

**RESOLUTION NO. 1934**

**A RESOLUTION OF THE CITY OF WILSONVILLE ACTING IN ITS CAPACITY AS ITS LOCAL CONTRACT REVIEW BOARD EXEMPTING FROM COMPETITIVE BIDDING REQUIREMENTS, AND AUTHORIZING THE CITY ENGINEER TO SIGN, A PROFESSIONAL SERVICES AGREEMENT WITH HDR ENGINEERING, INC. TO PROVIDE PROFESSIONAL (ENGINEERING) SERVICES FOR THE BOECKMAN ROAD EXTENSION PROJECT.**

WHEREAS, on June 7, 2004, the Wilsonville City Council adopted a Capital Improvement Program for the City that includes a FY 2004-05 appropriation of \$4,217,056 to fund the preliminary Engineering, Environmental Assessment, final design, and construction of the extension of Boeckman Road from 95<sup>th</sup> Avenue to 110<sup>th</sup> Avenue (Project No. 540.950.45030.00000.4048); and

WHEREAS, the City solicited proposals to accomplish the professional services for the referenced project and HDR Engineering, Inc. was selected as the consultant firm that was best qualified to provide the certain professional services for the referenced project; and

WHEREAS, on June 2, 2003, the City Council adopted Resolution No. 1835, authorizing the City Engineer to enter into a Professional Services Agreement with HDR Engineering, Inc. to provide professional services for the preliminary Engineering and Environmental Assessment for the Boeckman Road Extension project; and WHEREAS, since that date, HDR Engineering, Inc. has completed the Environmental Assessment, had it reviewed and approved by the State, and completed the preliminary engineering (30% plans and specifications) so that the City could move forward with the right-of-way acquisition process; and

WHEREAS, the City Engineer seeks the services of an engineering firm to provide professional services for the final design of the referenced project; and

WHEREAS, while Local Contract Review Board rules provide for competitive selection of personal service contractors, ORS 279B.085 (3) provides that the Board may exempt from competitive procurement those contracts if it finds that the special procurement will (a) be unlikely to encourage favoritism in the awarding of public contracts or to substantially diminish competition for public contracts; and (b) result in substantial cost savings to the city or the public or otherwise substantially promote the public interest in a manner that could not practicably be realized by more formal processes; and

WHEREAS, since HDR Engineering, Inc. was selected to perform the preliminary design work through a competitive process, the approval of this contract is unlikely to encourage favoritism or diminish competition; and

WHEREAS, HDR Engineering, Inc. has extensive and valuable information, including, but not limited to, the following: 30% design for street, storm, sewer, water, bridge structure, water quality and quantity elements, and the wetland mitigation; and

WHEREAS, HDR Engineering, Inc. has worked closely and coordinated with numerous sub-consultants on this project since the summer of 2003 which has generated a collective knowledge base of the area and City standards that could not be duplicated or transferred within the required timeframe; and

WHEREAS, the combination of technical and historical knowledge that will be utilized in the completion of the referenced project will thereby reduce the overall project costs; and

WHEREAS, staff has determined that the fees for the services as proposed by HDR Engineering, Inc. are fair and reasonable, reflecting the extensive and valuable information which will not have to be reconstructed or duplicated at public cost; and prompt execution of the design contract will allow the design and construction of these improvements in a timely manner; and

WHEREAS, HDR's specialized knowledge particular to the work, its capacity and capability to perform the work within tight time lines, cost savings associated with transferable experience and background and past record of performance, all promote the public interest in a way that soliciting other contractors would not; and

WHEREAS, HDR Engineering, Inc. has proposed to accomplish the professional engineering services for a fee not to exceed \$1,150,000; and,

WHEREAS, the City Council has conducted a properly noticed public hearing on the proposed exemption of this contract and, based upon the entire record herein, and being fully advised,

**NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:**

1. The City Council, acting as the Local Contract Review Board, does hereby adopt both the staff report in this matter and the forgoing as findings of fact, and concludes that, under the circumstances, the record satisfactorily demonstrates the required basis for special procurement. Based upon such findings and conclusion,

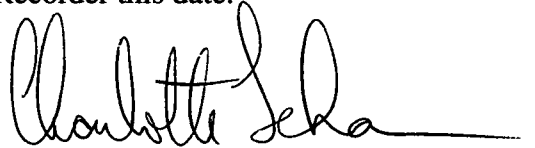
the Council does hereby exempt the award of the subject contract from competitive procurement.

2. The City Council, acting as the Local Contract Review Board, does hereby approve and authorize the City Engineer to sign a Professional Services Agreement between the City of Wilsonville and HDR Engineering, Inc., a copy of which is marked Exhibit "A", attached hereto and incorporated herein, to provide the engineering professional services recited within for the referenced project.
2. The City Council hereby authorizes the expenditures for this contract not to exceed \$1,150,000 from the Fiscal Year 2004-05 budget as follows:

<u>Account</u>	<u>Budget Amount</u>
540.950.45030.00000.4048	\$4,217,056.00

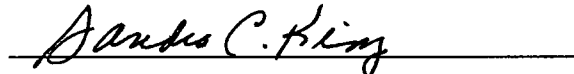
3. This resolution is effective upon adoption.

ADOPTED by the Wilsonville City Council at a regular meeting thereof this 2<sup>nd</sup> day of May, 2005, and filed with the Wilsonville City Recorder this date.



CHARLOTTE LEHAN, Mayor

ATTEST:



Sandra C. King, City Recorder, CMC

SUMMARY OF VOTES:

Mayor Charlotte Lehan	<u>Yes</u>
Council President Kirk	<u>Yes</u>
Councilor Holt	<u>Yes</u>
Councilor Scott-Tabb	<u>Yes</u>
Councilor Knapp	<u>Yes</u>

**ENGINEERING DEPARTMENT**  
**STAFF REPORT & RECOMMENDATION**

**DATE:** April 11, 2005

**TO:** Honorable Mayor and City Councilors

**FROM:** Laurel Byer, PE  
Capital Program Manager

**SUBJECT:** Professional Services Agreement with HDR Engineering, Inc. for the  
Boeckman Road Extension Project  
(Project No. 540.950.45030.00000.4048)

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**SUMMARY**

The first phase of the Boeckman Road Extension Project includes extending Boeckman Road from 95<sup>th</sup> Avenue to 110<sup>th</sup> Avenue. The second phase includes improving Tooze Road from 110<sup>th</sup> Avenue to Grahams Ferry Road. The extension of Boeckman Road will cross an environmentally sensitive area in the Coffee Lake Creek wetland complex. This agreement with HDR Engineering, Inc. would provide the final engineering and design for Phase 1 of the Boeckman Road Extension Project. Phase 2 design and construction will occur at a later date.

**DISCUSSION**

The Boeckman Road Extension project will provide an additional connection between the east and west sides of Wilsonville and will help relieve congestion on Wilsonville Road. The I-5/Wilsonville Freeway Access Study identified this project as the number one priority in terms of having the highest benefit to the local street system.

In 2002, City staff started the process to retain a consulting firm to provide preliminary engineering and environmental assessment services for the proposed Boeckman Road Extension Project. Of five consultants interviewed, HDR Engineering, Inc. was chosen as the top consultant firm.

In June of 2003, the City Council adopted Resolution No. 1835, which authorized the City Engineer to sign a professional service agreement with HDR Engineering for the Preliminary Engineering and Environmental Analysis. Since that time, HDR Engineering, Inc has completed the National Environmental Policy Act Environmental Assessment (EA) and the preliminary design engineering (through 30% plans and specifications). In order to expedite the final design, City staff is proposing to retain HDR Engineering, Inc. as the consultant.

To hire HDR Engineering, Inc. for the final design would require an exemption from the State's competitive bidding requirements. While Local Contract Review Board rules provide for competitive selection of personal service contractors, ORS 279B.085 (3) provides that the Board may exempt from competitive procurement those contracts if it finds that the special procurement

will (a) be unlikely to encourage favoritism in the awarding of public contracts or to substantially diminish competition for public contracts; and (b) result in substantial cost savings to the city or the public or otherwise substantially promote the public interest in a manner that could not practicably be realized by more formal processes.

Since HDR Engineering, Inc. was initially selected under a competitive selection process, the execution of this contract does not encourage favoritism nor diminish competition. HDR Engineering, Inc. has invaluable design information that will aid in the timely completion of the plans and specifications. HDR currently has easy access and control of the 30% construction plans for the street, storm, sewer, water, bridge structure, water quality and quantity features, landscape, as well as the associated permit applications under review. To change consultants in the middle of permit applications loses the continuity and breaks the communication lines that have already been established. They have also worked closely over the past two years with City staff and numerous sub-consultants to develop a collective knowledge base of the area, property owners, and City standards that would be impossible to duplicate or transfer to another consultant within the State required timeframe. Setting aside the extra delay costs in the time schedule, even if it were possible to duplicate the efforts and the knowledge gained, it would only come at an additional cost to the City. With these above factors, awarding the contract to HDR Engineering, Inc. will result in substantial cost savings to the City.

#### **RECOMMENDATION**

Staff respectfully recommends that the City Council adopt Resolution No. 1934, thereby exempting from competitive bidding requirements, and authorizing the City Engineer to sign, a professional services agreement with HDR Engineering, Inc. in an amount not to exceed \$1,150,000 for the Boeckman Road Extension Project.

**CITY OF WILSONVILLE  
PROFESSIONAL SERVICES AGREEMENT**

THIS AGREEMENT is made and entered into as of the date first indicated on the signature page, by and between the City of Wilsonville, Wilsonville, Oregon, (hereinafter referred to as the "City"), and HDR Engineering, Inc., (hereinafter referred to as "Consultant").

WHEREAS, City requires services which Consultant is capable of providing, under terms and conditions hereinafter described; and

WHEREAS, Consultant represents that it is qualified on the basis of specialized experience and technical competence and prepared to provide such services as City does hereinafter require;

NOW, THEREFORE, in consideration of those mutual promises and the terms and conditions set forth hereafter, the parties agreed as follows:

**A. Term**

The term of this Agreement shall be from the date of execution by both parties until tasks required hereunder are complete and accepted, unless earlier terminated in accordance herewith.

**B. Consultant's Services**

**B.1** The scope of Consultant's services and time of performance under this Agreement are set forth in Exhibit A. All provisions and covenants contained in Exhibit A are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein.

**B.2** All written documents, drawings, and plans submitted by Consultant and intended to be relied on for the project shall bear the signature, stamp or initials of Consultant or Consultant's authorized Project Manager. Any documents submitted by Consultant which do not bear Consultant's signature, stamp or initials or those of the Consultant's authorized Project Manger shall not be relied upon by City. Interpretation of plans and answers to questions covering Plans given by Consultant or Consultant's Project Manager need not be put in writing unless requested by the City and may be relied upon by City.

**B.3** All agreements on the Consultant's part are contingent upon, and the Consultant shall not be responsible for damages or be in default or be deemed to be in default by reason of delays in performance due to third party: strikes, lockouts, accidents; acts of God; other delays unavoidable or beyond the Consultant's reasonable control, or due to shortages or unavailability of labor at established area wage rates or delays caused by failure of the City or City's agents to furnish information or to approve or disapprove the Consultant's work promptly, or due to late or slow, or faulty performance by the City, other contractors, other consultants not

under Consultant's control or governmental agencies, the performance of whose work is precedent to or concurrent with the performance of the Consultant's work. In the case of the happening of any such cause of delay, the time of completion shall be extended accordingly.

B.4 The existence of this Agreement between City and Consultant shall not be construed as City's promise or assurance that Consultant will be retained for future services unrelated to this public works project.

B.5 Consultant shall maintain confidentiality of any private confidential information and any public information which is exempt from disclosure under state or federal law to which the Consultant may have access by reason of this Agreement. Consultant warrants that its employees assigned to work on services provided in this Agreement shall maintain confidentiality. All agreements with respect to confidentiality shall survive the termination or expiration of this Agreement.

C. City's Responsibilities

C.1 City certifies that sufficient funds are available and authorized for expenditure to finance costs of this Agreement.

D. Compensation

D.1 Except as otherwise set forth in this subsection D, City agrees to pay Consultant not more than \$1,150,000 for performance of those services provided hereunder. However, compensation may be less than such maximum amount and shall be actually determined on an hourly basis as shown on the Rate Schedule attached as Exhibit B which is attached hereto and incorporated herein. Compensation shall be only for actual hours worked on this project and related direct expenses. Consultant shall furnish with each bill for services an itemized statement showing the amount of hours devoted to the project by Consultant as well as any agents or employees of Consultant and any direct expenses.

D.2 During the course of Consultant's performance, if City or its Project Manager specifically requests Consultant to provide additional services which are beyond the scope of the services described on Exhibit A, Consultant shall provide such additional services and bill the City at the hourly rates outlined on the attached Standard Hourly Rate Schedule, provided the parties comply with the requirements of Section R. No compensation for additional services shall be paid or owing unless both parties specifically agree to such additional compensation and services.

D.3 Unless expressly set forth on Exhibit B as a reimbursable expense item, Consultant shall only be entitled to the compensation amount specified in subsections D.1 and D.2. Only those reimbursable expenses which are set forth on Exhibit A and itemized on Consultant's bills for services shall be the basis for which payment of those expenses by City shall be owing.

- D.4 Except for amounts withheld by City pursuant to this agreement, Consultant will be paid for services for which an itemized bill is received by City within 30 days.
- D.5 City shall be responsible for payment of required fees, payable to governmental agencies including, but not limited to plan checking, land use, zoning and all other similar fees resulting from this project, and not specifically covered by Exhibit A.
- D.6 Consultant's compensation rate includes but is not limited to salaries or wages plus fringe benefits and contributions including payroll taxes, workers' compensation insurance, liability insurance, pension benefits and similar contributions and benefits.
- D.7 In the event Consultant's responsibilities as described on Exhibit A have been separated into two or more phases, then Consultant shall not be entitled to any compensation for work performed directly on a later category of responsibilities unless and until City specifically directs that Consultant proceed with such work.

E. City's Project Manager

City's Project Manager is Michael A. Stone. City shall give Consultant prompt written notice of any redesignation of its Project Manager.

F. Consultant's Project Manager

Consultant's Project Manager is Claude Sakr. In the event that Consultant's designated Project Manager is changed, Consultant shall give City prompt written notification of such redesignation. In the event that City receives any communication from Consultant of whatsoever nature which is not executed by Consultant's designated Project Manager, City may request clarification by Consultant's Project Manager, which shall be promptly furnished.

G. Project Information

City shall provide full information regarding its requirements for the Project. Consultant agrees to share all project information, to fully cooperate with all corporations, firms, contractors, public utilities, governmental entities, and persons involved in or associated with the Project. No information, news or press releases related to the Project, whether made to representatives of newspaper, magazines or television and radio stations, shall be made without the authorization of City's Project Manager.

H. Duty to Inform

If at any time during the performance of this Agreement, or any future phase of this Agreement for which Consultant has been retained, Consultant becomes aware of actual or potential problems, faults or defects in the project or any portion thereof, any nonconformance with the federal, state or local law, rule, or regulation, or has any



objection to any decision or order made by City with respect to such laws, rules or regulations, Consultant shall give prompt written notice thereof to City's Project Manager. Any delay or failure on the part of City to provide a written response to Consultant shall neither constitute agreement with nor acquiescence to Consultant's statement or claim, nor constitute a waiver of any of City's rights.

**I. Consultant is Independent Contractor**

- I.1** Consultant shall be and herein declares that it is an independent contractor for all purposes and shall be entitled to no compensation other than compensation provided for under paragraph D of this Agreement. Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City. Consultant shall be completely independent and solely determine the manner and means of accomplishing the end result of this Agreement, and City does not have the right to control or interfere with the manner or method of accomplishing said results. City, however, has the right to specify and control the results of the Consultant's responsibilities.
- I.2** Subcontracting: City understands and agrees that only those special consulting services identified on Exhibit B may be performed by those persons identified on Exhibit C and not by Consultant. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and those who provide such services. Consultant may not utilize any subcontractors or in any way assign its responsibility under the Agreement without first obtaining the express written consent of the City.
- I.3** Consultant shall be responsible for and indemnify and defend City against any liability, cost or damage arising out of Consultant's use of such subcontractor(s) and subcontractor's negligent acts, omissions, or errors. Subcontractors will be required to meet the same insurance requirements of Consultant under this Agreement. Unless otherwise specifically agreed to by City, Consultant shall require that subcontractors also comply with and be subject to the provisions of this Section I.
- I.4** Consultant shall make prompt payment of any claim for labor, materials or services furnished to the Consultant by any person in connection with this Agreement as such claim becomes due. Consultant shall not permit any lien or claim to be filed or prosecuted against the City on account of any labor or material furnished to or on behalf of the Consultant. If the Consultant fails, neglects or refuses to make prompt payment of any such claim, the City may pay such claim to the person furnishing the labor, materials or services and charge the amount of the payment against funds due or to become due the Consultant under this Agreement.
- I.5** No person shall be employed under the terms of this agreement as described herein in violation of all wage and hour laws.

- I.6 Consultant shall make prompt payment as due to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Consultant of all sums which the Consultant agrees to pay for such services and all monies and sums which the Consultant collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.
- I.7 Should Consultant elect to utilize employees on any aspect of this Agreement, Consultant shall be fully responsible for payment of all withholding required by law, including but not limited to taxes, including payroll, income, Social Security (FICA) and Medicaid. Consultant shall also be fully responsible for payment of salaries, benefits, taxes, Industrial Accident Fund contributions and all other charges on account of any employees. Consultant shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. All costs incident to the hiring of assistants or employees shall be Consultant's responsibility. Consultant shall indemnify, defend and hold City harmless from claims for payment of all such expenses. Unless otherwise expressly set forth on Exhibit A as a reimbursable expense item, specific costs associated with items set forth in this paragraph shall be deemed as fully and conclusively included in the rate upon which consultants compensation is based.
- I.8 No person shall be denied or subjected to discrimination in receipt of the benefits of any services or activities made possible by or resulting from this Agreement on the grounds of sex, race, color, creed, marital status, age, disability or national origin. Any violation of this provision shall be grounds for cancellation, termination or suspension of the Agreement in whole or in part by the City.

J. Indemnity and Insurance

- J.1 Consultant acknowledges responsibility for liability arising out of the performance of this Agreement and the attachments thereto only and shall hold City harmless from and indemnify City of any and all liability, settlements, loss, costs and expenses in connection with any action, suit, or claim resulting or allegedly resulting from Consultant's negligent acts, omissions, errors or willful misconduct provided pursuant to this Agreement or from Consultant's failure to perform its responsibilities as set forth in this agreement. The review, approval or acceptance by City, its Project manager or City of Wilsonville employees of documents or other work prepared or submitted by Consultant shall not relieve Consultant of its responsibility to provide such materials in full conformity with City's requirements as set forth in this Agreement and to indemnify City from any and all costs and damages resulting from Consultant's failure to adhere to the standard of performance described in Section J.2.3. The provisions of this section shall survive termination of this Agreement. City agrees to indemnify and hold Consultant harmless from liability, settlements, losses, costs, and expenses in connection with any action, suit or claim resulting or allegedly resulting from City's negligent acts, omissions or from its willful misconduct as governed by

ORS Chapter 30.

J.2 Insurance Requirements and Consultant's Standard of Care.

- J.2.1 Consultant shall provide City with evidence of the following insurance coverages prior to the commencement of the work. 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 at the discretion of the City, in lieu thereof, a certificate in a form satisfactory to City certifying to the issuance of such insurance shall be furnished to City. Unless specifically set forth on Exhibit A, expenses relating to the cost of insurance shall not be the basis for additional reimbursement to Consultant.
- J.2.2 The City agrees that in accordance with generally accepted construction practices, the construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property.
- J.2.3 In the performance of its professional services, the Consultant shall use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the Portland Metropolitan Area. The Consultant will reperform any services not meeting this standard without additional compensation. Consultant's reperformance of any services, even if done at City's request, shall not be considered as a limitation or waiver by City of any other remedies or claims it may have arising out of consultant's failure to perform in accordance with the applicable standard of care or this Agreement.
- J.2.4 Consultant shall furnish the City a certificate evidencing the date, amount and type of insurance that has been procured pursuant to this Agreement. All policies shall be written on an "occurrence basis," except for Consultant's Professional Liability Insurance which may be written on a "claims made" basis, provided it shall endeavor to be maintained in full force for not less than four (4) years following Consultant's performance under this Agreement. All policies shall provide for not less than 30 days' written notice to the City before they may be revised, non-renewed, or canceled. The Consultant shall endeavor to provide for not less than 30 days' written notice to the City before the policy coverage may be reduced. Excepting professional liability and worker's compensation coverage, all policies shall provide an endorsement naming the City, its officers, employees and agents as additional insureds. In the event the policy lapses during performance, the City may: treat said lapse as a breach; terminate this Agreement and seek damages; withhold progress payments without impairing obligations of Consultant to proceed with work; pay an insurance carrier (either Consultants' or a substitute) the premium amount and withhold that amount from payments; and, use any other remedy

provided by this Agreement or by law.

- J.2.5 Insurance Requirements. The Consultant, its subcontractors, if any, and all employers working under this Agreement are subject employers under the Oregon Worker's Compensation Law and shall comply with ORS 656.017 which requires them to provide workers' compensation coverage for all their subject workers. The Consultant will maintain throughout this Agreement the following insurance:
- J.2.5.1 Workers' compensation and employers liability insurance as required by the State where the work is performed.
  - J.2.5.2 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 \$500,000 combined single limits.
  - J.2.5.3 Commercial general liability insurance covering claims for injuries to members of the public or damage to property of others arising out of any covered negligent act or omission of the Consultant or of any of its employees, agents or subcontractors, with \$1,000,000 per occurrence and in the aggregate.
  - J.2.5.4 Professional liability insurance of \$500,000 per occurrence and in the aggregate, including contractual liability coverage. If Consultant proposes using subcontractors, in addition to any other requirements of this Agreement, City may require subcontractors to provide Professional Liability Insurance, provided the amount and form of coverage complies with the requirements of paragraphs J.2.1, J.2.2, J.2.3, J.2.4 and J.2.5.4.
  - J.2.5.5 City will be named as an additional insured with respect to Consultant's liabilities hereunder in insurance coverages identified in items J.2.5.2 and J.2.5.3.
- J.2.6 The coverage provided by these policies shall be primary and any other insurance carried by City is excess. Consultant shall be responsible for any deductible amounts payable under all policies of insurance. In the event a dispute arises between City and Consultant for which Consultant has obtained insurance, the maximum amount which may be withheld by City for all such claims shall be no more than the amount of the applicable insurance deductible.

**K. Early Termination**

**K.1 This Agreement may be terminated prior to the expiration of the agreed upon terms:**

**K.1.1 By mutual written consent of the parties;**

**K.1.2 By City for any reason within its sole discretion, effective upon delivery of written notice to Consultant by mail or in person; and**

**K.1.3 By Consultant, effective upon seven days prior written notice in the event of substantial failure by the City to perform in accordance with the terms through no fault of the Consultant.**

**K.2 If City terminates the Agreement in whole or in part due to default or failure of Consultant to perform services in accordance with this Agreement, City may procure, upon reasonable terms and in a reasonable manner, services similar to those so terminated. In addition to any other remedies the City may have, Consultant shall be liable for all costs and damages incurred by City in procuring such similar service, and the Contract shall be in full force to the extent not terminated.**

**K.3 If City terminates the Agreement for its own convenience, payment of Consultant shall be prorated to and include the day of termination and shall be in full satisfaction of all claims by Consultant against City under this Agreement.**

**K.4 Termination under any provision of this paragraph shall not affect any right, obligation or liability of Consultant or City which accrued prior to such termination. Consultant shall surrender to City items of work or portions thereof, referred to in Paragraph O for which Consultant has received payment, or City has made payment. City retains the right to elect whether or not to proceed with actual construction of the project.**

**L. Suspension of Work**

**City may suspend, delay or interrupt all or any part of the work for such time as the City deems appropriate for its own convenience by giving written notice thereof to Consultant. An adjustment in the time of performance or method of compensation shall be allowed as a result of such delay or suspension unless the reason for the delay is within the Consultant's control. City shall not be responsible for work performed by any subcontractors after notice of suspension is given by City to Consultant. Should the City suspend, delay or interrupt the work and the suspension is not within the Consultant's control, then the City shall extend the time of completion by the length of the delay and the method of compensation shall be adjusted to reflect the Consultant's increase or decrease in its standard hourly rates.**

M. Subconsultants and Assignments

M.1 Unless expressly authorized in Exhibit A or Paragraph I of this Agreement, Consultant shall neither subcontract with others for any of the work prescribed herein, nor assign any of Consultant's rights acquired hereunder without obtaining prior written approval from City. Work may be performed by persons other than Consultant, provided Consultant advises City of the names of such subcontractors and the work which they intend to perform and the City specifically agrees thereto. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and subcontractor(s). Except as otherwise provided by this Agreement, City incurs no liability to third persons for payment of any compensation provided herein to Consultant. Any attempted assignment of this contract without the written consent of City shall be void. Except as otherwise specifically agreed, all costs for services performed by others on behalf of Consultant shall not be subject to additional reimbursement by City.

M.2 City shall have the right to let other agreements be coordinated with this Agreement. Consultant shall cooperate with other firms, engineers or subconsultants on the project and the City so that all portions of the project may be completed in the least possible time within normal working hours. Consultant shall furnish other engineers and subconsultants and affected public utilities, whose designs are fitted into Consultant's design, detail drawings giving full information so that conflicts can be avoided.

N. Access to Records

City shall have access upon request to such books, documents, receipts, papers and records of Consultant as are directly pertinent to this Agreement for the purpose of making audit, examination, excerpts, and transcripts for a period of four (4) years unless within that time City specifically requests an extension. This clause shall survive the expiration, completion or termination of this Agreement.

O. Work is Property of City

A. Originals or Certified copies of the original work forms, including but not limited to documents, drawings, tracings, surveying records, mylars, papers, diaries, inspection reports and photographs, performed or produced by Consultant under this Agreement shall be the exclusive property of City and shall be delivered to City prior to final payment. Any statutory or common law rights to such property held by Consultant as creator of such work shall be conveyed to City upon request without additional compensation. Upon City's approval and provided City is identified in connection therewith Consultant may include Consultant's work in its promotional materials. Drawings may bear a disclaimer releasing the Consultant from any liability for changes made on the original drawings and for reuse of the drawings subsequent to the date they are turned over to the City.

B. Consultant shall not be held liable for any damage, loss, increased expenses or

otherwise caused by or attributed to the reuse, by City or their designees, of all work performed by Consultant pursuant to this contract without the express written permission of the Consultant.

- C. City agrees it will indemnify and hold Consultant harmless for all losses or damages that may arise out of the reuse of specific engineering designs incorporated into extensions, enlargements or other projects, without the express written permission of the Consultant.

P. Law of Oregon

The Agreement shall be governed by the laws of the State of Oregon. The Agreement provisions required by ORS Chapter 279 to be included in public agreements are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein.

Consultant shall adhere to all applicable federal and state laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

Q. Adherence to Law

Consultant shall adhere to all applicable federal and state laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

R. Modification

Any modification of the provisions of this Agreement shall not be enforceable unless reduced to writing and signed by both parties. A modification is a written document, contemporaneously executed by City and Consultant, which increases or decreases the cost to City over the agreed sum or changes or modifies the scope of service or time of performance. No modification shall be binding unless executed in writing by Consultant and City. In the event that Consultant receives any communication of whatsoever nature from City, which communication Consultant contends to give rise to any modification of this Agreement, Consultant shall, within thirty (30) days after receipt, make a written request for modification to City's Project Manager. Consultant's failure to submit such written request for modification in the manner outlined herein may be the basis for refusal by the City to treat said communication as a basis for modification. In connection with any modification to the contract affecting any change in price, Consultant shall submit a complete breakdown of labor, material, equipment and other costs. If Consultant incurs

additional costs or devotes additional time on project tasks which were reasonably expected as part of the original agreement or any mutually approved modifications, then City shall be responsible for payment of only those costs for which it has agreed to pay.

**S. Other Conditions**

**S.1** Except as otherwise provided in paragraphs S.1.1, S.1.2, and S.1.3 Consultant represents and agrees that the contract specifications and plans, if any, prepared by the Consultant will be adequate and sufficient to accomplish the purposes of the project; and further, that any review or approval by the owner of the plans and specifications shall not be deemed to diminish the adequacy of Consultant's work.

**S.1.1** **Subsurface Investigations.** In soils, foundation, ground water, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total Project cost and/or execution. These conditions and cost/execution effects are not the responsibility of the Consultant.

**S.1.2** **Opinions of Cost, Financial Considerations, and Schedules.** In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the Project, Consultant has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate Project cost or schedule. Therefore, Consultant makes no warranty that Owner's actual Project costs, financial aspects, economic feasibility, or schedules will not vary from Engineer's opinions, analyses, projections, or estimates.

**S.1.3** **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. Consultant is responsible for any errors or omissions about which the Consultant knew or should have known in the information from those employees or firms employed by the Consultant under the terms of the contract as stated therein that is incorporated into the record drawings.

**S.2** Notwithstanding any acceptance or payments, City shall not be precluded or stopped from recovering from Consultant, or its insurer or surety, such damages as may be sustained by reason of Consultant's failure to comply with the terms of this Agreement. A waiver by City of any breach by Consultant shall not be



deemed to be a waiver of any subsequent breach by Consultant.

T. Integration

This Agreement, including but not limited to Exhibits and Consultant's proposal submitted to City contains the entire and integrated agreement between the parties and supersedes all prior written or oral discussions, representations or agreements. In case of conflict among these documents the provisions of this Agreement shall control.

U. Miscellaneous / General

Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City under the terms and conditions of this agreement as described herein.

The CONSULTANT and the CITY hereby agree to all provisions of this AGREEMENT.

IN WITNESS WHEREOF, the parties by their signatures below enter into this Agreement this \_\_\_\_\_ day of \_\_\_\_\_, 2005.

CONSULTANT:

HDR ENGINEERING, INC.

By \_\_\_\_\_

Jorge McClees  
Vice President

Mailing Address:

1001 SW 5<sup>th</sup> Ave, Suite 1800  
Portland, OR 97204-1134

Employer I.D. No. 47-0680568

CITY OF WILSONVILLE:

By \_\_\_\_\_

Michael A. Stone  
City Engineer

Attest:

\_\_\_\_\_  
Sandra C. King  
City Recorder

Mailing Address:

30000 SW Town Center Loop East  
Wilsonville, OR 97070

Approved as to form:

\_\_\_\_\_  
Michael E. Kohlhoff  
City Attorney

## CITY OF WILSONVILLE

### BOECKMAN ROAD – TOOZE ROAD CONNECTION PROJECT

#### Final Design Scope of Work

HDR Engineering (“CONTRACTOR”) completed the preparation of a National Environmental Policy Act (NEPA) Environmental Assessment (EA) and 30% Level Preliminary Design for the Boeckman Road - Tooze Road Connector project (Project).

The Project limits are from Boberg Road to Grahams Ferry Road. The project would extend Boeckman Road across the Coffee Lake wetlands to 110<sup>th</sup> Avenue and widen Tooze Road between 110<sup>th</sup> Grahams Ferry Road. Funding constraints require implementing the improvements in two phases:

- **Phase 1** - Starts just east of Boberg Road and extends west to intersect Tooze Road at a point west of 110<sup>th</sup> Avenue.
- **Phase 2** - Extends from the terminus of Phase 1 west to Grahams Ferry Road.

The City of Wilsonville (“CITY”) desires to proceed with final design of the Project including the preparation of plans and specifications and cost estimates. This Statement of Work (SOW) between CITY and CONTRACTOR is for the work necessary for the preparation of Final Design and construction documents for Phase 1. This SOW will also include the design of certain elements of Phase 2 to a sufficient level of detail to support the Section 404/Removal-Fill permit application, which covers the entire project, and its supporting documentation. CITY recognizes that several design aspects, while they relate to Phase 2, must be evaluated with an holistic approach under this SOW such as storm drainage, since the Phase 1 storm conveyance system is down stream from and must receive Phase 2 storm water runoff; slope impacts for determining right of way and easement acquisitions, and Access Management strategy to comply with OTIA requirements.

#### Phase 1 - 95th Avenue to 110th Avenue/SW Tooze Road

CONTRACTOR’S deliverables for *Phase 1* shall include:

- Task 1: Project Management
- Task 2: Public Involvement
- Task 3: Railroad Coordination
- Task 4: Utility Coordination
- Task 5: Permit Compliance
- Task 6: Bridge Hydraulics Analysis
- Task 7: Access Management Plan
- Task 8: Final Roadway Design and Plans
- Task 9: Final Structural Design and Plans for Coffee Lake Creek wetlands crossing structure

- Task 10: Final Construction Staging Design and Plans
- Task 11: Final Signing and Striping Design and Plans
- Task 12: Final Traffic Signal Design and Plans for Boeckman Road/95th Avenue intersection; and Final Pedestrian Signal Design and Plans for Boeckman Road/Kinsman Road intersection.
- Task 13: Final Illumination Design and Plans
- Task 14: Final Water Main Design and Plans
- Task 15: Final Sanitary Sewer Design and Plans
- Task 16: Final Storm Drainage Design and Plans
- Task 17: Final Water Quality and Quantity Design and Plans
- Task 18: Final Landscape Design and Plans
- Task 19: Final Erosion and Sediment Control Design and Plans
- Task 20: Plans, Specifications and Cost Estimate (PS&E)
- Task 21: Groundwater Flow Analysis and Additional Geotechnical Investigation
- Task 22: Survey
- Task 23: Bidding Assistance

**General Assumptions:**

- CITY will prepare appraisals, negotiate and acquire all required right of way for the Project.
- ODOT will develop the general specifications (100 Section) including the bid form, insurance requirements, legal requirements, and other CITY requirements.
- CONTRACTOR shall assemble plan mylars and special provisions for bidding. ODOT will copies.
- The Wilsonville Commuter Rail project will design the track alignment at the 95<sup>th</sup> rail crossing.
- The PORTLAND & WESTERN (P&W) Railroad will design and develop construction documents including plans and specifications for the at-grade rail crossing improvements at 95<sup>th</sup> Avenue. P&W will advertise and bid separately the track improvements. Bid assistance services for the track work are not included in this statement of work.
- Drawings are to be developed in conformance with CITY standards. English units will be used. The project will conform to the CITY of Wilsonville Public Works Standards, 2001 *Oregon Bicycle and Pedestrian Plan*, and the current edition (2001) of *A Policy on Geometric Design of Highways and Streets* by the American Association of State Highway and Transportation Officials (AASHTO). Each sheet will include the Federal Aid number provided by ODOT.
- The bridge crossing shall be designed in accordance with ODOT Bridge Section design and drafting standards, and AASHTO LRFD design standards.

- *APWA / ODOT Standard Specifications for Construction*, 2002 edition will be used and modified to include CITY Special Provisions. CITY Standard Drawings and ODOT's where applicable, will be used.
- Design review milestones will be set at 60% ("Preliminary Plans"), 90% ("Advance Plans"), and 100% ("Final Plans") completion. The milestone efforts shall include the following activities to be performed by the CONTRACTOR.

### **Task 1 Project Management**

This task provides for CONTRACTOR's Project Manager to perform project management responsibilities including directions to Contractor project team members in order to complete the project on time and within budget; attendance at meetings with CITY staff for design development and reviews; and provide and direct quality control activities. It also provides for CONTRACTOR's Project Manager to coordinate with CITY staff on project-related issues via telephone and e-mail as needed. This task will prepare a detailed project schedule for review and approval by the CITY; the schedule will be maintained throughout the project duration.

This task will also consist of administration of the contract including tracking the scope, schedule and budget; setting up and maintaining project documentation files; and monitoring budget expenditures by sub-consultant staff to complete the work tasks listed in this statement of work on budget. Project invoices will be prepared monthly with a project status report discussing progress made during that period and noting any unusual issues or factors affecting the project.

Contractor shall perform a peer review of all deliverables using Contractor's normal internal review and sign-off process before submission to CITY. The review sign-off page must be submitted with the reviewed deliverables and a copy maintained in the QA/QC section of the Project file.

#### **Task 1.1 Project Coordination**

This subtask will provide for the CONTRACTOR's Project Manager to organize and hold project meetings with the CITY's Project Manager and CITY staff, key project team members, other agencies and stakeholders. These meetings will have specific agendas addressing and resolving project issues as they are encountered. Coordination of public participation activities and attendance at public meetings are addressed in Task 2. CONTRACTOR shall:

- Coordinate project activities with the CITY. This includes monthly meetings to discuss project progress; plan and coordinate upcoming activities; discuss project issues; identify problems that could cause schedule variances and present possible corrective actions to keep the project on schedule, within scope and within budget; formal design reviews at completion of the 60%, 90% and 100% plans; and present project status and obtain approval from the CITY.
- Coordinate project activities with the CITY's Project Manager and key team members. This includes weekly meetings to review project status and design issues; review project scope/schedule/budget and identify variances and formulate action items to address variances, plan and coordinate upcoming activities including design QA/QC reviews. Coordination meetings will include sub-consultant team members as needed.
- Coordinate with the CITY's Project Manager on issues at contiguous infrastructure interface points, including Villebois Development and the Wilsonville Commuter Rail project .

**Assumptions:**

- Assume 5 monthly team meetings at 2 hours each
- Assume weekly coordination meetings at 2 hours each

**Deliverables:**

- Meeting Minutes with CITY and stakeholders
- On-going project management

**Task 1.2 Project Schedule**

CONTRACTOR shall prepare and present to the CITY an activities list and schedule within one week of Notice to Proceed. The schedule will show appropriate milestones for the project including intermediate and final submittal dates for deliverables and key decision points. This subtask will maintain the schedule throughout the project duration and provide schedule updates to reflect changes in the project milestones and timelines as soon as schedule variances are identified.

**Deliverable:**

- Project Schedule Updates

**Task 1.3 Prepare Monthly Status Reports**

CONTRACTOR shall prepare and submit to the CITY monthly status reports with a summary of project status, design issues and resolution, and discuss any scope/schedule/budget variances and possible action items to correct variances. If there is likelihood that the authorized cost will be exceeded, an estimate of cost to complete will be provided.

**Deliverable:**

- Monthly Status Report

**Task 1.4 Administration of the Contract**

CONTRACTOR shall set up and maintain project documentation files; internally monitor budget expenditures by team members; identify any budget variances; and prepare monthly project invoices.

**Deliverables:**

- Project administration
- Monthly invoice billing

**Task 2 Public Involvement**

CITY recognizes that continuing good communication with the various stakeholders and general public will be an important element to successfully deliver this project to construction. Under this task, CONTRACTOR shall assist with public involvement as described below.

**Task 2.1 Public information**

CONTRACTOR shall update the project mailing list, develop and mail one (1) postcard mailer as well as develop and distribute one (1) media release during the Phase 1 project.

**Deliverables:**

- Updated project mailing list – electronic (MS Excel)
- One (1) Postcard mailer, including mailing to project mailing list
- One (1) media release

**Task 2.2 Web Page Update**

CONTRACTOR shall update the project internet web page twice (2) during Phase 1.

**Deliverables:**

- Two (2) updates of the project internet web page

**Task 3 Railroad Coordination**

CONTRACTOR shall provide seamless design continuity between rail and roadway design elements at the 95<sup>th</sup> at-grade rail crossing. CONTRACTOR shall coordinate through the CITY's Project Manager all Portland & Western (P&W) Railroad and Wilsonville Commuter Rail project interface issues including design elements, staging requirements, design reviews and approvals. CONTRACTOR shall provide interface coordination with the ODOT Rail Division on rail order crossing application reviews and approvals.

**Assumptions:**

- The Wilsonville Commuter Rail Project is designing the track alignment.
- CITY is contracting with Portland & Western (P&W) Railroad to develop final design plans and construction documents for the 95<sup>th</sup> at-grade rail crossing improvements. P&W will advertise and bid the at-grade rail improvements independent from CONTRACTOR's work.
- CITY will complete the final rail order crossing application and submit to ODOT Rail Division

**Task 3.1 Portland and Western Railroad Track Design Review**

CONTRACTOR shall:

- Review P&W's track design. This includes horizontal and vertical track elevations, cross slope of track, drainage design, waterline crossing and the traffic signal interconnection at 95th Ave.
- Provide survey data to P&W that CONTRACTOR has obtained during the environmental phase.

**Assumptions:**

- CONTRACTOR will provide one (1) review of P&W's generated design plans and specifications.

**Deliverables:**

- Track topographic survey data

- Review comments for 95<sup>th</sup> at-grade rail design

#### **Task 4 Utility Coordination**

The purpose of the Utility Coordination task is to coordinate relocation of utilities with CITY for utilities that are affected by the design and construction of the project. CONTRACTOR shall (1) track progress, (2) outline the impact of the final road alignment on existing utilities, and (3) develop design criteria for utilities that will need relocation prior to construction or require special protection during construction.

#### **Assumption:**

- No meetings with utilities are included. The CITY Project Manager will coordinate with utilities all relocation issues.

#### **Task 4.1 Utility Meetings**

CONTRACTOR shall meet with the CITY Project Manager to discuss utilities conflicts and propose solutions. CONTRACTOR has allocated time such that 2 consultant staff members shall attend these meetings. CONTRACTOR shall coordinate with CITY Project Manager the time and place of meetings, and prepare meeting summaries as needed.

#### **Assumption:**

- Three (3) utilities coordination meetings with the CITY Project Manager are included.

#### **Deliverables:**

- 60% design drawings in paper plan and profile sheets to CITY for their distribution to utility companies – Second Notification.
- 90% design drawings in paper plan and profile sheets to CITY for their distribution to utility companies – Third Notification.
- Utility meeting summaries.

#### **Task 4.2 Utility Potholing**

Utility location efforts begun during the 30% design phase will be completed. CONTRACTOR shall coordinate through the CITY Project Manager on utilities conflicts as 60% plans are developed and potential conflicts are noted. Where critical to construction, specific utilities will be identified by CONTRACTOR and potholed by CITY or utility to determine accurate location and condition.

#### **Deliverables:**

- Pothole requests will be sent to the CITY, as needed.
- Utility location and condition data will be used in the design.

#### **Task 4.3 Identify Utility Conflicts**

CONTRACTOR shall identify conflicts with known utilities, for above ground and below ground. CONTRACTOR shall provide CITY with plan drawings showing utility conflicts at three periods in the design process (60%, 90% and 100% submittals). CONTRACTOR shall prepare and provide CITY with a utility conflict list between the 60% and 90% submittal stage to assist Utilities in the resolution of utility conflicts.

**Assumptions:**

- CITY will send to the Utilities plan drawings showing utility conflicts.
- CITY will prepare and provide the Utilities with utility notification letters per ORS 734-055-0045.

**Deliverables:**

- Utilities conflict list.
- Plans showing utility conflicts. ½ SIZE (11" X 17") PAPER PLOTS; (4 SETS)
- Utility impacts will be addressed during design and in the final construction documents.

**Task 4.4 Coordinate Utility Relocations**

CONTRACTOR shall coordinate with the CITY Project Manager resolution of conflicts between proposed improvements and existing utilities. Coordination efforts will include evaluation of plan relocation prior to construction, include relocation in the Project construction contract, as needed, or provide information for construction coordination.

**Deliverables:**

- Correspondence on relocation plans and timelines.
- Drafting utilities design.
- Utility special provisions for 90% and 100% plan submittals.

**Task 5 Permit Compliance**

CONTRACTOR shall facilitate permit revisions and notifications, as necessary in the event that project design changes modify the submitted permits (i.e., Section 404, Removal Fill, and 1200-C). CONTRACTOR shall also integrate permit conditions from the state and federal agencies into the construction bid documents.

**Deliverables:**

- Correspondence with regulatory agencies, as necessary to facilitate permit approvals.
- Integration of permit conditions into construction bid documents.

**Task 6 Bridge Hydraulic Analysis**

CONTRACTOR shall prepare a hydraulic design report reflecting the selected alternative for the Boeckman Road crossing over Coffee Creek. The objective of the work is to evaluate the hydraulic conditions associated with the construction of a new bridge. CONTRACTOR shall also provide recommendations for scour countermeasures for the new bridge crossing. The bridge hydraulics work will be done to a final design level to support the Type, Size and Location (TS&L) report.

**Task 6.1 Design Flows Estimate**

CONTRACTOR shall use flows identified in the CITY Storm Water Master Plan (June 2001) for the 2-, 10-, 25-, 50-, and 100-yr design flows. Extrapolated flow rates for the 500-year flood event included in the City's 2001 Storm Water Master Plan will also be used. CONTRACTOR shall also estimate temporary water management flow during the seasonal periods of in-water construction and seasonal design flows for fish passage considerations if required.



### **Task 6.2 Hydraulic Modeling**

CONTRACTOR shall perform hydraulic modeling of existing conditions and proposed conditions to size the bridge opening and evaluate the hydraulic performance of the new crossing. CONTRACTOR shall also include modifications resulting from proposed wetland mitigation work in the hydraulic analysis. CONTRACTOR will use the one-dimensional model HEC-RAS in the steady flow mode. CONTRACTOR shall check for flood overtopping (if overtopping occurs prior to 500-yr) and document model results including flow velocities, shear stresses, water surface elevations, and backwater.

### **Task 6.3 Scour Analysis and Countermeasure Design**

CONTRACTOR shall estimate scour depth according to ODOT Scour and HEC-18 Guidelines, including general, local, and contraction scour, and prepare design of appropriate countermeasures. CONTRACTOR shall design abutment protection according to HEC-11 and HEC-20.

### **Task 6.4 Bridge Hydraulics Report**

CONTRACTOR shall prepare a Hydraulics Report documenting the bridge hydraulic design. The objectives, methods and findings from the above tasks shall be compiled into the report. Documentation standards shall be consistent with guidance provided in the Oregon Department of Transportation (ODOT) Hydraulics Manual. CONTRACTOR shall respond to one set of collated comments prior to providing the final report.

#### **Assumptions for Tasks 6.1 through 6.4:**

- A single crossing over Coffee Creek will be constructed.
- Data review to be limited to available data obtained during prior hydraulic modeling prepared for Coffee Creek by CONTRACTOR and other information provided by CITY or public sources.
- Coordination with FEMA is not included.
- Hydrologic and hydraulic analyses to be performed consistent with CITY standards.
- A one-dimensional steady computer model (HEC-RAS) will be used to estimate flood elevations and flow velocities.
- The model will be made to simulate three conditions: natural, proposed without wetland mitigation, and proposed with wetland mitigation.
- The term "natural conditions" is assumed to reflect Coffee Lake Creek as it currently exists. Efforts to determine the "natural condition" of Coffee Lake Creek is not included as part of this work.

#### **Deliverables for Tasks 6.1 through 6.4:**

- Draft Bridge Hydraulics Report: Two (2) hard copies – Submitted with Preliminary (60%) Plans.
- Final Bridge Hydraulics Report: Two (2) hard copies and one electronic version – Submitted with Advance (90%) Plans.

### **Task 7 Access Management Plan**

CONTRACTOR shall assist CITY in developing an Access Management Plan that is consistent with the Oregon Highway Plan (OHP). It is anticipated that CITY would adopt the access

management plan as part of a legally binding, enforceable intergovernmental agreement between CITY and ODOT as a requirement of the OTIA funding.

The Access Management Plan will apply appropriate access spacing standards as found in the 1999 Oregon Highway Plan or in the local Transportation System Plan, whichever is more restrictive.

**Task 7.1 Access Management Research**

The objective of this task is to obtain preliminary information necessary to develop access criteria and compile background information. CONTRACTOR shall:

- Contact CITY to obtain acceptable Plan content and format. If available, obtain prior CITY access plan example.
- Site visit - take photos and prepare summary of all existing accesses.
- Prepare outline of plan and concept map.

**Task 7.2 Draft Access Management Plan**

The objective of this task is to apply appropriate criteria to develop a draft access management plan. CONTRACTOR shall:

- Hold one meeting with City Engineer to review existing and proposed access requirements, set criteria, determine support data needed, and agree upon schedule of deliverables.
- Prepare draft Access Management Base Map with existing accesses for review by CITY.
- Prepare and distribute to the CITY the Draft Access Management Plan.

**Task 7.3 Final Access Management Plan**

The objective of this task is to review and refine the draft access management plan. CONTRACTOR shall:

- Hold one meeting with CITY to review and respond to comments from CITY on Draft Access Management Plan.
- Prepare Final Access Management Plan.
- Final distribution of the plan.

**Deliverables for Tasks 7.1 through 7.3:**

- Access Management Base Map.
- Draft Access Management Plan.
- Final Access Management Plan.

**Task 8 Final Roadway Design and Plans**

CONTRACTOR shall prepare roadway construction notes, curve data, curb elevations, and other roadway construction items for the selected alternative. CONTRACTOR shall refine and finalize curb locations, sidewalk layout, and roadway model as needed to reflect changes to the design from 30% Plans review comments received. CONTRACTOR shall perform the following tasks:

**Anticipated Roadway Plans**

- Typical Sections

- Alignment and Right of Way
- General Construction notes
- Profile
- Details

**Assumptions:**

- Comments received after the 60% preliminary design review will not materially affect the roadway horizontal and vertical alignments.
- Plans will follow plans provided by CITY, with stationing for Boeckman Road and Tooze Road running right to left (east to west ahead on line) across the sheets so that the north arrow remains pointing toward the top of the sheets.
- A temporary horizontal and/or vertical alignment may be needed to tie Phase 1 construction to the existing Tooze Road centerline.

**Deliverables:**

- Preliminary (60%) Roadway Plans and Cost Estimate.
- Advance (90%) Roadway Plans, Special Provisions and Cost Estimate.
- Final (100%) Roadway Plans, Special Provisions and Cost Estimate.

**Task 9 Final Structural Design and Plans**

CONTRACTOR shall perform tasks necessary to develop the Final Plans, Specifications, and Estimate for the Boeckman Road -Tooze Road bridge crossing of Coffee Lake Creek wetlands. CONTRACTOR shall perform the following tasks:

**Task 9.1 Superstructure Design**

CONTRACTOR shall:

- Verify the horizontal and vertical alignment data.
- Create the horizontal control model for the bridge to establish stations and angles for centerline of roadway, bearing centerlines, girder centerlines, and edges of deck.
- Calculate the superstructure dead and live loads and distribution factors for interior and exterior girders.
- Create input data for girder design program. Iterate, refine, and finalize girder analysis.
- Slab Design.

**Task 9.2 Substructure/Foundation Design**

CONTRACTOR shall:

- Prepare layout of substructure and foundation members based on the dead and live load reactions of the superstructure.
- Build the 3-D model of the bridge superstructure and substructure elements, estimate the fixity depths of foundation members and the spring stiffness coefficients for abutment backfill.
- Analyze and refine results of dynamic load analysis until within design parameters.
- Design abutment diaphragms, caps, and foundations.
- Design intermediate bent diaphragms, caps, columns, and foundations.

- Design bearings, expansion joints, and other miscellaneous bridge components.

#### **Anticipated Bridge Plans**

- Plan and Elevation
- Typical Section and General Notes
- Geotechnical Data
- Foundation Plan
- Abutment Plan and Elevation (2)
- Abutment Details (2)
- Bent Plan and Elevation
- Bent Details (2)
- Deck Plan
- Deck Section
- Framing Plan
- Girder Details (2)
- Bearing Details
- Bridge Rail Details (2)
- Miscellaneous Details (2)

#### **Deliverables:**

- Preliminary (60%) Structural Plans and Cost Estimate.
- Advance (90%) Structural Plans, Special Provisions and Cost Estimate.
- Final (100%) Structural Plans, Special Provisions and Cost Estimate.

#### **Task 10 Construction Staging and TP&DT Design and Plans**

CONTRACTOR shall prepare construction staging design plans and associated Temporary Protection and Direction of Traffic (TP&DT) details for the 95<sup>th</sup> / Boeckman Road intersection and the 110<sup>th</sup> / Tooze Road / Boeckman Road intersection. The initial conceptual construction staging design shall be presented to CITY in the form of roll plots outlining the sequence of work zone areas.

#### **Deliverables:**

- Conceptual construction staging design (roll map format).
- Preliminary (60%) Construction Staging Plans and Cost Estimate.
- Advance (90%) Construction Staging Plans, Special Provisions and Cost Estimate.
- Final (100%) Construction Staging Plans, Special Provisions and Cost Estimate.

#### **Task 11 Signing and Striping Design and Plans**

CONTRACTOR shall prepare plans, specifications and cost estimates for permanent signing and striping. CONTRACTOR shall base permanent signing in part on an inventory of existing signing.

#### **Deliverables:**

- Advance (90%) Signing and Striping Plans, Special Provisions and Cost Estimate.

- Final (100%) Signing and Striping Plans, Special Provisions and Cost Estimate.

### **Task 12 Traffic Signal Design and Plans**

CONTRACTOR shall perform traffic analysis and prepare plans, specifications and cost estimates for Traffic signals including location of traffic signal poles, junction boxes, controller cabinets, sign posts and other system appurtenances as follows:

- Traffic signal design at Boeckman Road/95<sup>th</sup> Avenue intersection.
- Railroad signal preemption development.
- Pedestrian signal design at future location of Kinsman Road.

#### **Assumptions:**

- Intersection design, signing and striping are covered under other tasks.
- Final signal phasing operation will be approved by the CITY.
- Traffic warrant analysis is not included as part of this scope of work.

### **Task 12.1 Traffic Signal Design at Boeckman Road/95<sup>th</sup> Avenue Intersection**

CONTRACTOR shall prepare plans, specifications and cost estimates for a traffic signal at Boeckman Road/95<sup>th</sup> Avenue Intersection including location of traffic signal poles, junction boxes, controller cabinet, video camera detection and loop detectors. CONTRACTOR shall:

- Hold meeting with CITY to identify operational requirements including preferred operation and configuration of the traffic signal improvements.
- Evaluate utility conflicts and provide the CITY with preliminary signal layout plans for use by CITY during utility coordination meetings.

#### **Anticipated Traffic Signal Plans**

- Channelization and signal plan showing location of signal poles, mast arms, vehicle and pedestrian signal heads, conduit runs, junction boxes, and controller/service cabinets. Sheet will be drawn at a scale of 1" = 20'.
- Preemption diagram and phase rotation diagram will be completed on not-to-scale sheet.
- Detector loop layout and loop wiring.
- Cabinet prints to include detector plan showing: signal poles, arms, spans, and heads; lane use arrows and signal phasing per lane; preemption diagram; phase rotation diagram; and front and back of the Output File and Auxiliary Output File.
- Video camera placement for detection

#### **Deliverables:**

- Preliminary (60%) Traffic Signal Plans and Cost Estimate.
- Advance (90%) Traffic Signal Plans, Special Provisions and Cost Estimate.
- Final (100%) Traffic Signal Plans, Special Provisions and Cost Estimate.

### **Task 12.2 Railroad Signal Preemption Design at 95<sup>th</sup> Crossing**

CONTRACTOR shall prepare a railroad preemption matrix design for the 95<sup>th</sup> at-grade railroad crossing. CONTRACTOR shall coordinate through the CITY signal preemption requirements from P&W.

### **Anticipated Signal Preemption Plans**

- Railroad preemption matrix.
- Adjacent intersection layout including signal pole standard and signal displays.

### **Deliverables:**

- Preliminary (60%) Railroad signal preemption plans and Cost Estimate.
- Advance (90%) Railroad signal preemption plans, Special Provisions and Cost Estimate.
- Final (100%) Railroad signal preemption plans, Special Provisions and Cost Estimate.

### **Task 12.3 Pedestrian Traffic Signal Design at future Kinsman Road Intersection**

CONTRACTOR shall prepare plans, specifications and cost estimates for a pedestrian traffic signal at future Kinsman Road Intersection with Boeckman Road including location of signal poles, junction boxes, controller cabinet, and in-road lighting. CONTRACTOR shall:

- Hold meeting with CITY to identify operational requirements including preferred operation and configuration of the pedestrian traffic signal improvements, as well as, converting the pedestrian traffic signal system to a full signal when Kinsman Road is built.
- Evaluate utility conflicts and provide the CITY with preliminary signal layout plans for use by CITY during utility coordination meetings.

### **Anticipated Traffic Signal Plans**

- Channelization and pedestrian traffic signal plan showing location of pedestrian signal poles, mast arms, pedestrian signal heads, conduit runs, junction boxes, and controller/service cabinets. Sheet will be drawn at a scale of 1" = 20'.

### **Deliverables:**

- Preliminary (60%) Pedestrian Traffic Signal Plans and Cost Estimate.
- Advance (90%) Pedestrian Traffic Signal Plans, Special Provisions and Cost Estimate.
- Final (100%) Pedestrian Traffic Signal Plans, Special Provisions and Cost Estimate.

### **Task 13 Illumination Design and Plans**

CONTRACTOR shall prepare Illumination plans, specifications and cost estimates in accordance with CITY requirements. CONTRACTOR shall coordinate with the City and PGE to locate adequate power supply for the project illumination. CONTRACTOR shall:

- Prepare Roadway Illumination Design Criteria (IESNA RP-8/AASHTO) for City approval.
- Perform a photometric analysis using AGI32 Lighting Analysis Software to comply with established project design criteria. A roll map with the lighting analysis will be prepared summarizing the results of the photometric analysis.
- Prepare a preliminary luminaire layout and service cabinet locations.
- Outline special provisions and identify necessary revisions to "front-end" documents.
- Prepare cost estimate.
- Coordinate power service locations with City and PGE (Jeff Stegleder).
- Coordinate structure mounting of luminaire poles, junction boxes, and electrical conduit on bridge rail.
- Finalize pole locations and prepare final PS&E drawings for illumination system.

**Deliverables:**

- Preliminary (60%) Illumination Plans and Cost Estimate.
- Advance (90%) Illumination Plans, Special Provisions and Cost Estimate.
- Final (100%) Illumination Plans, Special Provisions and Cost Estimate.

**Task 14 Water Main Design and Plans**

CONTRACTOR shall prepare water main plans, specifications and cost estimates in accordance with CITY requirements. The CITY will provide electronic copies of City-standard water system standard details and "boiler plate" specifications for this task. CONTRACTOR shall:

- Obtain working pressure and surge pressure from CITY. Determine pipe class for a maximum of two pipe materials: steel and ductile iron.
- Design 400-foot underground crossing Coffee Lake wetlands (approximate station 56+00). Design pipe appurtenances including air release/vacuum valves, blow-offs, railroad crossing, etc.
- Update design of vertical and horizontal alignment and plan and profile drawings based on 30% design plans.
- Prepare project specific schematic details.

**Deliverables:**

- Preliminary (60%) Water Main Plans and Cost Estimate.
- Advance (90%) Water Main Plans, Special Provisions and Cost Estimate.
- Final (100%) Water Main Plans, Special Provisions and Cost Estimate.

**Task 15 Sanitary Sewer Design and Plans**

CONTRACTOR shall prepare sanitary sewer plans, specifications and cost estimates in accordance with CITY requirements. The CITY will provide electronic copies of City-standard sanitary sewer standard details and "boiler plate" specifications for this task. CONTRACTOR shall:

- Obtain future build-out flow requirements from the CITY.
- Identify design constraints including downstream design elevation, and service to adjacent properties. CITY to provide downstream invert elevation prior to start of 60% design.
- Identify locations of excessive velocity or locations where potential hydraulic jumps may create odor generation issues. Evaluate opportunities to minimize velocity and remove abrupt changes in sewer slope.
- Update horizontal and vertical alignments based on 30% plans.
- Prepare Phase 1 plan and profile design to accommodate Phase 2 sewer connection.

**Deliverables:**

- Preliminary (60%) Sanitary Sewer Plans and Cost Estimate.
- Advance (90%) Sanitary Sewer Plans, Special Provisions and Cost Estimate.
- Final (100%) Sanitary Sewer Plans, Special Provisions and Cost Estimate.

**Task 16 Storm Drainage Design and Plans**

CONTRACTOR shall prepare storm drainage conveyance plans, specifications and cost estimates for the proposed roadway and bridge, and develop designs for cross culverts under the

proposed roadway. Storm sewer lines and crossing utilities, where identified, will be shown on roadway profile sheets. CONTRACTOR shall:

- Refine subbasin boundaries, as developed in the 30% design phase, and estimate runoff peaks for the water quality and 25-year design storms. Obtain peak flow estimates from CITY for existing storm drain system.
- Perform street runoff capacity calculations and size and locate curb inlets accordingly.
- Design bridge deck surface runoff conveyance system. Perform street capacity calculations for bridge deck subbasin and size inlets as required. Design conveyance system to outfall.
- Model hydraulic grade line, if necessary, and energy grade line of storm drain system using the 25-year design storm. Modify pipe diameter, slope and horizontal alignment as necessary to minimize velocities, hydraulic losses and the potential hydraulic jumps. Evaluate backwater effect from receiving waters (water quality ponds and streams) on storm drain system.
- Design vertical alignment and prepare plan and profile drawings of storm drain system that accommodates inlet leaders, new water and sewer mains, and existing utilities.
- Determine culvert design criteria for ditches/waterways that cross under the project, including considerations necessary to meet ODFW requirements for amphibian passage.

**Deliverables:**

- Preliminary (60%) Storm Drainage Plans and Cost Estimate.
- Advance (90%) Storm Drainage Plans, Special Provisions and Cost Estimate.
- Final (100%) Storm Drainage Plans, Special Provisions and Cost Estimate.

**Task 17 Water Quality and Quantity Facility Design and Plans**

CONTRACTOR shall prepare plans, specifications and cost estimates for proprietary structures (Downstream defender or equal) and surface water quality facilities. CONTRACTOR shall:

- Determine water quality design to include the west pond identified in 30% plans and water quality swales in locations determined suitable. Design water quality pond grades.
- Prepare details of water quality pond inlet and outlet structures. Include high flow bypass/overflow and water quality storm outlet. Design outfall to receiving waters.
- Plant species and planting plans are developed in Task 18.
- Design proprietary structures adjacent to the bridge. Design outfall to receiving waters.

**Assumptions:**

- Water quality structures will be proprietary (Downstream defender or equal)
- Both facilities will be the same type

**Deliverables:**

- Preliminary (60%) Water Quality Facility Plans and Cost Estimate.
- Advance (90%) Water Quality Facility Plans, Special Provisions and Cost Estimate.
- Final (100%) Water Quality Facility Plans, Special Provisions and Cost Estimate.

**Task 18 Landscape and Irrigation Design and Plans**

CONTRACTOR shall prepare Landscape and irrigation plans, specifications and cost estimates in accordance with CITY requirements. Plans will include street tree planting, irrigation and



detail sheets including planting at the water quality facilities, median islands including those at the rail crossing and the proposed roundabout.

CONTRACTOR shall prepare a conceptual (30%) landscape design for the entire project for review by the CITY. This will include preparation of illustrative cross sections for proposed landscape concept(s) and a review of existing trees to be removed or protected.

**Deliverables:**

- Conceptual (30%) Landscape Plans and Cost Estimate.
- Preliminary (60%) Landscape Plans and Cost Estimate.
- Advance (90%) Landscape and Irrigation Plans, Special Provisions and Cost Estimate.
- Final (100%) Landscape and Irrigation Plans, Special Provisions and Cost Estimate.

**Task 19 Erosion and Sediment Control Design and Plans**

CONTRACTOR shall prepare Erosion Control plans, specifications and cost estimates as a separate series of sheets for project areas requiring excavation or grading. CONTRACTOR assumes that erosion and sediment control measures will be used as necessary to comply with the local jurisdiction requirements. Erosion Control plans shall be developed in time to be included with the LUR and DSL permit applications.

**Deliverables:**

- Preliminary (60%) Erosion and Sediment Control Plans and Cost Estimate.
- Advance (90%) Erosion and Sediment Control Plans, Special Provisions and Cost Estimate.
- Final (100%) Erosion and Sediment Control Plans, Special Provisions and Cost Estimate.

**Task 20 Plans, Specifications and Cost Estimate**

Under this task, CONTRACTOR shall consolidate all plans, specifications and cost estimates for deliverables produced under Tasks 8 through 19 of this scope of work. Under this task, CONTRACTOR shall consolidate project cost estimates, estimated construction schedules and special provisions. Under this task, CONTRACTOR shall make and submit review copies and final copies of the consolidated plans, specifications and cost estimates for each submittal, as further described below:

**Assumptions:**

- It is assumed that the CITY will be the holder of the final record drawings.
- Plans, Special Provisions and Cost Estimates will be prepared for Phase 1 only.

**Task 20.1 60% (Preliminary Plans) Submittal**

CONTRACTOR shall provide a preliminary set of plans, special provisions, and a cost estimate at approximately 60% completion ("Preliminary Plans") for review by the CITY. The submittal shall include half-size (11" x 17") plans and a preliminary cost estimate with major construction elements included. A review meeting will be conducted with the CITY, to discuss review comments on the 60% plan documents. Comments from this meeting will be reviewed, addressed and incorporated into the design, as appropriate. The 60% (Preliminary Plans) Submittal will include the following:

- A. PRELIMINARY PLANS – ½ SIZE (11" X 17") PAPER PLOTS (8 SETS); AND FULL SIZE (22 X 34) PAPER PLOTS (3 SETS).
- B. PRELIMINARY COST ESTIMATE LISTING MAJOR ITEMS OF WORK. PAPER (SIX SETS) AND ELECTRONIC (MS EXCEL)
- C. PRELIMINARY LIST OF NEEDED SPECIAL PROVISIONS. PAPER (SIX SETS ) AND ELECTRONIC (MS WORD)
- D. MEMORANDUM WITH 30% PLAN REVIEW COMMENTS AND RESPONSES. PAPER (SIX SETS) AND ELECTRONIC (MS WORD)
- E. DRAFT ACCESS MANAGEMENT PLAN. PAPER (SIX SETS) AND ELECTRONIC (AUTOCAD)
- F. DRAFT BRIDGE HYDRAULICS REPORT. TWO PAPER COPIES
- G. CONCEPTUAL CONSTRUCTION STAGING PLANS. 11" X 17" PAPER PLOTS; SIX SETS

**Task 20.2 90% (Advance Plans) Submittal**

CONTRACTOR shall provide an advanced set of plans, special provisions and cost estimate at approximately 90% completion ("Advance Plans") for review by CITY. The submittal shall include half-size (11" x 17") plans, draft special provisions and a cost estimate. This submittal will include all anticipated plan sheets required for the contract plan set, unless otherwise directed by the CITY. A review meeting will be conducted with the CITY to discuss review comments to the 90% documents. Review comments will be addressed and incorporated into the design, as appropriate. CONTRACTOR shall prepare a memorandum with consolidated review comments from the review of the 60% plans, and a response to the comments. The 90% (Advance Plans) Submittal will include the following:

- A. ADVANCE PLANS – ½ SIZE (11" X 17") PAPER PLOTS (8 SETS); AND FULL SIZE (22 X 34) PAPER PLOTS (3 SETS).
- B. ADVANCE COST ESTIMATE LISTING ALL BID ITEMS. PAPER (SIX SETS) AND ELECTRONIC (MS EXCEL)
- C. ADVANCE SPECIAL PROVISIONS. PAPER (SIX SETS) AND ELECTRONIC (MS WORD)
- D. MEMORANDUM WITH 60% PLAN REVIEW COMMENTS AND RESPONSES. PAPER (SIX SETS) AND ELECTRONIC (MS WORD)
- E. FINAL BRIDGE HYDRAULICS REPORT – TWO PAPER COPIES AND ELECTRONIC (MS WORD)

**Task 20.3 100% (Final Review Plans) Submittal (Paper Copies for Review)**

CONTRACTOR shall provide a final set of plans, special provisions and cost estimate at the 100% (Paper Set) completion stage for review by the CITY. The submittal shall include full-sized and half-size plans, special provision mark-ups, and engineer's cost estimate for review. CONTRACTOR shall prepare a memorandum with consolidated review comments from the review of the 90% plans, and a response to the comments. The 100% (Final Review Plans) Submittal will include the following:

- A. FINAL PLANS – FULL (22-INCH X 34-INCH) PAPER PLOTS (3 SETS) AND ½ SIZE (11" X 17") PAPER PLOTS (8 SETS). AND, AUTOCAD FILES.
- B. FINAL COST ESTIMATE LISTING ALL BID ITEMS. PAPER (SIX SETS) AND ELECTRONIC (MS EXCEL).
- C. FINAL SPECIAL PROVISIONS. PAPER (SIX SETS) AND ELECTRONIC (MS WORD).
- D. MEMORANDUM WITH 90% PLAN REVIEW COMMENTS AND RESPONSES. PAPER (SIX SETS) AND ELECTRONIC (MS WORD).

**Task 20.4 100% (Final Plans) Submittal (for Bidding)**

CONTRACTOR shall provide one reproducible set of the final signed construction plans, special provisions, and construction cost estimate to the CITY at the 100% (Mylar Set) completion stage. Final contract plans will be in full-size (22-inch by 34-inch) format on Mylar (4 mil), and will also be submitted as electronic PDF files for the CITY's records. The 100% (Final Plans) Submittal will include the following:

- A. FINAL PLANS – FULL-SIZE, STAMPED AND SIGNED REPRODUCIBLE XEROX SET (22-INCH BY 34-INCH). CONTRACTOR TO PROVIDE, AT 100% COMPLETION, FULL SIZE DRAWINGS (22" X 34") WITH SINGLE MAT FINISH (FRONT SIDE) AND FRONT SIDE-IMAGE, TRIMMED TO THE TRIMLINE.
- B. FINAL PLANS - ELECTRONIC WITH STAMP AND SIGNATURE (ADOBE ACROBAT READER PDF) AND AUTOCAD FILES.
- C. FINAL COST ESTIMATE LISTING ALL BID ITEMS. PAPER AND ELECTRONIC (MS EXCEL)
- D. FINAL SPECIAL PROVISIONS. PAPER AND ELECTRONIC (ADOBE ACROBAT READER PDF AND MS WORD).
- E. FINAL ACCESS MANAGEMENT PLAN – PAPER AND ELECTRONIC (MS WORD)

**Plans**

CONTRACTOR shall prepare plans for the proposed project design as detailed in Tasks 8 through 19. The effort (budget) for preparing, updating and revising plans for each submittal is budgeted under Tasks 8 through 19. CONTRACTOR shall prepare plans using AutoCAD using CITY's drafting format.

**Specifications**

CONTRACTOR shall prepare a consolidated set of project special provisions for all elements of project that are to be included in the construction contract, to be submitted with the Advance (90%) and Final (100%) review submittals and for the final bidding documents. The 2002 edition of the Oregon Department of Transportation's Standard Specifications for Highway Construction

shall be used as the standard specifications for this project. CONTRACTOR shall, to the extent possible, utilize applicable special provisions already available from the CITY and ODOT. The environmental special provisions will be developed to include conditions imposed by regulatory agencies through the environmental permitting process. The special provisions will include procedures for the construction contractor to respond to unanticipated environmental conditions encountered during construction. CITY will develop the general specifications (100 Section) including the bid form, insurance requirements, legal requirements, and other CITY requirements.

#### **Cost Estimates**

CONTRACTOR shall prepare a consolidated Bid Item Summary and Cost Estimate for all elements of the project that are to be included in the construction contract, to be submitted with the Preliminary (60%), Advance (90%), and Final (100%) review documents and for the final bidding documents. Estimates shall be prepared based on the most recent available historic unit bid costs for other similar projects and similar bid items in the same general geographic area of the project. The actual cost of construction may vary due to demand and market conditions. All Cost Estimates prepared for this project are confidential and shall not be provided to any parties other than designated CITY staff.

#### **Construction Schedule**

CONTRACTOR shall prepare and submit an estimated construction schedule to assess contract duration requirements to include in the contract special provisions. An estimated construction schedule shall be prepared for the 90% submittal and shall be revised for the 100% submittal.

#### **Task 21 Groundwater Flow Analysis and Resistivity Testing**

CONTRACTOR shall evaluate concerns regarding groundwater flow through the underlying compressible soils in the site vicinity and the response of groundwater to construction of the proposed roadway embankment.

##### **Task 21.1 Preliminary Assessment**

CONTRACTOR shall perform a preliminary assessment of the impact of the roadway construction on the groundwater flow at the site using geotechnical information and data collected during the environmental phase and documented in the March 2, 2004, report entitled, "Geotechnical Investigation, Boeckman-Tooze Road Connection, Wilsonville, Oregon." CONTRACTOR shall obtain seven soil samples for pH and resistivity testing including two samples at locations within the wetland/floodway area and on Metro property.

CONTRACTOR shall prepare traffic control plans for submittal and review by CITY and/or Clackamas County. CONTRACTOR shall provide traffic control services in support of field investigation. CONTRACTOR shall:

- Review information available regarding geologic and groundwater conditions in the site vicinity.
- Review available published sources for information regarding groundwater flow in the general site vicinity and for similar settings/subgrade conditions.
- Complete engineering studies and analyses of data collected during the geotechnical investigation.

- Prepare a technical memorandum that summarizes the results and provides preliminary conclusions regarding the response of groundwater flow to the proposed roadway embankment. The memorandum may also provide a suggested approach to further evaluate the groundwater response.
- Conduct pH and resistivity testing on seven soil samples.

**Assumptions:**

- CITY will obtain permits and pay associated drilling fees within the public right-of-way, if required

**Deliverables:**

- Traffic control plans
- Technical memorandum (Five Paper Copies)

**Task 22 Survey**

CONTRACTOR shall complete additional field topographic survey to support the final design of the following areas:

- Wetland Mitigation Site and Roundabout
- 95<sup>th</sup> to Boberg
- Tooze Road (up to transition point between Phase 1 and Phase 2.

**Task 22.1 Topographic Survey and Terrain Model – Wetland Mitigation Site and Roundabout**

Contractor shall develop topographic survey base mapping in NAVD 88 datum to complete the final design of wetland mitigation site grading plans. Contractor shall also obtain additional ground shots to cover the nearby area of the roundabout while mobilized for the wetland mitigation site. This task will perform and complete the topographic base map to include field survey of topographic features not mapped previously. This task includes calling One-call utility locates to identify/tie existing subsurface features; research existing as-built records; and ground tie and relate all existing features within the project limits. Contractor shall perform the following activities:

- Topographic mapping will include known overhead lines. Underground features such as utility line sizes and invert elevations, fuel tanks, wells, septic tanks, and drain fields will be shown as indicated by surface features and other information including as-built drawings and utility company locates, supplemented by field survey as needed. The topographic mapping will also include fences, area lights, driveways, walks, traffic and other permanent signs.
- Delineate property line boundaries of the tax lots involved as described below.
- Incorporate the field topographic data into the base map and digital terrain model.

**Assumptions:**

- Mapping will be at a scale of 1" = 20ft. and with contours at 0.5-ft. intervals. English units will be used.
- The limits of survey for the Wetland Mitigation Site are described below:
  1. All of Metro's (TL's 14B 802, 15 200, 15 280, 15 290) property south of Bischoff TL 15 190.

2. Entire Bischoff property from house north, from 70' west of previous delineated wetland boundary to Seely Ditch (east property line).
  3. All of Metro's property (TL 14B 802) east of Seely Ditch from road alignment to south.
- This scope of work is intended to add-on to and expands areas of previously accomplished field work.

**Deliverables:**

- Electronic files of topographic survey base map at a scale of 1" = 20' in AutoCAD 2000 drawing format.
- Electronic file of terrain model (.tin) compatible with Autodesk Land Desktop (LDD); OR ASCII file of regular/random points AND AutoCAD of 3-D break lines.

**Task 22.2 Topographic Survey and Terrain Model – 95<sup>th</sup> Ave. to Boberg Rd.**

Contractor shall develop topographic survey base mapping in NAVD 88 datum to extend current base mapping and terrain model from 95<sup>th</sup> Ave. to Boberg Rd. to complete the final design. This task will perform and complete the topographic base map to include field survey of topographic features not mapped previously. This task includes calling One-call utility locates to identify/tie existing subsurface features; research existing as-built records; and ground tie and relate all existing features within the project limits. Contractor shall perform the following activities:

- Topographic mapping will include known overhead lines. Underground features such as utility line sizes and invert elevations, fuel tanks, wells, septic tanks, and drain fields will be shown as indicated by surface features and other information including as-built drawings and utility company locates, supplemented by field survey as needed. The topographic mapping will also include fences, area lights, driveways, walks, traffic and other permanent signs.
- Delineate Right of Way lines on Boberg Rd.
- Incorporate the field topographic data into the base map and digital terrain model.

**Assumptions:**

- Mapping will be at a scale of 1" = 20ft. with contours at 1-ft intervals. English units will be used.
- The limits of survey for 95<sup>th</sup> Ave. to Boberg Rd. are described below:
  1. From boundary of previous survey: 75' north and 75' south (150' total width) of the centerline Boeckman Rd. east to 300' east of centerline of Boberg Rd. on Boeckman, and approximately 400' south along Boberg Rd. 50' east and 50' west of centerline of Boberg Rd.
- This scope of work is intended to add-on to and expands areas of previously accomplished field work.

**Deliverables:**

- Electronic files of topographic survey base map at a scale of 1" = 20' in AutoCAD 2000 drawing format.
- Electronic file of terrain model (.tin) compatible with Autodesk Land Desktop (LDD); OR ASCII file of regular/random points AND AutoCAD of 3-D breaklines.
- Delineate right of way lines along Boberg Rd.

### **Task 22.3 Topographic Survey and Terrain Model – Tooze Road**

This subtask will develop topographic survey base mapping in NAVD 88 datum to extend current base mapping and terrain model on Tooze Road. This subtask will perform and complete the topographic base map to include field survey of topographic features not mapped previously. This subtask includes calling One-call utility locates to identify/tie existing subsurface features; research existing as-built records; and ground tie and relate all existing features within the project limits. The following activities will be performed:

- Topographic mapping will include known overhead lines. Underground features such as utility line sizes and invert elevations, fuel tanks, wells, septic tanks, and drain fields will be shown as indicated by surface features and other information including as-built drawings and utility company locates, supplemented by field survey as needed. The topographic mapping will also include fences, area lights, driveways, walks, traffic and other permanent signs.
- A confidence check will be made to ensure the new data collected under this subtask is in compliance with ODOT standards for the terrain surface shots. If the terrain model does not meet ODOT standards, additional terrain points will be gathered in the field to cover the area(s) needed to meet ODOT standards.
- Delineate Right of Way lines and Tax Lots along Tooze Road within the limits of this subtask
- Incorporate the field topographic data into the base map and digital terrain model.

#### **Assumptions:**

- Mapping will be at a scale of 1" = 20ft. with contours at 2-ft intervals. English units will be used.
- The limits of survey for Tooze Road are 75' east and 75' west (150' total width) north and south of the centerline of Tooze Road, 225-feet west from previous western limits of Tooze Road.

#### **Deliverables:**

- Electronic files of topographic survey base map at a scale of 1" = 20' in Autocad 2000 drawing format
- Electronic file of terrain model (.tin) compatible with Autodesk Land Desktop (LDD); OR ASCII file of regular/random points AND autocad of 3-D breaklines.
- Delineate Right of Way lines and Tax Lots on Tooze Road within the limits of this subtask

### **Task 23 Bidding Assistance**

CONTRACTOR shall assist the CITY in answering questions from contractors and bidders during the advertisement period. CONTRACTOR shall assist the CITY by preparing necessary drawing and special provisions revisions, reviewing substitution requests, and preparing up to three Addenda. CITY will issue Addenda. CONTRACTOR shall, if needed, provide interpretation of construction documents during the bidding period and prepare changes to drawings or special provisions, if required. CONTRACTOR shall attend one pre-bid meeting, if requested by CITY.

**Assumptions:**

- CONTRACTOR will not be responsible for Advertising and Solicitation of Bids, Review and Evaluation of Bids, or Contract Award.

**Deliverables:**

- Tracking (log book) of responses to bidding questions from construction contractors.
- Addenda in appropriate electronic format. CITY will distribute the addenda to bidders.
- Attendance at pre-bid meeting