor; and use any other remedy provided by this Agreement or by law.

- A. **Automobile.** Comprehensive automobile and vehicle liability insurance covering claims for injuries to members of the public and/or damages to property of others arising from the use of motor vehicles, including on-site and off-site operations, and owned, non-owned, or hired vehicles, with \$1,000,000 combined single limits.
- B. **General Liability.** Commercial general liability insurance covering claims for injuries to members of the public or damage to property of others arising out of any act or omission of Contractor or of any of its employers, agents, or subcontractors, with \$2,000,000 per occurrence and in the aggregate.
- C. **Professional Liability.** Professional Liability Insurance of \$2,000,000 per occurrence and in the aggregate, including contractual liability coverage. If Contractor proposes using subcontractors, City may require subcontractors to provide professional liability insurance, provided the amount and form of coverage complies with this Section.
- D. **Policy Coverage.** Coverage provided by this policy(ies) must be primary and any other insurance carried by City is excess. Contractor will be responsible for any deductible amounts payable under all policies of insurance.
- E. **Workers Compensation.** Contractor, its subcontractors, if any, and all employers working under this Agreement are subject employers under the Oregon Worker's Compensation Law and must comply with ORS 656.017.

Section 34. Default; Remedies; Termination.

- A. **Default by Contractor.** Contractor is in default under this Agreement if Contractor commits any material breach or default of any covenant, warranty, obligation or agreement under this Agreement, fails to perform the Work under this Agreement within the time specified herein or any extension thereof, or so fails to pursue the Work as to endanger Contractor's performance under this Agreement in accordance with its terms, and such breach, default or failure is not cured within fourteen (14) calendar days after City's notice, or such longer period as City may specify in such notice.
- B. **City's Remedies for Contractor's Default.** In the event Contractor is in default, City may, at its option, pursue any or all of the remedies available to it under this Agreement and at law or in equity; including, but not limited to:
 - (i) Termination of this Agreement;
 - (ii) Withholding all monies due for Work and Work Products that Contractor has failed to deliver within any scheduled completion dates or has performed inadequately or defectively;
 - (iii) Initiation of an action or proceeding for damages, specific performance, or declaratory or injunctive relief;
 - (iv) Exercise of its right of setoff.

These remedies are cumulative to the extent the remedies are not inconsistent, and City may pursue any remedy or remedies singly, collectively, successively or in any order whatsoever. If a court determines that Contractor was not in default, then Contractor is entitled to the same remedies as if this Agreement was terminated.

- C. **Default by City.** City is in default under this Agreement if:
 - (i) City fails to pay Contractor any amount pursuant to the terms of this Agreement, and City fails to cure such failure within thirty (30) calendar days after Contractor's notice or such longer period as Contractor may specify in such notice; or
 - (ii) City commits any material breach or default of any covenant, warranty, or obligation under this Agreement, and such breach or default is not cured within thirty (30) calendar days after Contractor's notice or such longer period as Contractor may specify in such notice.
- D. **Contractor's Remedies for City's Default.** In the event City terminates the Agreement, or in the event City is in default and whether or not Contractor elects to exercise its right to terminate the Agreement, Contractor's

sole monetary remedy is (i) with respect to services compensable on an hourly basis, a claim for unpaid invoices, hours worked within any limits set forth in this Agreement but not yet billed, authorized expenses incurred and interest of two-thirds of one percent per month, but not more than eight percent per annum, and (ii) with respect to deliverable based Work, a claim for the sum designated for completing the deliverable multiplied by the percentage of Work completed and accepted by City, less previous amounts paid and any claim(s) that City has against Contractor. In no event will City be liable to Contractor for any expenses related to termination of this Agreement or for any anticipated profits. If previous amounts paid to Contractor exceed the amount due to Contractor under this subsection, Contractor must pay immediately any excess to City upon written demand provided.

E. Termination by City. At its sole discretion, City may terminate this Agreement:

- (i) For any reason upon thirty (30) days' prior written notice by City to Contractor;
- (ii) Immediately upon written notice if City fails to receive funding or expenditure authority at levels sufficient to pay for the Work or Work Products; or
- (iii) Immediately upon written notice if federal or state laws, regulations, or guidelines are modified or interpreted in such a way that the City's purchase of the Work or Work Products under this Agreement is prohibited or City is prohibited from paying for such Work or Work Products from the planned funding source.
- (iv) Immediately upon written notice by City to Contractor if Contractor is in default of this Agreement.

F. Termination by Contractor. Contractor may terminate this Agreement with such written notice to City upon the occurrence of the following events.

- (i) City is in default because City fails to pay Contractor any amount pursuant to the terms of this Agreement, and City fails to cure such failure within thirty (30) calendar days after Contractor's notice of the failure to pay or such longer period as Contractor may specify in such notice; or
- (ii) City is in default because City commits any material breach or default of any covenant, warranty, or obligation under this Agreement, fails to perform its commitments hereunder within the time specified or any extension thereof, and City fails to cure such failure within thirty (30) calendar days after Contractor's notice or such longer period as Contractor may specify in such notice.

G. Return of Property upon Termination. Upon termination of this Agreement for any reason whatsoever, Contractor must immediately deliver to City all of City's property (including without limitation any Work or Work Products for which City has made payment in whole or in part) that is in the possession or under the control of Contractor in whatever stage of development and form of recordation such City property is expressed or embodied at that time. Upon receiving a notice of termination of this Agreement, Contractor must immediately cease all activities under this Agreement, unless City expressly directs otherwise in such notice of termination. Upon City's request, Contractor must surrender to anyone City designates, all documents, research or objects or other tangible things needed to complete the Work and the Work Products.

H. City's Remedies Cumulative. In the event of termination, in addition to the remedies provided herein, City shall have any remedy available to it in law or equity. City shall also have such remedies as are available to it in law or equity for Contractor's breach without the requirement that City first terminate this Agreement.

Section 35. Dispute Resolution.

A. Process. If Contractor is not in agreement with a decision of the City under this Agreement, Contractor must comply with the following process:

- (i) Contractor must file a written notice of appeal with the City's Project Manager within fifteen (15) days following receipt of the City's written decision.
- (ii) The City's Project Manager will have sixty (60) days for review of the appeal prior to presenting a decision to Contractor. During the sixty (60) day period, the City's Project Manager will appoint a three-person management team as the authorized review panel. The review panel may call on the resources appropriate to evaluate the merit of the appeal. This may include; but not be limited to, City's attorney, Contractor, and any employee of City.

(iii) Prior to the end of the sixty (60) day review period, the City's Project Manager will issue a written decision to Contractor. If Contractor is agreeable with this decision, a Change Order will be processed consistent with the decision.

B. Exhaustion of Remedies. If Contractor is not in agreement with the written decision of Public Works Director, Contractor will only then be entitled to initiate legal action as the prescribed administrative remedies have been exhausted.

C. Complaint. Any claim that cannot be resolved between the parties as set forth in this Section shall be initiated by filing a complaint in the appropriate court as provided in this Agreement. The claim and all cross and counter-claims filed in response to the complaint shall be submitted to mediation. If the parties cannot agree on a mediator, the Presiding Judge for Washington County will select the mediator. Only if the dispute cannot be resolved by mediation, will the parties proceed to litigate the claim in court.

Section 36. Attorney Fees. If any suit, action, arbitration or other proceeding is instituted upon this Agreement or to enforce any rights herein or otherwise pursue, defend or litigate issues related to this Agreement, each party will be liable for their own attorneys' fee and costs, including those on appeal. The parties each agree and hereby waive any right to attorney fees granted by statute or rule that conflicts with this provision.

Section 37. Execution of Agreement; Electronic Signature. This Agreement may be executed in one or more counterparts, all of which when taken together constitute one agreement binding on all parties, notwithstanding that all parties are not signatories to the same counterpart. Each copy of the Agreement so executed constitutes an original. A signature of a party provided by email, "pdf," or other electronic data file constitutes an original signature of that party.

Section 38. Governing Law; Venue; Consent to Jurisdiction. This Agreement is governed by and will be construed in accordance with the laws of the State of Oregon without regard to principles of law. Any claim, action, suit or proceeding (collectively, "Claim") between City and Contractor that arises from or relates to this Agreement shall be brought and conducted solely and exclusively within the Circuit Court of Washington County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event will this Section be construed as a waiver of any form of defense or immunity from any Claim or from the jurisdiction of any court. Contractor, BY EXECUTION OF THIS AGREEMENT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF SAID COURTS.

Section 29. Authority to Bind. City and Contractor each represent and warrant that the individual(s) executing this Agreement have taken all steps necessary to secure full authority to bind the City and Contractor, respectively, for the acts, expenditures, and obligations contemplated in this Agreement to be performed by each of them. BY EXECUTION OF THIS AGREEMENT, EACH PARTY HEREBY ACKNOWLEDGES THAT THEY HAVE READ THIS AGREEMENT, UNDERSTAND IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

AGREED AND ENTERED this 14th day of December, 2015.

OBEC Consulting Engineers, Inc.
(Contractor)

By: Guy Hakanson
Guy N. Hakanson, P.E.
Vice President
920 Country Club Road, Suite 100B
Eugene, OR 97401
541-683-6090

By: Sherilyn Lombos
Sherilyn Lombos
City Manager
18880 SW Martinazzi Ave.
Tualatin, Oregon 97062
503-691-3010

93-0552628
Contractor's Federal ID Number

APPROVED AS TO LEGAL FORM

J. B. S.
City Attorney

EXHIBIT A

SCOPE OF PROFESSIONAL SERVICES

For

ENGINEERING SERVICES – Myslony Bridge: West of 112th Ave

Project Understanding:

The City of Tualatin is seeking a professional engineering consultant to provide design services for the Myslony Bridge project. SW Myslony Street is a major collector roadway located in a light industrial area. The roadway is located between SW Herman Road and SW Tualatin-Sherwood Road and travels from SW 124th Avenue at the west end and ends at Hedges Creek at the east end. Approximately 420 feet east of where SW Myslony Street ends it begins again at SW 112th Avenue, with an extension and cul-de-sac already paved and in place east of SW 112th Avenue.

The Myslony Bridge project includes approximately 420 feet of new two lane roadway, bike lanes, planter strips, sidewalks, street lights, storm drainage and water quality treatment, a roughly 100 foot long bridge over Hedges Creek, and existing utilities. This project will also coordinate the construction of a water line. The Myslony Bridge project will connect SW Myslony Street from where it ends on the west side of Hedges Creek to the east where it currently intersects with SW 112th Avenue, allowing continuous access along SW Myslony Street from SW 124th Avenue to SW 112th Avenue.

Organization of Work Tasks:

The follow work tasks are provided to develop an effective and comprehensive project delivery plan and provide a basis for the level of effort and design fee required for successful project delivery.

Task 1 Project Management

Provide management and coordination for all tasks included in this Scope. Manage Services performed by Consultant's staff and sub-consultants and coordinate with the City as needed on work tasks performed by others.

Subtask 1.1 Overall Project Management

Provide project management and design oversight for the consultant team. Prepare and maintain a milestone delivery schedule in either Smartsheet or Microsoft Project formats. Maintain a project decision log using an established format for use in collecting City design input, documenting key decisions and tracking the resolution of design issues. Plan and direct Quality processes in accordance with Consultant's existing Quality Program, including the development of a project specific Project Quality Plan (PQP). The PQP shall document the required quality assurance reviews that must be undertaken by the Consultant for each project deliverable. Collect and respond to City review comments. Keep the city apprised of work progress, project issues, resolutions and changes affecting the design, schedule or project budget by providing a monthly progress report with each monthly

invoice. Submit project invoices monthly, including a breakdown of hours spent by each individual on each task. Maintain a comprehensive project file, which must include engineering computations, assumptions, meeting agendas and minutes, working drawings, correspondence and memoranda.

Assumptions

- Project Management tasks are assumed to be seven months in duration to match the overall design schedule.

Deliverables

- Invoices and progress reports (monthly) Milestone Delivery Schedule (within 10 working days of NTP, and modifications as required by the City)
- Project Decision Log (available for review upon request)
- Create and maintain a Project file containing elements mentioned above for the duration of the Project. The Project file must be delivered within thirty (30) calendar days of request by City.

Schedule

Task shall be continuous throughout project design phase duration.

Subtask 1.2 Project Meetings

Prepare and lead the targeted production meetings listed below as an integral part of Project delivery. The purpose of these meetings is to clearly identify and document the City's Project goals, objectives and design preferences; to establish a high level of efficiency and design quality; and to promote accurate communications between the City and the consultant team at key Project milestones. Meetings shall take place at the City's Engineering Services Office or by conference call, as appropriate.

Assumptions

- Effort includes preparation of meeting materials, meeting coordination, communications, agendas, travel time and meeting minutes.
- Project Kickoff Meeting – up to four (4) Consultant team members shall meet with City design staff for up to two (2) hours at the City's offices to discuss the overall work plan, project schedule, design criteria, alternatives analysis and stakeholder concerns.
- Preliminary Design Review Meeting – up to six (6) Consultant team members shall meet with City design staff for up to two (2) hours at the City's offices to present the results of the preliminary evaluation and discuss review comments to the preliminary design report. This meeting shall take place following the delivery of the preliminary design report, and a two week review period. Review comments shall be provided by the City in an excel worksheet at least two days before the preliminary design review meeting.
- 30% design review meeting – up to two (2) Consultant employees shall meet with City design staff for up to one (1) hour at the City's offices to discuss plan review comments. This meeting shall take place following the delivery of the 30% Plans and Estimate Package and a two week review period. Review comments shall be provided by the City in an excel worksheet at least two days before the design review meeting.

- 95% design review meeting – up to two (2) Consultant employees shall meet with City design staff for up to one (1) hour at the City's offices to discuss plan review comments. This meeting shall take place following the delivery of the 95% PS&E Package and a two week review period. Review comments shall be provided by the City in an excel worksheet at least two days before the design review meeting.
- Pre-bid meeting – up to two (2) Consultant employees shall meet with City design staff and potential bidders for up to one (1) hour at the City's offices to discuss the project bid.
- Project Coordination Phone Calls – Consultant project manager shall participate in bi-monthly 30 minute project coordination calls, on an as needed basis, for up to seven (7) months.

Deliverables

- Meeting agendas will be delivered electronically 48 hours prior to each meeting
- Meeting minutes will be delivered electronically within one (1) week of meeting date

Subtask 1.3 Public Meetings

Consultant Project Manager shall attend and participate in meetings including public information and city council meetings. Consultant will prepare for and assist the city in presenting materials related to the project and will coordinate with the city to work public feedback into the design decision log

Assumptions

- Consultant Project Manager shall attend up to one (1) public meeting and one (1) city council meeting. Each meeting is assumed to occur within 5 miles of the project site or city offices. Each meeting is anticipated to last up to two (2) hours.
- Consultant has assumed effort associated with preparing slides for one meeting and assisting the city in responding to questions. No allowance for formal presentations or preparation are included in the scope.

Deliverables

- None

Subtask 1.4 Provide Exhibits, Maps and Figures

Prepare draft and final graphic materials to support the public involvement process. Work shall include the design, production, and printing of materials for up to three public meetings.

Assumptions

- Up to three (3) 24x36 posters mounted and laminated on foam core board
- Request for meeting materials shall occur a minimum of three weeks prior to each public meeting
- Review of Draft Materials shall be completed by the district within 24 hours of receipt
- Prepare up to 6 PowerPoint slides for the City Council meeting.

Deliverables

- Draft and Final Meeting Materials

Schedule

- Draft meeting materials shall be provided to the district electronically five (5) days prior to each public meeting
- Final meeting materials shall be delivered to the district one (1) hour prior to each public meeting

Task 2 Survey

Provide labor, equipment and materials to complete the surveying needs for the project. Surveying on this project includes establishing a control network, performing topographic mapping within the defined topographic limits, and filing a Pre-Construction Survey with the Washington County Surveyors Office.

All deliverables must be reviewed and stamped by Consultant's Professional Surveyor (PLS) registered in the State of Oregon.

The limits of topographic surveying and right-of-way resolution for this project are as follows:

- Myslony Street from center line 60 feet northerly and 60 feet southerly, from a point 100 feet easterly of the intersection of Myslony Street and 118th Avenue east to a point 300 feet east of the intersection of Myslony Street and 112th Avenue.

Subtask 2.1 Horizontal and Vertical Control

Establish horizontal and vertical survey control for the project using the Oregon Coordinate Reference System (OCRS) Portland Zone, NAD 83(2011) Epoch 2010. International Survey Feet units will be used. The vertical datum for this project will be NAVD 88 Datum.

Deliverables

- ASCII File containing the OCRS coordinates for all network control points.
- One scanned copy of the original field notes in *.pdf format.
- Washington County Benchmark datasheets for benchmarks used.

Subtask 2.2 Pre-Construction Record of Survey

Perform right-of-way research (surveys, plats, deeds, etc.) to locate existing monuments and to resolve existing roadway centerlines and right-of-way lines within the project limits.

Obtain Lot Book Reports for each of the properties adjoining Myslony Street. Perform a field survey of existing monuments subject to disturbance by the project or needed to resolve existing right-of-way lines. If the initial search is inconclusive, a second search will be made utilizing coordinates calculated from nearby found monuments and/or additional measurements. Survey at least one Public Land Survey System (PLSS) corner tie for ROW descriptions and future filing of the survey.

Resolve the existing centerline and right-of-way lines for Myslony Street. Existing side street centerline and right-of-way lines will be resolved, as necessary, in the project areas. Existing property lines will not

be resolved, but will be calculated from survey and deed records, as necessary. Parcel tax lot ID numbers, owner names, property addresses (if applicable), existing property lines (entire property), and existing right-of-way lines will be compiled on a right-of-way map.

Prepare a pre-construction record of survey to show the existing centerlines and right-of-way lines as resolved in Task 2.2 to document the factors pertaining to this resolution, and to show control established in Task 2.1. This survey will also dimension the location of all monuments located in Task 2.2 that may be disturbed by construction. This survey will conform to ORS 209.155 and ORS 209.250. The units will be in International Feet. File the record of survey with the Washington County Surveyors Office.

Assumptions:

- Seven existing properties adjoin the project limits.

Deliverables

- Pre-Construction Record of Survey, in Microstation (version to be determined by client) compatible format, to be filed with the Washington County Surveyors Office.
- One scanned copy of the original field notes in *.pdf format.
- One pdf file for each of the 9 Lot Book Reports.

Subtask 2.3 Topographic Survey and Base Mapping

Prepare and submit survey notification letter to the City Project Manager for review. Distribute approved letter by mail to distribution list provided by Washington County, if requested.

Coordinate and attend a pre-survey meeting with City engineering and survey staff.

Provide all labor, equipment, and materials to perform a topographic survey for the project. Tie all topographic features, man-made or natural within the topographic survey limits described in this SOW. This will include, but not be limited to, edge of pavement, curb, existing utilities, fences, lights, wells, storm drainage structures, culverts, roof drains, valves, landscaping, driveways, fences, buildings, walks, signs, and striping. Any other affected utilities or features will be tied as required for design. Locate all trees, including size and species of trees 6 inches (DBH) or greater. Tie grade breaks to create an accurate terrain model.

Gather the field data necessary to show utility locations in the base mapping for roadway design. Request underground utilities to be marked in the field within the topographic survey limits as identified above. Use the statewide utility notification system (OUNC) to submit a pre-survey locate request. Record in the field notes the utility ownerships. All storm and sewer manholes, cleanouts and inlets invert elevations will be measured and recorded. Elevations will be recorded on rims of manholes and inlets. Invert elevations of culverts will be obtained as well as size and material type.

Measure the elevation of the lowest wires that cross street or road intersections on all overhead utilities within the topographic survey limits.

Tie wetland delineation and geotechnical borings and show them in the survey base map.

Reduce field survey data and prepare a topographic base map compatible with Microstation (version to be determined by client), with 1 foot minor and 5 feet major contour intervals. A Civil 3D Triangular Irregular Network (TIN) Digital Terrain Model (DTM) in LandXML format will be created using a combination of survey data including breaklines, features, and spot elevations.

Deliverables

- Survey Notification Letter.
- 1"=50' scale topographic survey Base map in Microstation compatible Format
- DTM compatible with Inroads XM
- OUNC locate request
- Copy of original survey field notes

Subtask 2.4 Right of Way Descriptions, Exhibits and Right-of-Way Staking

Prepare legal descriptions for all right-of-way and easement acquisitions required to construct the roadway improvements, including permanent drainage, water quality, slope, and temporary construction easements.

Prepare exhibits for all right-of-way and easement acquisitions required to construct the roadway improvements.

Prepare and update a spreadsheet to track the legal description submittals and revisions and provide to the City.

Develop right-of-way base map showing existing and proposed right-of-way line and permanent and temporary easement lines. Scale of the map will be 1" = 50'. Show map and tax lot number, site address number, owner, and file number for each parcel.

Stake proposed and existing right-of-way and easements for appraisal and acquisition process as requested by the City within two weeks of authorization to proceed from the City.

Assumptions

- A total of two (2) files are assumed
- Right of way will be staked one time for each file.

Deliverables

- Legal descriptions and exhibits for right-of-way and easements. Due 6 weeks after the City has accepted the design.
- Tracking spreadsheet for legal descriptions and exhibits. Due 6 weeks after the City has accepted the design.
- Appraisal stakes for the right-of-way and easements. Due 3 weeks after the City gives authorization.
- Right-of-Way Map base map – Microstation compatible format. Due 8 weeks after the City has accepted the design.

Task 3 Environmental Documentation and Permits

Provide the City with professional consultation services to complete the environmental compliance documentation for the proposed Myslony Bridge project in Tualatin, OR. All necessary city permits, including tree removal permits, are assumed to be completed by the City.

Subtask 3.1 Review Data and On-going Communication

Consultant Environmental Specialist shall obtain and review existing information. Coordinate and communicate with City regarding environmental tasks and assumptions, verify schedule, and estimate impacts of proposed alternatives. Participate in two (2) environmental meetings for the Project including an environmental kick-off meeting with the City and Project Team to discuss Project design; potential areas of impacts; and avoidance, minimization, and conservation measures.

Consult with the City, NMFS, USFWS, and ODFW to obtain the most current information on the presence of all proposed, threatened and endangered species.

Summarize the information review results, progress of environmental tasks, and estimated project impacts in the environmental section of the preliminary report.

Assumptions

- City will assist in obtaining any existing background information prepared for the project

Deliverables

- Provide a summary of the information collected in this task as part of Task 13.1, Preliminary Design Report.

Subtask 3.2 Wetland Delineation Field Work

Complete a wetland field delineation and OHWM demarcation for the project study area (PSA). The PSA is defined as the area within existing City right of way along the proposed Myslony extension alignment between 112th Avenue in the east and the existing SW Myslony Road limits in the west. Right of way varies in width from 46.5 feet to 74 feet. Use available data (including but not limited to: soil surveys, aerial photos, National Wetland Inventory maps) as well as data gathered in the field to document the presence or absence of wetlands within the project study area. Consultant shall:

- Place flags in the field to show wetland and upland sample plot locations and the wetland boundaries.
- Place flags in the field to show the OHWM elevation of all jurisdictional surface waters. Assess the OHWM elevation using accepted field indicators within 50 feet upstream and downstream of the PSA. The two (2) year flood event elevation (calculated) may be used in the absence of field indicators.
- Appropriately label and number the flags to identify their function and prepare sketch maps of approximate wetland boundaries with numbering of flags or stakes to be provided prior to site surveys for Project base mapping.
- Determine the average active channel width (ACW) for inclusion in the subsequent permitting documentation tasks.

Consultant shall determine wetland/waters boundaries in accordance with the criteria and methods described in the 1987 Corps of Engineers Wetland Delineation Manual (Environmental Laboratory Technical Report Y-87-1) and appropriate Regional Supplements. Consultant shall compile delineation data onto the standard Wetland Delineation Data Sheets for inclusion in the Task 3.3 deliverables.

Assumptions

- Rights-of-entry for completing all necessary field work will be obtained by the City prior to wetland field work.
- Place wetland/waters flagging in the field
- The project can be designed to avoid wetland impacts. If impacts are necessary, Contingency Task 3.10 will need to be released.

Deliverables

- Flag the boundaries of wetlands and waters inside the Project Study Area.
- Wetland Delineation Data Sheets for inclusion in the Task 3.3 deliverables.

Schedule

Field work will be completed within three (3) weeks of receiving NTP or whenever ROEs for affected properties are received. Data sheets will be prepared within one (1) week of field work completion.

Subtask 3.3 Clean Water Services (CWS) Site Assessment

Prepare a CWS Standard Site Assessment Report to obtain a Service Provider Letter for the Project. The CWS Standard Site Assessment Report shall outline the result of the field evaluation and document the Project's compliance with the current CWS Design and Construction Standards (R&O 07-20) Chapter 3. The CWS Standard Site Assessment Report will require, at a minimum, the following information and documentation:

- Review and analysis of all data obtained during Task 3.1.
- Assessment of the vegetated corridors within the PSA
- Analysis of R&O 07-20 criteria and applicability to the proposed development.
- Completion of the Sensitive Areas Certification Form.
- Preparation of the Standard Site Assessment Report, to include:
 - A description of the PSA and adjacent properties, including a discussion of any off-site wetlands and waters.
 - A discussion of the existing vegetated corridor width, plant communities identified, and the overall condition of the vegetated corridor area.
 - A brief discussion of the proposed Project and the buffer enhancement opportunities identified during Task 3.1 field work.
 - Copies of all required site figures including a Project Vicinity Map, and the Existing Conditions, Proposed Development, and Final Conditions Figures (if necessary).
 - Copies of all completed data sheets prepared under Task 3.2 (if necessary).
 - A color photographic record documenting existing site conditions.

Once submitted, the Consultant shall track the application and respond to CWS requests for additional information in a timely manner.

Assumptions

- CWS will not require any on-site visits or personal meetings. All follow-up communication will be accomplished through telephone and/or email correspondence.
- All Service Provider Letter fees are the responsibility of the City.

Deliverables

- One (1) draft Standard Site Assessment in Word format electronically via email
- One (1) final Standard Site Assessment as a hard copy

Schedule

The draft Standard Site Assessment will be provided to the City within three (3) weeks following acceptance of the Preliminary Design. The final version will be provided within three (3) weeks following receipt of City comments on draft.

(Contingency) Subtask 3.4 Joint Permit Application

Prepare a Joint Permit Application (JPA) and Functional Assessment for a USACE Section 404 Nationwide Permit, DEQ Section 401 Water Quality Certification and a DSL General Permit (GP), to authorize work within jurisdictional waters and wetlands within the PSA.

Provide pre-submittal coordination with representatives of the USACE and DSL to confirm permitting requirements and application procedures. If necessary, conduct a pre-application meeting at the offices of the ACOE and DSL (or on-site) to review the Project plans and to assess initial Agency comments on the Project. Prepare drawings, maps, photographs, project descriptions, and additional information for

inclusion in the JPA. Provide engineering plans, concept drawings, site plan details, and project description information as required to quantify and document wetland and waters impacts for the JPA. Prepare permitting documents for City signature and shall submit required application materials directly to Agencies.

Address comments and questions from the DSL, USACE, DEQ, and NMFS to facilitate the permitting process.

Assumptions

- City is responsible for obtaining City Land Use Department signatures on the permit application
- One round of revisions to the JPA based on City comments.
- The potential wetland and water impacts will be minimal and will be authorized according to the Nationwide Permit Program administered by the USACE and a General Permit issued by the DSL. This scope of work does not include preparation for an Individual Permit (IP) application to the USACE or DSL.
- Due to the varied nature of post-submittal coordination, Consultant time is limited to 8 hours of office review and coordination time for post-submittal coordination.
- Geotechnical drilling will not be required below jurisdictional waters or wetlands.
- Wetland mitigation will be satisfied by buying credits at a wetland mitigation bank.
- City will be responsible for payment of mitigation payment and DSL submittal fees.
- Consultant's best professional judgment, based upon the functions and values presented in the Judgmental Method in the Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites, will be used for evaluating wetlands within the project study area (PSA).

Deliverables

- Draft and final JPA.
- Wetland Functional Assessment

Schedule

The draft JPA will be submitted to City for review within two (2) weeks of receiving approval of Preliminary Design.

(Contingency) Subtask 3.5 ESA Compliance Documentation

Consultant shall use the US Army Corps of Engineers (USACE) SLOPES programmatic biological opinion (BO) to evaluate the effects of the project on Endangered Species Act (ESA) listed fish species that may be impacted by the project. Prepare programmatic SLOPES V documentation to obtain the Section 404 permit from the USACE. Coordinate with the USACE, the National Marine Fisheries Service (NMFS), Oregon Department of State Lands (DSL), Oregon Department of Fish and Wildlife (ODFW), and Oregon Department of Environmental Quality (DEQ) to obtain the information required by the USACE and NMFS to complete the programmatic documentation. It is anticipated that one on-site visit with NMFS and the USACE will be required for this task.

Assumptions

- While new bridges are typically not covered, NMFS will allow the use of SLOPES for the proposed bridge. The project will meet all other programmatic biological opinion conditions thus requiring no compensatory mitigation.
- Project will not require geotechnical drilling within wetlands or waters.
- ESA/SLOPES mitigation design and coordination is excluded from this scope.

Deliverables

- Draft and final programmatic BO documentation.

Schedule

Programmatic BO documentation will be submitted with Task 3.4

(Contingency) Subtask 3.6 ODFW Fish Passage Plan

Evaluate fish passage through the new bridge according to ODFW criteria and prepare one (1) ODFW Fish Passage Plan. The Fish Passage Plan must identify and address ODFW fish passage concerns and requirements per the ODFW Fish Passage Plan form. Coordinate with ODFW and obtain their concurrence/approval.

Assumptions

- The new bridge will be designed to meet all the terms and conditions of Oregon Fish Passage Law.
- Approval will not require mitigation.
- On-site meetings will not be required.

Deliverables

- Draft and Final ODWF Fish Passage Plan in electronic format.

Schedule

The Fish Passage Plan will be submitted with Task 3.4.

Subtask 3.7 NPDES 1200-C Permit Application

Provide pre-submittal coordination with representatives of the Oregon Department of Environmental Quality (DEQ) and CWS to confirm permitting requirements and application procedures. Consultant coordination shall include correspondence in the form of telephone calls, e-mail, letters, and memos to document permit needs. Assemble permit application materials including the application forms, plans, drawings, memos, details, and specifications to support the permit application. Provide support to the City in order to successfully transfer the 1200-C permit to the eventual construction contractor.

Assumptions

- The DEQ application fee will be paid by the City.
- The City will be listed as applicant on the 1200-C application.
- The 1200-C Permit will be transferred to the eventual construction contractor.

Deliverables

- 1200-C Permit Application

Schedule

The 1200-C Permit Application will be submitted to the City for review and approval within two (2) weeks of receiving the CWS Service Provider Letter.

Subtask 3.8 Archaeological Phase I Survey and Technical Letter Report

Literature Search - Conduct research at the Oregon State Historic Preservation Office (SHPO), and shall review General Land Office maps and other records archives as available for known prehistoric and historical archaeological resources for the road project.

Visual Archaeological Field Survey - Consultant's archaeologist shall conduct a visual pedestrian survey of the project area by systematically walking the Area of Potential Impact (API) looking for evidence of prehistoric use and early historic use. Use the results of the literature search to focus the search for prehistoric and historic remains. The surveys must include all areas to be affected by the Project, including any potential detours and staging areas. Areas of high and low probability for archaeological sites must be identified during the surveys. Report - Summarize findings in an archaeological resources letter report. The findings of the records review and field surveys, the description of the API, the Project description and the absence or need for any further work such as site protection measures or avoidance areas shall be addressed. Prepare the report in a format acceptable to the City and SHPO.

Assumptions

- No subsurface probes are anticipated at this time, pending the results of the field survey.

Deliverables

- Provide City with an electronic copy (Word format) of draft report for review no later than ten (10) weeks following NTP for this WOC.
- Provide City with an electronic copy (Word format) of the final report no later than fourteen (14) calendar days following receipt of comments on the draft report from City.
- Submit the report to SHPO for review and concurrence on behalf of the City upon approval.

(Contingency) Subtask 3.9 Historic Research and Baseline Report

Prepare a Historic Resources Baseline Report (HRBR) for the project area. Conduct research at the SHPO and with other records for known historic resources and for Project background information. Survey historic-age properties (greater than 50 years of age) adjacent to the proposed Project that may be affected and shall make recommendations for any additional work. Include listed and potentially eligible structures and features in the baseline report and shall make a preliminary determination whether any newly identified or updated properties are potentially eligible for listing in the National Register of Historic Places.

Deliverables

- Submit one (1) Draft HRBR electronically in Word format to City no later than ten (10) weeks following NTP for this WOC.
- Submit one (1) Final HRBR electronically in PDF format to City no later than fourteen (14) calendar days following receipt of comments from Agency and County.

- Submit the report to SHPO for review and concurrence on behalf of the City upon approval.

(Contingency) Subtask 3.10 Wetland/Waters Delineation Report

If wetlands are present within the Project site that will be impacted, it will be necessary to prepare a Wetland/Waters of the U.S. Delineation Report (Wetland Delineation Report) in accordance with DSL standards. Include a description of all site-specific methodologies utilized to demarcate the resource boundaries, and a copy of all wetland data sheets. Prepare appropriate graphics to accompany the report and shall include a site location map, local wetland inventory ("LWI") map, soil survey map, and representative photographs. Consultant's Wetland Delineation Report shall also include wetland delineation boundary mapping (figures) as finalized by Consultant. Complete the appropriate DSL cover page for submitting the Wetland Delineation Report to the DSL for review and approval.

Attend one post submittal site visit with representatives of DSL following submittal of the wetland delineation report. The post submittal site visit with DSL will not exceed six (6) hours including travel time, site visit, coordination, and follow-up. Supply additional information, as required, to DSL and USACE following submittal of the Wetland Delineation Report. Additional information requests will not exceed six (6) hours of Consultant's time.

Assumptions

- DSL will require a fee for review of the Wetland Delineation Report. City is responsible for payment of this fee.
- City will review the Draft Wetland Delineation Report and provide comments to Consultant within two (2) weeks of receipt of the draft.

Deliverables

- Draft and Final Wetland Delineation Report.

Schedule

The Draft Wetland Delineation Report will be completed within three (3) weeks following release of this Contingency Task.

Task 4 Utility Location and Coordination

Coordinate design effort with city regarding utility coordination. City will perform all utility coordination tasks including, identify any conflicts or impacts associated with construction of the Project and coordinate utility relocations.

Subtask 4.1 Review Data and On-going Coordination

Provide city with necessary design documents to facilitate utility coordination. Communicate with city regarding ongoing utility coordination efforts

Assumptions

- Up to one (1) utility may be present within the Project area.

Deliverables

- None

Schedule

Copies of communication record must be provided to Agency or City within three (3) days of request.

Subtask 4.2 Utility Coordination Meetings

Schedule, attend and document on-site meetings with potentially affected utilities. Consultant attendance at a maximum of one (1) site meetings is anticipated.

Assumptions

- No utility kickoff meeting will be required

Deliverables

- Written meeting summary or minutes

Schedule

Meeting minutes shall be made available to City within three (3) days of request.

Task 5 Right of Way

Provide labor, equipment and materials to research the needed properties.

The right of way activities shall conform to the standards contained in the Uniform Act of 1970 and amendments, Oregon State Laws and City of Tualatin administrative rules for right of way acquisition services.

Assumptions

- Right of way acquisitions will be required from two properties

There is one personal property relocation. The business, if any, is assumed not displaced at this site.

- The City will pre-approve all real estate forms used on this project prior to use by the consultant.
- The City will approve and authorize all offers to the property owner before consultant makes any offer. Settlement offers must be pre-approved by the City.

Universal Field Services's (UFS) project manager will be the main contact for the project right of way acquisition activities and will:

- Coordinate with their subconsultant appraisers for the appraisal and appraisal review work.
- Assign right of acquisitions and oversee the agents working on the project.
- Attend a kick-off meeting and up to three additional in-person project meetings with the City.
- Attend conference call meetings with the City as requested.
- Track the budget and project schedule.
- Provide monthly tracking reports of parcel status.

QA/QC will be provided by the UFS Regional Manager who will also be responsible for any contracting issues.

Subtask 5.1 Order Title Report

Be responsible for ordering and payment of preliminary title reports as needed. Title reports will be reviewed for encumbrances and UFS will coordinate with the City on which items will be required to be cleared prior to settling with the property owner.

Deliverables

- Preliminary Title Reports for four properties adjacent to existing project ROW

Subtask 5.2 Appraisal and Appraisal Reviews

The appraisal will fully meet accepted professional appraisal standards and will conform to the Oregon Law and the requirements of the Uniform Standards of Appraisal Practices.

An appraisal report shall be prepared for each parcel and shall include, at the minimum, the following information:

- The property owner shall be contacted and offered the opportunity to accompany the appraiser during the inspection of the property and shall be provided a 15 day notice as required by Oregon law.
- The purpose and function of the appraisal, including limiting factors and conditions.
- Description of the physical characteristics of the property being acquired in addition to the highest and best use of property.
- A discussion of all relevant and reliable approaches to value. In most cases this will necessitate the use of the sales comparison approach only.
- A description of comparable sales relied on in the determination of value.
- A statement of the value of the property rights to be acquired, including damages to the remainder.

An appraisal review will be completed for each acquisition. The appraisal review shall include a check of all mathematical calculations and a determination that all relevant and appropriate appraisal methodologies have been employed. The reviewed appraisal shall be forwarded to the City for the purpose of establishing the amount of just compensation in accordance with Federal and State laws. The amount of just compensation shall not be less than the approved appraisal.

Assumptions

- No Fixture and Equipment or Specialty Appraisal will be required.

Deliverables

- Two Appraisals
- Two Appraisal Reviews, if required

Subtask 5.3 Acquisition

Conduct negotiations, on behalf of the City, for right-of-way acquisition in accordance with the City policies and Oregon laws. Property owners will be met in person and presented offers if at all possible. If owners are out of the area, the offer will be mailed certified. The owners will be presented with written offers, copies of all documents to be signed and an explanation of the valuation information.

Provide all notifications and documents accordingly and will keep complete files to be delivered to the City for recording and payment.

UFS will:

- Send Project Information Letter to owners on the project.
- Prepare documents and deeds for the offer package.
- Make all written offers in person if feasible. Out of town owners will have offers sent certified mail.
- Provide justification for any increase in settlement above the approved offer amount.
- Prepare administrative settlement letters for the City.
- Transmit completed files to the City.

Assumptions

- City will provide approved acquisition documents or approve samples provided by UFS

Deliverables

- Two completed files (Files include: All correspondence, offer letters, agreements, legal documents, diary of negotiator contacts with property owners and tenants)

Subtask 5.4 Relocation

Provide relocation advisory services to all displaced persons/businesses on the project. Consultant will provide relocation services on behalf of the City in accordance with City policies, Oregon law and The Federal Uniform Act. A relocation assistance program involves providing advisory and financial assistance to all displacees. The needs of each displacee will be thoroughly evaluated in order to determine the appropriate level of benefits.

Prepare a Relocation Plan that conforms to the Uniform Act and the City Policies and Procedures. The Relocation Plan will include:

- An in-depth analysis of displacement site and personal property located within the area of acquisition. Depending on building impacts additional displacement area may be considered. Meet with and interview the displacees at the site
- Advisory assistance will be provided to the displacees throughout the project which includes recommendations and coordination with services that may be necessary.
- Prepare and deliver the following notices: General Information Notices, Notices of Eligibility, 90-Day Notice to Vacate, and other required notices.
- Establish the eligibility of each displacee and make a determination of relocation benefits.
- Prepare all necessary claim forms required for the moving payment to be signed by the displacee and submitted to the City for approval. When payment checks are available, deliver them to the displacee, if requested.
- When necessary, assist the displacees in obtaining moving cost estimates.

- An individual file will be maintained for each displacee throughout the relocation process. Once the project is complete, the files will be turned over to the City.

Assumptions

- There is one personal property relocation to be completed.

Deliverables

- One completed relocation files (Files include: All correspondence, notices and claim forms)

Subtask 5.5 Closing and Certification

Review the preliminary title report and identify issues with the title that need to be cleared at the start of the project. Once negotiations with the property owner have been completed and acquisition documents have been signed, the closing process will be completed. This process will be carefully coordinated with the Title Company that will handle all title/closing services. We will coordinate the following activities to ensure that closings occur in a timely manner:

- Remove unacceptable exceptions and/or encumbrances and obtain title policies
- Review closing statements and obtain City signatures and approvals
- Complete the assembly of each individual parcel file
- Provide certification advisory services, as needed
- Prepare each individual parcel file and submit it for the City's approval

UFS will prepare completed files for certification to the standards of the City. A certification memo will be provided.

Deliverables

- Final Certification Memo

Task 6 Geotechnical Investigation

Review existing geotechnical field investigations performed during pre-design to perform a preliminary evaluation of liquefaction and to evaluate different foundation types. In order to meet the project schedule, the preliminary evaluation will be performed concurrently with our field investigation program. We will supplement the existing geotechnical explorations performed during preliminary design to provide information for subsurface conditions of the proposed bridge foundations, abutment walls, roadway extension, and to evaluate site-specific seismic hazards.

Perform the preliminary geotechnical design in accordance with the AASHTO LRFD Bridge Design Specifications (2014) and the ODOT Geotechnical Design Manual (2014).

Subtask 6.1 Data Review and Preliminary Evaluation

Review available existing information to evaluate the geologic and subsurface conditions. Review available information from the following sources (as applicable) and perform the following analyses:

- Existing published literature and the previous geotechnical reports from federal, city, county, or other officials, Consultants, groups, or individuals pertinent to the project;
- Perform preliminary site-specific seismic hazard evaluations using existing information. The preliminary evaluations will include ground motion, liquefaction, liquefaction-induced settlement, lateral spreading and slope stability.
- Perform a preliminary bridge foundation design analysis of 24 inch diameter pipe piles and small diameter drilled shafts. Evaluation shall include the axial capacity analysis, and providing L-Pile parameters for the bridge structural design.

Deliverables

- Pertinent available existing information will be presented in a draft Technical Memorandum and finalized in Subtask 6.6 Geotechnical Report.

Subtask 6.2 Field Exploration and Analysis

Site Reconnaissance: Conduct a reconnaissance of the site. Identify the geologic conditions at the project site, any geologic hazards present, and their impacts to the proposed project elements. Locate the borings in the field during the reconnaissance.

The site reconnaissance shall include the following work:

- Observe surface conditions indicative of subsurface conditions as well as past or ongoing geologic processes (e.g., areas of seeps or springs, erosion, unstable slopes, shallow groundwater, roadway settlement, offsets and depressions, existing earthwork performance, exposed soil and bedrock units).
- Identify site constraints, staging concerns (for exploration and construction), and environmental issues (including wetland locations).
- Identify potential exploration locations.

Field Exploration Work Plan: Prior to beginning the field explorations, the Prepare a Field Testing Work Plan showing the proposed exploration locations and outlining the drilling and sampling procedures, preliminary laboratory testing plan, and the traffic control plans for borings located in the roadway. No fieldwork is to be performed, other than initial site reconnaissance, until the work plan is reviewed and approved by the City of Tualatin.

Develop a Field Safety Plan (FSP) for fieldwork and Traffic Control Plans (TCPs), if needed, for borings located in the roadway. Both the FSP and TCPs shall be submitted to the City prior to the start of investigation work. The Traffic Control Plans must address single lane closures for activities associated with drilling exploratory borings from the roadway surface and pavement restoration.

Field Explorations: Perform geotechnical field explorations to determine the subsurface conditions for the express purpose of characterizing subsurface conditions within the project limits and determining the foundation recommendations for the bridge, abutment wall, and as well as earthwork. Perform exploration work in accordance with all Federal, State, and Local regulations. Perform the subsurface exploration work in conformance with the FTWP as described in Task 2. The field exploration program is

estimated to consist of two (2) borings. Anticipated boring locations include one boring on the west side of the bridge for use in foundation design, and static and seismically induced liquefaction settlement analyses, and one boring on the east side of the bridge to confirm the depth of soft soils. Specific information regarding the borings is shown below in Table 1, Boring Summary.

Table 1: Boring Summary

Boring	Locations	Purpose	Anticipated Depth (feet)	Rig Type	Traffic Control
B-5	West Approach	Static Settlement & Seismic Hazard Evaluation	100	Track/Truck	single lane closure
B-6	East Approach	Static Settlement & Seismic Hazard Evaluation	35	Track	none

Provide an engineer or geologist to supervise the field operations and log the borings. Subsurface explorations shall be conducted in general accordance with the ODOT GDM chapter 3. Soil samples shall be obtained at 2.5-foot to 5-foot intervals using either a standard penetration sampler or a Shelby tube sampler. The depth to groundwater will be measured if observed during drilling.

Assumptions:

- Borings scheduled for daytime work (see Table 1 above) will be drilled on week days, between the times of 7:00 a.m. and 6:00 p.m.
- Temporary traffic control (single lane closures) will be required only for the borings indicated above in Table 1.
- A right-of-way permit from the City of Tualatin will be obtained prior to beginning the drilling.
- Truck-mounted or track-mounted drill rigs will be used to complete the work, as indicated above in Table 1. Borings assumed to be accessed using a track-mounted rig drilling may be drilled using a truck-mounted drill rig if conditions allow. Borings accessible by truck may also be drilled using a track-rig to reduce mobilization costs.
- The subsurface material is not contaminated and no testing will be performed to investigate the possible presence of toxic or hazardous materials and petroleum products and the cuttings can be let on-site.
- The borings will be abandoned and backfilled according to OWRD regulations.
- All boring through pavement will be patched with cold patch asphalt emulsion, or quick set PCC as appropriate.
- No wells or instrumentation of any kind will be installed in the boreholes.

Deliverables:

- One (1) electronic copy in MS Word format of the Field Testing Work Plan (FTWP), including ESP and TCPs, to the County at least five (5) business days prior to beginning field work.
- Logs and locations of explorations shall be included in Subtask 6.6, Geotechnical Report.

Subtask 6.3 Laboratory Testing

Perform laboratory tests on disturbed and undisturbed samples obtained from the explorations to characterize the subsurface materials, develop engineering soil parameters, to assist with determining engineering geologic unit boundaries, and to check field soil identification and description of the materials encountered. The laboratory testing program shall consist of some or all of the following tests:

- Up to 10 natural moisture content determinations (ASTM D2216);
- Up to 3 fines content determinations (ASTM D1140);
- Up to 2 unconfined compressive strength tests of soil or rock (ASTM D2166 or ASTM 7012)
- Up to 2 organic content tests (ASTM D2974)
- Up to 2 plasticity index determinations (ASTM D4318);
- One consolidation tests (ASTM D2435); and
- One corrosivity suite.

Deliverables

- Laboratory testing results shall be included in Subtask 6.6, Geotechnical Report.

Subtask 6.4 Geotechnical Engineering Analysis and Report

Perform geotechnical analysis to confirm or refine the results of the preliminary geotechnical study, and provide final geotechnical design recommendations and construction considerations for the Project. The engineering evaluations and analysis must be performed in accordance with the AASHTO LRFD Bridge Design Specifications (2014) and the ODOT Geotechnical Design Manual (November 2014). Prepare a preliminary Geotechnical Report according to the ODOT Geotechnical Design Manual. An evaluation of alternative foundation systems must be included to document the reasoning behind the preferred foundation type. The analysis and report must:

- Provide recommendations for earthwork including site preparation, excavation, cut and fill slopes, structural fill material, fill placement, compaction, and wet weather construction.
- Provide a settlement analysis and provide options for mitigating excessive settlement at the bridge approaching embankment.
- Update the preliminary site-specific seismic hazard evaluation, including the peak horizontal acceleration for 475-year and 975-year return period ground motions, and hazards at each bridge abutment and retaining wall due to potential liquefaction and lateral spreading.
- Provide final recommendations for the new Bridge foundations including:
 - Evaluating 24-inch diameter driven piles, and small-diameter drilled shaft foundation options.
 - Providing design recommendations for the selected preferred foundation option, including: the strength limit and service limit state axial resistance of deep foundations, soil lateral resistance parameters for deep foundations, strength limit and service limit state nominal bearing resistance and sliding coefficients for shallow foundations, and resistance factors for all proposed foundation types.
 - Evaluating constructability of the Bridge foundations.
 - Providing L-Pile parameters for use in lateral pile analysis.
- Provide recommendations for retaining walls and embankments including:
 - Evaluating retaining wall types;

- Evaluating lateral earth pressures, nominal factored bearing resistances and estimated settlement for retaining walls.
- Appropriate cut-and-fill slopes, global stability, and estimated settlement for embankments.
- Geotechnical related construction considerations for shoring and staging.
- Summarize geotechnical design and construction recommendations, including providing the geotechnical capacity of the preferred foundation type and L-Pile parameters for use in lateral pile analysis.
- Summarize laboratory testing and test results.
- Summarize the results of the geotechnical engineering evaluation and design.
- Consultant shall prepare up to one (1) Foundation Data Sheet (FDS) based on the base map developed for the Project. A draft Foundation Data Sheet must be submitted for review with the draft Geotechnical Report. The Foundation Data Sheet must be finalized following review by the City.

Deliverables

- Consultant shall provide one (1) electronic copy (PDF) of the Draft Geotechnical Report to the City for review. Due six (6) weeks after completion of borings

(RESERVED) Subtask 6.5 Pavement Analysis and Design

At the direction of the city, pavement design previously completed by the city will be used for the roadway design. Subtask 6.6 Review of Plans and Specifications

Review geotechnical-related plans and special provisions to confirm that the design plans and specifications are consistent with the geotechnical recommendations presented in the final geotechnical and pavement design report.

Task 7 Hydraulic and Stormwater Studies

Subtask 7.1 Hydraulic Analysis and Report

Provide a hydraulic analysis for the Project site. Perform the following tasks for the bridge replacement site as necessary to complete the preparation of the Hydraulic deliverables.

Review Existing Data/Site Inspection

Obtain and review all available data related to hydraulics at the Project site. Visit and inspect the Project site. Assess stream channel, scour conditions, identify sections for the hydraulic model, and estimate hydraulic model parameters. Review existing soil conditions, existing drainage patterns, and potential locations for storm water infiltration and drainage conditions for stormwater runoff analysis and stormwater management report to be prepared under Task 9.2.

Hydraulic Analysis

Develop the 2-year, 10-year, 50-year, 100-year and 500-year flows in the vicinity of the replacement bridge. Develop one (1) site specific hydraulic model for the Project. The site specific hydraulic model

must contain two (2) conveyance alternatives: (1) the "natural" channel, and (2) a new replacement single span bridge.

Scour Analysis and Riprap Sizing

Perform scour analyses for the hydraulic conditions resulting from the design alternative in accordance with the current *ODOT Hydraulics Manual*. The analysis will include combinations of scour types to determine what scour potential exists. Using Agency, HEC-18, and HEC-23 criteria, Size abutment rip rap for the bridge. Protection measures shall be included in the final design.

Summarize these findings and recommendations in a Hydraulic Report. Consultant's Hydraulic Report must include:

A description of the impacts of the recommended bridge opening on hydrology and hydraulics including design recommendations for stream bank erosion protection. One bridge cross section will be considered for hydraulics and scour analysis.

Site hydrology, flood history (if known from Project information), flood flows, velocities and water surface elevations, and summary and output from the HEC-RAS hydraulic analysis.

CONSULTANT shall:

- Determine the proposed hydraulics and flood plain elevations at the bridge replacement site.
- Summarize design flood characteristics.

Submit the Hydraulic Report with the Recommendations Memo for review by the County. Respond to review comments, and revised or amended Hydraulic Report as required.

Deliverables:

- One (1) electronic copy in PDF format of Draft Hydraulics Report to be delivered as part of the preliminary design report as described in Task 13.1.
- One (1) electronic copy in PDF Word format of Final Hydraulics Report.

Task 7.2 Stormwater Alternatives Analysis and Design

Provide stormwater analysis for runoff at the bridge replacement site as required by regulatory agencies for permitting and to satisfy City and Clean Water Services (CWS) requirements. Design the stormwater facilities according to the City standards. Prepare a stormwater management plan summarizing results of the stormwater analysis.

Calculate the flow rate and/or volume of stormwater runoff from the contributing impervious area at the bridge replacement site. Estimate the infiltration rate of *in-situ* soils, determine the quantity of stormwater runoff that infiltrates into the existing ground, and determine areas where runoff does not naturally infiltrate to direct this runoff to areas where infiltration can occur. Determine the appropriate stormwater facilities required to meet permitting standards.

Deliverables:

- A summary of the Stormwater Analysis and Design results shall be provided in the deliverables for Task 7.3

Task 7.3 - Stormwater Management Report

Prepare a draft "Preliminary Stormwater Management Report" documenting compliance with City of Wilsonville and NOAA Fisheries stormwater standards for the selected design including stormwater facility sizing and design. Stormwater analysis shall be completed using InfoSWMM. Draft Stormwater Facility Plans including facility layout, details, and landscape design shall be prepared. Piping shall be coordinated with the conveyance design.

Prepare a final Stormwater Management Report incorporating all comments received on the draft report and prepare documents for submission to the City, CWS, and other regulatory agencies.

Deliverables:

- One (1) electronic copy in PDF format of Draft Stormwater Management Report to be delivered as part of the preliminary design report as described in Task 13.1.
- One (1) electronic copy in PDF Word format of Final Stormwater Management Report.

RESERVED Task 8 Utility Design

The city will complete all design including PS&E for the new waterline. Design shall include all aspects of pipe design. OBEC shall provide the design of pipe hangers as part of the bridge design task.

Task 9 Roadway Design

Subtask 9.1 Roadway Alternatives Analysis

Investigate roadway design alternatives with regard to geometric design standards, staging issues, and environmental impacts. Investigate up to two alignment roadway alternatives during preliminary design. Design shall be for a 72' overall cross section on the east end of the bridge, a 67' wide cross section on the west side of the bridge, and a 62' wide cross section over the bridge. Design shall meet minimum AASHTO site distance requirements. Determine a preferred alternative based on constructability, access control, right of way, environmental impacts and mitigation, utilities, stormwater control, and construction cost. Evaluate the need for retaining walls to minimize adverse right of way and environmental impacts.

Deliverables

- Results of the roadway alternative investigation shall be summarized in the deliverable for Task 13.1

Subtask 9.2 Prepare 30% Roadway PS&E

Prepare preliminary roadway drawings for the preferred alternative. The roadway drawings for the preferred alternative shall be included in the 30% Plans and Estimate. The preliminary roadway drawings shall be on 11"x17" sheets and shall include:

- Title Sheet (1 sheet)
- Typical sections (2 sheets)

- Plan and profile drawings (2 sheets)
- Preliminary construction staging (2 sheets)
- Preliminary traffic control plans (2 sheets)
- Erosion control plans (2 sheets)

Deliverables

- One (1) 11" x 17" hard copy and one (1) electronic copy of preliminary roadway drawings to the City.

Schedule

- 30% Design shall be completed within 10 weeks following the preliminary design meeting

Subtask 9.3 Prepare 95% Roadway PS&E

OBEC shall prepare and submit the following plan drawings for submittal to the City for review as applicable.

- Title Sheet (1 sheet)
- Index of sheets (1 sheet)
- Typical Sections (2 sheets)
- Detail Sheets (2 sheets)
- Traffic Control Details (1 sheet)
- Traffic Control Plans (2 sheets)
- Pipe Data Sheet (1 sheet)
- Plan & Profile Sheets (4 sheets)
- Erosion Control Details (2 sheets)
- Erosion Control Plans (2 sheets)

OBEC shall perform an independent design check of drawings, specifications and quantities in conformance with OBEC's written Quality Program.

OBEC shall prepare and submit engineer's construction cost estimate of roadway construction quantities and costs for 95% Plans.

Deliverables

- 95% copies of all roadway plan sheets and estimate with 95% PS&E Package
- Quality Control documentation shall be maintained in files located at OBEC's corporate office and be available for inspection by the City upon request.
- Completed comment log addressing 30% PS&E comments

Schedule

95% Design shall be completed within 10 weeks following the 30% design meeting

Subtask 9.4 Prepare Final Roadway PS&E

OBEC shall prepare and submit the Final plan drawings as described in Task 9.3 for submittal to the City for bidding as applicable. OBEC shall perform an independent design check and Quality Control/Quality Assurance (QC/QA) review of drawings, specifications and quantities in conformance with OBEC's written Quality Program. OBEC shall prepare and submit engineer's construction cost estimate of roadway construction quantities and costs for Final Plans. OBEC shall make corrections as required following County review of 95% Plans, Estimates, and Specifications. Responses to comments shall be documented in a comment log spreadsheet.

Deliverables

- OBEC shall provide Final copies of all roadway plan sheets and estimate
- Quality Control documentation shall be maintained in files located at OBEC's corporate office and be available for inspection by the County upon request.
- OBEC shall provide a completed comment log on 95% PS&E comments

Schedule

- Final design shall be completed within 4 weeks of the 95% design review meeting

Task 10 Bridge Design

Task shall include the alternatives analysis, final design, and production of plans, specifications and estimates associated with the proposed bridge.

Subtask 10.1 Bridge Alternatives Analysis

Prepare preliminary alternatives analysis and cost estimate for the proposed bridge. The analysis shall include preliminary engineering, and feasibility and fatal flaw analysis associated with the identified bridge alternative. Analysis will include consideration of bridge type, foundation design including L-pile analysis, safety rails, and potential aesthetic enhancements. The task shall include the production of preliminary bridge plan and section drawings.

Assumptions

- Alternatives analysis shall include up to one bridge types: single-span slab Alternatives analysis shall consider up to one bridge widths associated with each superstructure type.
- Alternatives analysis shall consider up to two rail types.
- Up to one (1) 11x17 drawings will be produced in microstation to illustrate the design alternatives.

Deliverables

- Results of the Alternatives analysis shall be included in the preliminary design report

Subtask 10.2 Prepare 30% Bridge PS&E

Prepare 30% bridge plans, and cost estimate based on the direction received following the preliminary design meeting. Task shall include design, independent checking, and drafting associated with the proposed bridge.

Assumptions

- A single-span concrete slab bridge using typical ODOT detailing in accordance with the Oregon Bridge Design and Detailing Manual is assumed for level of effort.
- The total number of bridge sheets is assumed not to exceed 14 sheets
- Design shall be in accordance with City design standards, AASHTO Design Specifications, and the ODOT BDDM
- Drawings shall be half-size (11"x17") produced in microstation format to Consultant Standards
- Design shall include standard water-line hangers, and ODOT standard bridge rail design
- The following sheets are anticipated for design:
 - General Notes
 - Plan and Elevation
 - Foundation Data Sheet
 - Footing Plan
 - Deck Plan
 - Typical Section
 - Girder Elevations
 - Bent Details (2 Sheets)
 - Wingwall Details (2 Sheets)
 - Bearing Details
 - Miscellaneous Details (2 Sheets)

Deliverables

- 30% Design drawings will be delivered electronically (PDF) as part of 30% Plans and Estimate design package
- Cost estimate for bridge quantities will be included with the project estimate

Schedule

- 30% Design shall be completed within 10 weeks following the preliminary design meeting

Subtask 10.3 Prepare 95% Bridge PS&E

Prepare 95% bridge plans, specifications and cost estimate based on the direction received following the 30% design review meeting. Task shall include design, independent checking, and drafting associated with the proposed bridge.

Assumptions

- Level of effort is based on the assumption that no changes to the bridge type or cross section will be required following 30% design.
- The total number of bridge sheets is assumed not to exceed 14 sheets
- Design shall be in accordance with City design standards, AASHTO Design Specifications, and the ODOT BDDM
- Drawings shall be half-size (11"x17") produced in microstation format to Consultant Standards

Deliverables

- 95% Design drawings will be delivered electronically (PDF) as part of 95% PS&E design package

- Cost estimate for bridge quantities will be included with the project estimate

Schedule

- 95% Design shall be completed within 10 weeks following the 30% design meeting

Subtask 10.4 Prepare Final Bridge PS&E

Prepare final stamped and signed bridge plans, specifications and cost estimate. Plans and Specifications shall be signed by a qualified professional engineer licensed to practice in the state of Oregon. Final deliverables shall address all outstanding review comments to the satisfaction of the city. Submit final structural computations in a bridge calculation book, stamped by the design engineer after submittal of the signed construction plans.

Assumptions

- Level of effort is based on the assumption that no changes to the bridge type or cross section will be required following 30% design meeting.
- The total number of bridge sheets is assumed not to exceed 14 sheets
- Design shall be in accordance with City design standards, AASHTO Design Specifications, and the ODOT BDDM
- Drawings shall be half-size (11"x17") produced in microstation format to Consultant Standards

Deliverables

- One hard copy of full sized (22"x34" paper) Final Stamped Bridge Plans
- One scanned electronic .pdf copy of half size (11"x17") Final Stamped Bridge Plans

Schedule

- Final design shall be completed within 4 weeks of the 95% design review meeting

Task 11 Landscape Design

Services during each design phase including 30%, 95% and Final will include some or all of the activities required to prepare final construction documents. Plans and technical specifications shall conform to the City of Tualatin's Construction Specifications format. Plans shall be prepared using AutoCAD and converted to Microstation. Major items include the following:

- Planting plans for planting strips, vegetated stormwater facilities, and seeded areas
- Planting details
- Specifications for plantings, soil mixture
- Performance specifications for irrigation
- Engineers estimates of probable costs

Assumptions:

- There will be 420 feet of new roadway with planter strips on either side and stormwater planters along the west side of the road.
- Planting strips will include street trees, groundcovers and seeded areas.

- Planting plans will include erosion control seeding and other seeding for landscape restoration of private property from construction disturbance.
- The landscape design scope does not include the design of an irrigation system in any of the planting areas. Also not included in this scope of work are any mitigation plans or permit drawings for work in the riparian corridor.
- Assumed sheet list:
 - LS-1 Legend and notes, planting plans, details
 - LS-2 Stormwater planters, details

Subtask 11.1 Prepare 30% Landscape PS&E

Coordinate with OBEC and City of Tualatin staff on project issues including landscaping, plant selection, and other pertinent topics.

Deliverables

- Special Provisions outline
- Preliminary Engineers estimate of probable construction costs
- Plans
 - Conceptual layout, locations of landscape improvements
 - Draft planting details
 - Table of recommended plant materials

Subtask 11.2 Prepare 95% Landscape PS&E

Deliverables

- Tabulation of comments received on 30% PS&E and corresponding actions taken
- First draft of Special Provisions
- Updated Engineers estimate of probable construction costs
- Plans
 - Draft planting plans for planter strips, stormwater facilities and seeding
 - Updated planting details

Subtask 11.3 Prepare Final Landscape PS&E

Deliverables

- Tabulation of comments received on 95% PS&E and corresponding actions taken
- Final Special Provisions
- Final Engineers estimate of probable construction costs
- Final stamped drawings in PDF format
- Submit all Microstation files related to final design

(Contingency) Subtask 11.4 Irrigation Design

Irrigation design and plans shall be produced for 30%/95%/Final deliverables. Up to one additional Landscape sheet shall be produced. Technical specifications and product data will be provided for the necessary irrigation design. Utility sheets shall include locations and details for metered connections.

Deliverables

- PS&E for irrigation design shall be included as a hard copy and electronic copy for 30%/95%/ and Final deliverables

Task 12 Traffic Engineering

Subtask 12.1 Signing and Striping Alternatives Analysis

OBEC shall develop a preliminary signing and striping concept design based on City standards. The preliminary design must include discussion of signing and striping requirements, and concept design plans.

Deliverables

- Summary of preliminary signing and striping design to be included as part of the preliminary design report as described in Task 13.1

Subtask 12.2 Prepare 30% Signing and Striping PS&E

Develop the preferred alternative design to the approximate 30% level, and update the draft technical memorandum to reflect any City comments. The 30% signing and striping plans and estimate shall be included in the 30% PS&E package.

Deliverables

- One (1) 11" x 17" hard copy and one (1) electronic copy of 30% signing and striping plans included in the Roadway 30% PS&E submittal.

Subtask 12.3 Prepare 95% Signing and Striping PS&E

Develop the signing and striping design to the approximate 95% level, and update the plans to reflect any City comments. The 95% signing and striping plans, specifications, and estimate shall be included in the 95% PS&E package.

Deliverables

- One (1) 11" x 17" hard copy and one (1) electronic copy of 95% signing and striping plans, specifications and cost estimate to City included in the Roadway 95% PS&E submittal.

Subtask 12.4 Prepare Final Signing and Striping PS&E

Prepare the final signing and striping design, and update the plans to reflect any City comments. The Final signing and striping plans, specifications, and estimate shall be included in the Final PS&E package.

Deliverables

- One (1) 11" x 17" hard copy and one (1) electronic copy of Final signing and striping plans, specifications and cost estimate included in the Roadway Final PS&E submittal.

Subtask 12.5 Traffic Analysis

Using the future traffic forecast DKS developed as part of the City's Transportation System Plan (TSP), analyze the intersection of SW Myslony Street/SW 112th Avenue to determine appropriate lane

geometry and intersection traffic control. Synchro and Simtraffic traffic models will be utilized for this analysis. The traffic analysis for this intersection will not take into consideration future traffic associated with undeveloped properties adjacent to the intersection, nor will it include accommodation of a future north intersection approach. Based on the results of the analysis, DKS will summarize our recommendations in a draft technical memorandum. DKS will then prepare a final version of the memorandum incorporating City comments from the draft version.

No new traffic counts will be collected as part of this task. Future traffic volumes will be derived from the adopted City of Tualatin TSP and the SW 115th Avenue Connection Sensitivity Analysis.

Assumptions

- Future traffic volumes will be derived from the Tualatin TSP and the SW 115th Avenue Connection Sensitivity Analysis
- No new travel demand forecasting will be conducted as part of this task
- Traffic analysis will not take into consideration future traffic associated with the undeveloped properties adjacent to the Myslony/112th intersection
- Traffic analysis will not consider a future north approach to the Myslony/112th intersection
- Traffic analysis will be based on Highway Capacity Manual (HCM)

Deliverables

- Draft traffic analysis memorandum
- Final traffic analysis memorandum

Schedule

- Draft traffic analysis memo submitted within 4 weeks of NTP
- Final version of the technical memorandum submitted within 2 week of receiving comments on the draft

Subtask 12.6 Illumination Design

Provide final plans, specifications and cost estimate (PS&E) for roadway lighting between the current termination point of SW Myslony Street west of Hedges Creek and SW 112th Avenue. This will include roadway lighting along SW Myslony Street, intersection lighting (as necessary) at SW Myslony Street/SW 112th Avenue, and roadway/accent lighting on the new bridge over Hedges Creek. The City will provide the Consultant the lighting standard (including any architectural accent lighting on the bridge) to be used on both the roadway and the bridge. No alternatives evaluation for lighting will be performed under this task. DKS will conduct a lighting analysis using AGI software to determine appropriate pole locations, mounting heights and luminaire wattages to meet current Illumination Engineering Society (IES) lighting standards. Since different light standards apply to roadways versus intersections, analysis of both the new roadway section and the intersection of SW Myslony Street/SW 112th Avenue will be conducted. DKS will prepare a draft technical memorandum summarizing the results of this analysis. DKS will prepare a final version of the memorandum, which will incorporate City comments from the draft version. The following plan sheets will be prepared for final design:

- Lighting legend and light pole table (NTS) – 1 sheet
- Lighting plans (1"-20') – 1 sheet
- Lighting details (NTS) – 3 sheets

Plans and specifications will meet both City and NEC requirements. LED technology will be incorporated if possible to reduce energy and maintenance costs to the City. Coordinate with PGE for power connections.

Assumptions

- City will provide lighting standard to be used on the project
- City will provide direction for accent lighting (if any) on the bridge
- No alternative evaluation will be performed for lighting, including accent lighting on bridge
- Base mapping, including existing curbs, sidewalks, and utilities will be provided to DKS in electronic format

Deliverables

- Draft and Final lighting memorandum
- 30 percent plans and cost estimates
- 95 percent PS&E
- 100 percent stamped PS&E

Schedule

- Lighting technical memorandum submitted within 4 weeks of NTP

Task 13 Reports and Specifications

Subtask 13.1 Preliminary Design Report

Prepare and compile a preliminary design report outlining the results of the alternatives analysis. The design report will provide narrative descriptions of project concerns, design alternatives, and discipline specific design considerations. The purpose of the report is to provide the city with the information required so that the city can determine the final design concept. The preliminary design report shall include figures, cost data and graphic renderings of design alternatives.

Assumptions

- Up to 2 half page original graphics or renderings will be produced for the body of the report
- The results of all alternatives analysis and preliminary design tasks listed above will be summarized in the preliminary design report
- The preliminary design report is intended for internal city decision making purposes only and will be considered final at the time of receipt
- Any design options the city wishes to be considered for the preliminary design report will be identified at the conclusion of the project kickoff meeting

Deliverables

- The preliminary design report will be delivered electronically in .pdf format

Schedule

- The preliminary design report will be completed within 8 weeks of the project kickoff meeting

Subtask 13.2 Compile 30% Cost Estimate and Specifications Outline

Prepare and compile an estimate of construction costs broken down in standard ODOT bid items utilizing applicable unit prices. Quantities for each item shall be calculated and independently checked by the consultant. The cost estimate will be based on the preferred design alternative chosen during the preliminary design meeting. A technical memorandum shall be prepared to explain the cost estimate and document any revisions required of the original project construction budget. Prepare an outline of the necessary special provisions.

Assumptions

- Cost estimate will be completed with a target accuracy of +/- 20% with a construction contingency of 20% of the total construction costs
- Cost estimate will include all external construction costs including construction engineering costs

Deliverables

- Cost estimate will be completed in a Microsoft excel format and delivered electronically.
- A memorandum will be delivered electronically on Consultant letterhead in .pdf format

Schedule

- 30% Cost estimate and memorandum will be completed within 6 weeks of the preliminary design meeting

Subtask 13.3 Compile 95% Specifications and Cost Estimate

Compile 95% specifications and cost estimate for all technical disciplines associated with the project. Prepare Special Provisions utilizing ODOT standard specifications and boiler plate special provisions. Write any additional special provisions needed and prepare construction cost estimates based on the 95% design drawings. Review the city's boiler plate general conditions and bid documents and provide edits, as necessary.

Assumptions

- Cost estimate will be completed with a target accuracy of +/- 10% with a construction contingency of 15% of the total construction costs
- Cost estimate will include all external construction costs including construction engineering costs
- City shall provide all non-technical specifications and general conditions in .doc format for review by the consultant

Deliverables

- 95% Specifications delivered electronically in .doc format
- Cost estimate delivered electronically in .xls format

Schedule

- 95% Cost estimate and specifications will be completed within 6 weeks of the 30% design review meeting

Subtask 13.4 Compile Final Specifications and Cost Estimate

Compile final specifications and cost estimate for all technical disciplines associated with the project. Prepare final stamped special provisions and cost estimate based on direction obtained at the 95% review meeting. Address all city comments received at the 95% submittal in preparing the final specifications and cost estimate.

Assumptions

- Cost estimate will be completed with a target accuracy of +/- 10% with a construction contingency of 10% of the total construction costs
- Cost estimate will include all external construction costs including construction engineering costs
- City shall be responsible for producing all non-technical specifications and general conditions; consultant shall provide an overall review of non-technical specifications and general conditions and will provide feedback regarding potential sources of conflict with technical specifications.

Deliverables

- One set of review comments on non-technical specifications and general conditions
- One paper copy of the stamped final specifications and cost estimate

Schedule

- City shall provide non-technical specifications for review 4 weeks prior to Final PS&E Submittal. Consultant shall return review comments 2 weeks prior to Final PS&E Submittal

Task 14 Quality Assurance

Provide senior level quality assurance (QA) of all major deliverables in accordance with Consultant's Quality Management Plan (QMP) and project specific Project Quality Plan (PQP). All major deliverables shall be reviewed internally by senior level discipline experts, a principal level engineer, and construction inspection staff. The QMP has been included as an attachment to the scope of work.

Assumptions

- Complete a formal internal QA process for the following deliverables:
 - Preliminary Design Report
 - 30% PS&E
 - 95% PS&E
 - Final QA
- All QA related comments shall be reviewed and verified to the satisfaction of the reviewer

Deliverables

- The QA comment logs, and PQP documentation shall be available to the city, at any time, in electronic format within 5 days of request.

Schedule

QA will be completed prior to submitting all deliverables listed above for city review.

Task 15 Bidding Support

Provide engineering services necessary to facilitate bidding the final PS&E documents for construction.

Subtask 15.1 Pre-bid Services

Provide engineering services necessary to support the bidding that includes answering questions, attending the pre-bid meeting, and assisting the city with evaluating estimates and selecting a prospective bidder

Assumptions

- Anticipated level of effort is limited to 20 hours of total engineering services.

Deliverables

- None

Schedule

- Respond to any requests for service during the bidding process within two (2) days of request

Subtask 15.2 Prepare Technical Addenda

Prepare technical addenda, as required, to address contractor questions and resolve documented inconsistencies in the plans and specifications.

Assumptions

- Effort assumes up to two technical addenda
- Each addenda will require modifications of up to 2 plan sheets and 2 specification sheets

Deliverables

- Addenda shall be submitted, as required, to the city electronically in .pdf format

Schedule

- Addenda will be provided to city within five (5) days of request