108th Ave NE Sewer and Water Replacement
Job No. 48-19-PW
CSS 0052/CWA 0052
CITY OF KIRKLAND
DEPARTMENT OF PUBLIC WORKS

108th Ave NE Sewer and Water Replacement
Project No. 48-19-PW
CIP NO. CSS-0052/CWA-0052

Certificate of Engineer:
The Special Provisions and drawings contained herein have been prepared by or under the
direction of the undersigned, whose seal as a Professional Engineer licensed to practice in the
State of Washington, is affixed below.

Rodney Langer, P.E.
Project Manager

Approved for Construction:

Rod Steitzer, P.E.
Capital Projects Manager
<table>
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INVITATION TO BID

Notice is hereby given that the City of Kirkland will receive sealed bids in the office of the Purchasing Agent, City Hall, 123 Fifth Avenue, Kirkland, Washington, at 1:30 PM, local time on December 19, 2019, for the project hereinafter referred to as:

108th Ave NE Sewer and Water Replacement
JOB NO. 48-19-PW

At said time all bids will be opened and publicly read aloud. Each bid shall be accompanied by a bid proposal deposit in the form of a cashier’s check or a bond issued on a form acceptable to your surety made payable to the City of Kirkland for a sum of not less than five percent (5%) of the total bid amount. No bid shall be considered unless accompanied by such bid proposal deposit. Incomplete proposals and proposals received after the time stated above will not be considered. Faxed or emailed responses are not acceptable.

PROJECT DESCRIPTION FOR INVITATION TO BID

The work to be performed under this Contract consists of furnishing all labor, tools, materials, and equipment necessary for construction of the 108th Ave NE Sewer and Water Replacement project. The project has three schedules of work. Schedule A: Sanitary Sewer Main – 108th Ave NE from NE 68th Street to NE 53rd Street includes, but is not limited to, the replacement of approximately 4,132 LF of 8-inch concrete sewer main with 1,285 LF of 8-inch PVC sewer main and 2,847 LF of 12-inch PVC sewer main within 108th Ave NE. In addition, the schedule includes the replacement of 19 manholes and 34 side sewers, restoration of asphalt section and sidewalk sections disturbed by project construction, removal and replacement of three traffic islands, repair of water mains damaged by work, and other general restoration work. Schedule B: Water Main – NE 68th Street to NE 60th Street includes, but is not limited to, the replacement of approximately 2,412 LF of 8-inch water main (asbestos cement and other pipe materials) with 260 LF of 8-inch ductile iron (DI) and 2,152 LF 12-inch DI water main within 108th Ave NE. In addition, the schedule includes the replacement of approximately 37 LF of 18-inch water main with 37 LF of 18-inch DI water main, installation of seven fire hydrant assemblies, replacement of all water services, restoration of asphalt section and sidewalk sections disturbed by project construction, and other general restoration work. Schedule C, Road Overlay and ADA Ramp Replacement, includes, but is not limited to, the replacement of nine concrete curb (“ADA”) ramps, full pavement overlay of 108th Ave NE from NE 68th Street to NE 60th Street, two lanes of pavement overlay of 108th Ave NE from NE 60th Street to NE 53rd Street, and other general restoration work. All work shall be in accordance with the attached Contract Plans, these Contract Provisions, and the Standard Specifications. The evaluation of bid and determination of the low responsive bid shall be based on the Base Bid (Schedules A + B + C) from the bid schedules. Contract award shall include the Base Bid schedules, in the sole discretion of the City of Kirkland. The estimated cost for all three schedules is $5,200,000 to $5,700,000, not including sales tax where applicable.

The City will not sell bid packages. Plans, specifications, and addenda may be viewed and obtained online at www.bxwa.com. Click on: “Posted Projects”; “Public Works”, “City of Kirkland”. The Bidders List is maintained by the Builder’s Exchange of Washington, Inc. Registration for the bidder’s list may be made online, by phoning (425) 258-1303, or at Builder’s Exchange of Washington located at 2607 Wetmore Ave, Everett, WA.
The City of Kirkland in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

Questions regarding this project shall be submitted in writing to Patrick Herbig, P.E. via fax (425) 587-3844. Questions via phone or email will not be accepted. Bidders shall submit questions no later than December 13, 2019 at 4:00 PM local time.

The City reserves the right to reject any and all bids, and to waive any informalities in the bidding, and to make the award to the lowest, responsive, responsible bidder as best serves the interests of the City.

No bids may be withdrawn within forty-five (45) days after the actual date of the bid opening.

Published: Daily Journal of Commerce – November 27, 2019, December 4, 2019
GENERAL INFORMATION, PROPOSAL, & CONTRACT
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CITY OF KIRKLAND
INFORMATION FOR BIDDERS

Bidders must bid on all items contained in the proposal. The omission or deletion of any bid item will be considered non-responsive and shall be cause for rejection of the bid.

Submit your proposal on the Bid Proposal and other forms which are enclosed, or make a copy of the required forms and submit these documents.

The following forms must be executed in full with submittal of the bid:

1. BIDDER RESPONSIBILITY CRITERIA CHECKLIST
2. SUBCONTRACTOR RESPONSIBILITY CRITERIA CHECKLIST
3. PROPOSAL
   The lump sum or unit prices must be shown in the spaces provided on the bid schedule.
   Show total bid price in both words and figures on the Proposal.
   The Proposal form must be completed in full, signed and dated.

4. BID BOND
   A surety issued bid bond must be executed by the bidder and its surety company. The amount of the bid bond shall be not less than five percent (5%) of the total amount bid and may be shown in dollars or on a percentage basis. (A cashier’s check payable to the City of Kirkland and issued for an amount not less than 5% of the total bid may be submitted in lieu of a bid bond.)

5. NONCOLLUSION AFFIDAVIT - Notarized
6. STATEMENT OF BIDDER'S QUALIFICATIONS
   This form must be filled in and signed. The owner reserves the right to check all statements and to judge the adequacy of the bidder's qualifications.

7. SUBCONTRACTOR IDENTIFICATION LIST
   This form must be completed for HVAC, plumbing, and electrical subcontractors if the estimate exceeds $1,000,000.

The following forms are to be executed after the contract is awarded:

1. CONTRACT
   This agreement is to be executed by the successful bidder.

2. PERFORMANCE AND PAYMENT BOND
   To be executed by the successful bidder and its surety company.

3. CONTRACTOR'S DECLARATION OF OPTION FOR MANAGEMENT OF STATUTORY RETAINED PERCENTAGE; RETAINED PERCENTAGE ESCROW AGREEMENT
   To be executed by the successful bidder based on bidder's selection of option.

4. CERTIFICATES OF INSURANCE
   To be executed by the successful bidder and by an acceptable insurance company. The City of Kirkland must be named as an additional insured.

5. STATEMENT(S) OF INTENT TO PAY PREVAILING WAGES
   Affidavit certifying all employees of Contractor and Subcontractor shall be paid no less than the Prevailing Wage Rate(s) as determined by the Industrial Statistician of the Washington State Department of Labor and Industries.

SPECIAL NOTE: Prior to commencing work, the contractor and all subcontractors must have applied and paid for a City of Kirkland business license.
CITY OF KIRKLAND
BIDDER RESPONSIBILITY CRITERIA

It is the intent of City to award a contract to the low responsible bidder. Before award, the bidder must meet the following bidder responsibility criteria to be considered a responsible bidder. The bidder may be required by the City to submit documentation demonstrating compliance with the criteria. The bidder must:

☐ 1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;

☐ 2. Have a current Washington Unified Business Identifier (UBI) number;

☐ 3. Have:

   a. Industrial Insurance (workers’ compensation) coverage for the bidder’s employees working in Washington, as required in Title 51 RCW;

   b. A Washington Employment Security Department number, as required in Title 50 RCW;

   c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;

☐ 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3). **Meet responsibility criteria in RCW 39.04.350**

☐ 5. Until December 31, 2017, not have violated more than one time the off-site, prefabricated, non-standard, project specific items reporting requirements of RCW 39.04.370.

☐ 6. For public works projects subject to the apprenticeship utilization requirements of RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the first date of advertising for the project.
CITY OF KIRKLAND
SUBCONTRACTOR RESPONSIBILITY CRITERIA

☐ A. The Contractor shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.

☐ B. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

☐ 1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;

☐ 2. Have a current Washington Unified Business Identifier (UBI) number;

☐ 3. Have:
   a) Industrial Insurance (workers’ compensation) coverage for the subcontractor’s employees working in Washington, as required in Title 51 RC
   b) A Washington Employment Security Department number, as required in Title 50 RCW;
   c) A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
   d) An electrical contractor license, if required by Chapter 19.28 RCW;
   e) An elevator contractor license, if required by Chapter 70.87 RCW.

☐ 4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3). **Meet responsibility criteria in RCW 39.04.350**

☐ 5. Until December 31, 2017, not have violated more than one time the off-site, prefabricated, non-standard, project specific items reporting requirements of RCW 39.04.370.

☐ 6. For public works projects subject to the apprenticeship utilization requirements of RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the first date of advertising for the project.
CITY OF KIRKLAND
BID PROPOSAL

108th Ave NE Sewer and Water Replacement
CIP NO. CSS-0052/CWA-0052
JOB NO. 48-19-PW

To: Director of Finance
    City of Kirkland
    123 Fifth Avenue
    Kirkland, Washington 98033

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this proposal are those named herein; that this proposal is in all respects fair and without fraud; that it is made without collusion with any official or employee of the City of Kirkland, hereinafter called the Owner; and that the proposal is made without any connection or collusion with any person making another proposal on this contract.

The bidder further declares that it has carefully examined the contract documents for the construction of the project; that it has personally inspected the site; that it has satisfied itself as to the quantities involved, including materials and equipment and conditions of work involved, including the fact that the description of the quantities of work materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the contract documents; and that this proposal is made according to the provisions and under the terms of the contract documents, which documents are hereby made a part of this proposal.

The bidder further agrees that it has exercised its own judgment regarding the interpretation of subsurface information and has utilized all data which it believes pertinent from the engineer-architect, owner, and other sources in arriving at its conclusions.

The bidder agrees to hold its bid proposal open for 45 days after the actual date of bid opening and to accept the provisions of the Instructions to Bidders regarding disposition of bid bond.

The bidder agrees that if this proposal is accepted, it will, within ten (10) calendar days after notification of acceptance, execute the contract with the Owner in the form of contract included in the contract documents, and will, at the time of execution of the contract, deliver to the Owner the Performance and Payment Bond and all Certificates of Insurance required therein, and will, to the extent of its proposals, furnish all machinery, tools, apparatus, and other means of construction and do the work in the manner, in the time, and according to the methods as specified in the contract documents and required by the engineer or other project manager designated thereunder.

The bidder further agrees, if awarded the contract, to begin work within ten (10) calendar days after the date of the execution of the contract and to complete the construction within the time specified in Section 1-08.5 of the Special Provisions.

In the event the bidder is awarded the contract and shall fail to complete the work within the time limit or extended time limit agreed upon as more particularly set forth in the contract documents, liquidated damages shall be paid to the Owner per the specifications contained in the contract documents.
The bidder further proposes to accept as full payment for the work proposed herein, the amounts
computed under the provisions of the contract documents and based upon the lump sum and unit
price amounts entered by the bidder for the various bid items included in the Bid Schedule. The
bidder further agrees the lump sum and unit prices entered for the various bid items included in
the Bid Schedule include all use taxes, overhead, profit, bond premiums, insurance premiums
and all other miscellaneous and incidental expenses as well as all costs of materials, labor, tools
and equipment required to perform and complete the work.

Within the three-year period immediately preceding the date of the bid solicitation for this
Project, bidder has not been determined by a final and binding citation and notice of
assessment issued by the department of labor and industries or through a civil judgment
entered by a court of limited or general jurisdiction to have willfully violated, as defined in
RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

The evaluation of bid and determination of the low responsive bid shall be based on the Base Bid
(Schedules A + B + C) from the bid schedules.

The undersigned bids and agrees to complete all construction of the 108th Ave NE Sewer and
Water Replacement; JOB NO. 48-19-PW for the following:

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Subtotal Bid Price</th>
<th>Sales Tax (Rule 170)</th>
<th>Total Bid Price</th>
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<tr>
<td>A – Sanitary Sewer Main – 108th Ave NE from NE 68th St to NE 53rd St</td>
<td>$_____________</td>
<td>$_____________</td>
<td>$_____________</td>
</tr>
<tr>
<td>B – Water Main – 108th Ave NE from NE 68th St to NE 60th St</td>
<td>$_____________</td>
<td>$_____________</td>
<td>$_____________</td>
</tr>
<tr>
<td>C – Road Overlay and ADA Ramp Replacement</td>
<td>$_____________</td>
<td>$N/A</td>
<td>$_____________</td>
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</table>

TOTAL BASE BID with tax (in figures) | $_____________
TOTAL BASE BID with tax (in words) | $_____________

To be considered responsible, the bidder shall submit a price on each and every item of work
included in Schedules A, B, and C.

Receipt of Addenda No(s). _______________ is hereby acknowledged.

I certify (or declare) under penalty of perjury under the laws of the State of Washington
that the foregoing is true and correct:
**Bid proposal to be submitted in a sealed envelope marked "Bid Enclosed" for 108th Ave NE Sewer and Water Replacement, JOB NO. 48-19-PW.**
CITY OF KIRKLAND
BID SCHEDULE

108th Ave NE Sewer and Water Replacement
JOB NO. 48-19-PW

Note: Unit prices for all items, all extensions, and the total amount of the bid must be shown. All entries must be typed or entered in ink.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Description</th>
<th>Spec Ref.</th>
<th>Est. Qty.</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Amount</th>
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<tr>
<td>A-1</td>
<td>Mobilization / Demobilization - Schedules A and B</td>
<td>1-09</td>
<td>1</td>
<td>LS</td>
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<tr>
<td>A-2</td>
<td>Type B Progress Schedule – Schedules A and B (min. Bid $5,000.00)</td>
<td>1-08</td>
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<td>LS</td>
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<tr>
<td>A-3</td>
<td>SWPPP – All Schedules (min. Bid $5,000.00)</td>
<td>8-01</td>
<td>1</td>
<td>LS</td>
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<td>A-4</td>
<td>SPCC Plan – All Schedules (min. Bid $5,000.00)</td>
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<td>1</td>
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<tr>
<td>A-5</td>
<td>Project Temporary Traffic Control (min. Bid $10,000.00)</td>
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<td>1</td>
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<tr>
<td>A-6</td>
<td>Other Traffic Control Labor – Off Duty Police (min. Bid $75/HR)</td>
<td>1-10</td>
<td>60</td>
<td>HR</td>
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<tr>
<td>A-7</td>
<td>Trench Safety Systems (Shoring)</td>
<td>7-08</td>
<td>5,153</td>
<td>LF</td>
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<tr>
<td>A-8</td>
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<td>8-01</td>
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<td>A-9</td>
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<td>A-10</td>
<td>PVC Sanitary Sewer Pipe 8 In. Diam.</td>
<td>7-17</td>
<td>1,285</td>
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<td>A-11</td>
<td>PVC Sanitary Sewer Pipe 12 In. Diam.</td>
<td>7-17</td>
<td>2,847</td>
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<td>A-12</td>
<td>PVC Sanitary Sewer Pipe 6 In. Diam.</td>
<td>7-18</td>
<td>1,020</td>
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<td>A-13</td>
<td>Side Sewer Connection</td>
<td>7-18</td>
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<tr>
<td>A-14</td>
<td>Sewer Cleanout</td>
<td>7-19</td>
<td>33</td>
<td>EA</td>
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<td>A-15</td>
<td>48” Sanitary Sewer Manhole</td>
<td>7-05</td>
<td>19</td>
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<td>A-16</td>
<td>Connection to Existing Sewer Main</td>
<td>7-05</td>
<td>13</td>
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<td>A-17</td>
<td>Cement Concrete Crossing with Detectable Warning Surface</td>
<td>8-14</td>
<td>2</td>
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<td>A-18</td>
<td>Remove and Replace Cement Conc. Sidewalk</td>
<td>8-14</td>
<td>129</td>
<td>SY</td>
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<td>A-19</td>
<td>Remove and Replace Cement Conc. Traffic Curb and Gutter</td>
<td>8-04</td>
<td>883</td>
<td>LF</td>
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<tr>
<td>A-20</td>
<td>Remove and Replace Cement Conc. Driveway Entrance</td>
<td>8-06</td>
<td>5</td>
<td>EA</td>
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<tr>
<td>A-21</td>
<td>Median Island 1 Replacement (all other work)</td>
<td>8-02</td>
<td>1</td>
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<tr>
<td>A-22</td>
<td>Median Island 2 Replacement (all other work)</td>
<td>8-02</td>
<td>1</td>
<td>EA</td>
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<tr>
<td>A-23</td>
<td>Median Island 3 Replacement (all other work)</td>
<td>8-02</td>
<td>1</td>
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<tr>
<td>A-24</td>
<td>PSIPE - Cambridge Pear (1.5&quot; Caliper, Branched at 6')</td>
<td>8-02</td>
<td>5</td>
<td>EA</td>
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<tr>
<td>A-25</td>
<td>Gravel Borrow</td>
<td>9-03</td>
<td>6,600</td>
<td>TN</td>
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<td>A-26</td>
<td>Sawcutting Pavement - Up to 9.5&quot; Thick</td>
<td>2-02</td>
<td>11,338</td>
<td>LF</td>
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<td>A-27</td>
<td>Unsuitable Foundation Excavation including Haul</td>
<td>8-02</td>
<td>110</td>
<td>CY</td>
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<tr>
<td>A-28</td>
<td>Crushed Surfacing Base Course</td>
<td>9-03</td>
<td>2,000</td>
<td>TN</td>
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<tr>
<td>A-29</td>
<td>Crushed Surfacing Top Course</td>
<td>9-03</td>
<td>6,600</td>
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<td>A-30</td>
<td>HMA Cl. 1/2&quot; PG 64-22 for Trench Restoration (Temporary)</td>
<td>5-04</td>
<td>320</td>
<td>TN</td>
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<td>A-31</td>
<td>HMA Cl. 1/2&quot; PG 64-22 for Trench Restoration (Permanent)</td>
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<td>2,000</td>
<td>TN</td>
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<tr>
<td>A-32</td>
<td>HMA Cl. 1/2&quot; PG 64-22 for Traffic Island Restoration</td>
<td>5-04</td>
<td>22</td>
<td>TN</td>
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<tr>
<td>A-33</td>
<td>Decommission Monitoring Well</td>
<td>2-02</td>
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<td>EA</td>
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<tr>
<td>A-34</td>
<td>Reference and Replace Survey Monument</td>
<td>8-13</td>
<td>8</td>
<td>EA</td>
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<tr>
<td>A-35</td>
<td>Record Drawings – All Schedules (min. Bid $5,000.00)</td>
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<td>A-36</td>
<td>Miscellaneous Work</td>
<td>1-09</td>
<td>1</td>
<td>FA</td>
<td>$90,000</td>
<td>$90,000</td>
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**TOTAL COMPUTED PRICE** – Bid Schedule A (Base Bid): $

Sales Tax at 10.1%: $

Total with Sales Tax: $
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>Item Description</th>
<th>Spec Ref.</th>
<th>Est. Qty.</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1</td>
<td>Project Temporary Traffic Control (min. Bid $10,000.00)</td>
<td>1-10</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-2</td>
<td>Other Traffic Control Labor – Off Duty Police (min. Bid $75/HR)</td>
<td>1-10</td>
<td>60</td>
<td>HR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-3</td>
<td>Water Pollution/Erosion Control (min. Bid $5,000.00)</td>
<td>8-01</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-4</td>
<td>Trench Safety Systems (Shoring)</td>
<td>7-08</td>
<td>2,535</td>
<td>LF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-5</td>
<td>Construction Surveying</td>
<td>1-05</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-6</td>
<td>Ductile Iron Pipe for Water Main 8 In. Diameter</td>
<td>7-09</td>
<td>260</td>
<td>LF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-7</td>
<td>Ductile Iron Pipe for Water Main 12 In. Diameter</td>
<td>7-09</td>
<td>2,152</td>
<td>LF</td>
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<td></td>
</tr>
<tr>
<td>B-8</td>
<td>Ductile Iron Pipe for Water Main 18 In. Diameter</td>
<td>7-09</td>
<td>37</td>
<td>LF</td>
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<td></td>
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<tr>
<td>B-9</td>
<td>Fire Hydrant Assembly</td>
<td>7-14</td>
<td>7</td>
<td>EA</td>
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<tr>
<td>B-10</td>
<td>Gate Valve 8 in.</td>
<td>7-12</td>
<td>6</td>
<td>EA</td>
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<tr>
<td>B-11</td>
<td>Gate Valve 12 in.</td>
<td>7-12</td>
<td>21</td>
<td>EA</td>
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<td></td>
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<tr>
<td>B-12</td>
<td>Connection to Existing Water Main (8&quot;/12&quot;/18&quot;)</td>
<td>7-09</td>
<td>8</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-13</td>
<td>Additional Ductile Iron Fittings</td>
<td>7-09</td>
<td>3,000</td>
<td>LB</td>
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<td></td>
</tr>
<tr>
<td>B-14</td>
<td>Service Connection 1 in. Diam. Near Side</td>
<td>7-15</td>
<td>15</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-15</td>
<td>Service Connection 1.5&quot; in. Diam. Near Side</td>
<td>7-15</td>
<td>3</td>
<td>EA</td>
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<td></td>
</tr>
<tr>
<td>B-16</td>
<td>Service Connection 1 in. Diam. Far Side</td>
<td>7-15</td>
<td>34</td>
<td>EA</td>
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<td></td>
</tr>
<tr>
<td>B-17</td>
<td>Remove and Replace Cement Conc. Sidewalk</td>
<td>8-14</td>
<td>93</td>
<td>SY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-18</td>
<td>Remove and Replace Cement Conc. Traffic Curb and Gutter</td>
<td>8-04</td>
<td>390</td>
<td>LF</td>
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<tr>
<td>B-19</td>
<td>Remove and Replace Cement Conc. Driveway Entrance</td>
<td>8-06</td>
<td>5</td>
<td>EA</td>
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<td></td>
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<tr>
<td>B-20</td>
<td>Sawcutting Pavement - Up to 9.5&quot; Thick</td>
<td>2-02</td>
<td>5,540</td>
<td>LF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-21</td>
<td>Crushed Surfacing Base Course</td>
<td>9-03</td>
<td>590</td>
<td>TN</td>
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<td></td>
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<tr>
<td>Item</td>
<td>Description</td>
<td>Quantity</td>
<td>Unit</td>
<td>Price</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>B-22</td>
<td>Crushed Surfacing Top Course</td>
<td>9-03</td>
<td>2,000</td>
<td>TN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-23</td>
<td>HMA Cl. 1/2&quot; PG 64-22 for Trench Restoration</td>
<td>5-04</td>
<td>110</td>
<td>TN</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(Temporary)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>B-24</td>
<td>HMA Cl. 1/2&quot; PG 64-22 for Trench Restoration</td>
<td>5-04</td>
<td>1,100</td>
<td>TN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Permanent)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-25</td>
<td>Miscellaneous Work</td>
<td>1-09</td>
<td>1</td>
<td>FA</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>$50,000</td>
<td>$50,000</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL COMPUTED PRICE** – Bid Schedule B (Base Bid): $

Sales Tax at 10.1%: $

Total with Sales Tax: $
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>Item Description</th>
<th>Spec Ref.</th>
<th>Est. Qty.</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1</td>
<td>Mobilization / Demobilization</td>
<td>1-09</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-2</td>
<td>Type B Progress Schedule - Supplement (min. Bid $2,000.00)</td>
<td>1-08</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-3</td>
<td>Project Temporary Traffic Control (min. Bid $10,000.00)</td>
<td>1-10</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-4</td>
<td>Other Traffic Control Labor – Off Duty Police (min. Bid $75/HR)</td>
<td>1-10</td>
<td>60</td>
<td>HR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-5</td>
<td>Water Pollution/Erosion Control (min. Bid $5,000.00)</td>
<td>8-01</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-6</td>
<td>Construction Surveying</td>
<td>1-05</td>
<td>1</td>
<td>LS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-7</td>
<td>Remove and Replace Cement Conc. Sidewalk</td>
<td>8-14</td>
<td>20</td>
<td>SY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-8</td>
<td>Remove and Replace Cement Conc. Traffic Curb and Gutter</td>
<td>8-04</td>
<td>186</td>
<td>LF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-9</td>
<td>Cement Conc. Pedestrian Curb</td>
<td>8-04</td>
<td>288</td>
<td>LF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-10</td>
<td>ADA Curb Ramp Replacement</td>
<td>8-14</td>
<td>9</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-11</td>
<td>Sawcutting Pavement - Up to 9.5&quot; Thick</td>
<td>2-02</td>
<td>310</td>
<td>LF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-12</td>
<td>Crushed Surfacing Base Course</td>
<td>9-03</td>
<td>50</td>
<td>TN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-13</td>
<td>Planing Bituminous Pavement</td>
<td>5-04</td>
<td>18,200</td>
<td>SY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-14</td>
<td>HMA Cl. 1/2&quot; PG 64-22 for 3&quot; Overlay</td>
<td>5-04</td>
<td>3,100</td>
<td>TN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-15</td>
<td>HMA Cl. 1/2&quot; PG 64-22 for Curb Ramp Restoration</td>
<td>5-04</td>
<td>20</td>
<td>TN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-16</td>
<td>MMA Green Bicycle Lane Treatment</td>
<td>9-34</td>
<td>1,100</td>
<td>SF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-17</td>
<td>Traffic Signal Induction Loops</td>
<td>8-20</td>
<td>5</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-18</td>
<td>Miscellaneous Work</td>
<td>1-09</td>
<td>1</td>
<td>FA</td>
<td>$30,000</td>
<td>$30,000</td>
</tr>
</tbody>
</table>

**TOTAL COMPUTED PRICE – Bid Schedule C (Base Bid):** $______________

**Sales Tax at 10.1%:** $ n/a

**Total with Sales Tax:** $______________
BID DEPOSIT

Herewith find deposit in the form of a cashier’s check or certified check in the amount of $__________________ which amount is not less than five percent (5%) of the total bid.

SIGN HERE______________________________

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, ______________________________________________________________, as Principal, and ______________________________________________________________, as Surety, are held and firmly bound unto the City of Kirkland, as Obligee, in the penal sum of ________________________________ dollars, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for

Project Name ________________________________ Job Number ________________________________

according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for faithful performance thereof, with Surety or Sureties approved by the Obligee; or if the Principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _______________ DAY OF __________________, 20______.

PRINCIPAL: ___________________________________________ SURETY: ___________________________________________

Note: If a Bid Bond is provided, it must be accompanied by a power of attorney which appoints the Surety’s true and lawful attorney-in-fact to make, execute, seal and deliver this Bid Bond.
MUST BE SUBMITTED WITH PROPOSAL

CITY OF KIRKLAND
NONCOLLUSION AFFIDAVIT
108th Ave NE Sewer and Water Replacement
CIP NO. CSS-0052/CWA-0052
JOB NO. 48-19-PW

STATE OF WASHINGTON  )
COUNTY OF KING       ) SS

The undersigned, being duly sworn, on oath deposes and says that the person(s), firm, association, partnership or corporation herein named has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.

Firm Name _____________________________________________
Authorized Signature ________________________________

Type Name ___________________________________________
Title ________________________________________________

Sworn to before me, this _____ day of ____________________, 20__.

Notary Public in and for the State of Washington
Residing at __________________________________________
My Commission Expires ____________________________

NOTICE TO ALL BIDDERS
To report bid rigging activities call:  1-800-424-9071

The U.S. Department of Transportation (USDOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., ET. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of USDOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the USDOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.
CITY OF KIRKLAND
STATEMENT OF BIDDER’S QUALIFICATIONS

Contractor Name: ___________________________ Contact: ___________________________

Business Address: ___________________________

Business phone: ___________________________ Fax: ___________________________

Number of years the Contractor has been engaged in the construction business under the present
firm name: ___________________________

Describe the general character of work performed by your company: ___________________________

List five projects of a similar nature which Contractor has completed within the last 10 years. Include contract amount and contact information for references:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Amount</th>
<th>Owner/Agency</th>
<th>Contact</th>
<th>Phone</th>
<th>Year Completed</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

List major equipment anticipated to be used on this project; indicate whether Contractor-owned or to be leased from others:

________________________________________

Bank reference(s): ___________________________

Washington State Contractor Registration No.: ___________________________

Uniform Business Identification No.: ___________________________

I certify that other contracts now in progress or hereafter obtained will not interfere with timely performance of the City of Kirkland project should I become the successful bidder.

Authorized Signature: ___________________________

Print Name: ___________________________ Title: ___________________________
RCW 39.30.060 requires the following:

“Every invitation to bid on a prime contract that is expected to cost one million dollars or more for the construction, alteration, or repair of any public building or public work of the state or a state agency or municipality as defined under RCW 39.04.010 … shall require each prime contract bidder to submit as part of the bid, or within one hour after the published bid submittal time [see note below], the names of the subcontractors with whom the bidder, if awarded the contract, will subcontract for performance of the work of: HVAC (heating, ventilation, and air conditioning); plumbing as described in chapter 18.106 RCW; and electrical as described in chapter 19.28 RCW, or to name itself for the work. The prime contract bidder shall not list more than one subcontractor for each category of work identified, unless subcontractors vary with bid alternates, in which case the prime contract bidder must indicate which subcontractor will be used for which alternate. Failure of the prime contract bidder to submit as part of the bid the names of such subcontractors or to name itself to perform such work or the naming of two or more subcontractors to perform the same work shall render the prime contract bidder's bid non-responsive and, therefore, void."

NOTE: The City of Kirkland has elected not to allow bidders to submit the information required by RCW 39.30.060 after the published bid submittal time. A proposal will be considered irregular and will be rejected if the bidder does not provide the above list as part of its proposal when submitting its bid.

Each bidder shall submit a list of:

1. HVAC, plumbing, and electrical subcontractors; and

2. The specific items of work those subcontractors will perform on the contract; and

3. The specific items of work that will be performed by the bidder on the contract.
CITY OF KIRKLAND
SUBCONTRACTOR IDENTIFICATION LIST

*REQUIRED IF ESTIMATE AMOUNT EXCEEDS $1,000,000 (Reference RCW 39.30.060 RCW)

Proposed Subcontractors and items of work to be performed:
Subcontractor Name: __________________________
Item Numbers: __________________________

Subcontractor Name: __________________________
Item Numbers: __________________________

Subcontractor Name: __________________________
Item Numbers: __________________________

Subcontractor Name: __________________________
Item Numbers: __________________________

- make additional pages if necessary -

Work to be performed by Prime Contractor:
Item Numbers: __________________________

Item Numbers: __________________________

Item Numbers: __________________________
CITY OF KIRKLAND
BIDDER'S CHECKLIST

1. Have you reviewed the Bidder Responsibility and Subcontractor Responsibility Criteria?
2. Have you enclosed a bid bond or certified check with your bid? (Must be at least 5% of the total amount bid)
3. Have you entered a bid amount for all items and all schedules?
4. Do the written amounts of the proposal agree with the amounts shown in the figures?
5. Have you acknowledged receipt of addenda?
6. Has the proposal been properly completed and signed?
7. Have you completed the Statement of Bidder’s Qualifications?
8. Have you completed the City of Kirkland Non-collusion Affidavit?
9. Have you completed the Subcontractor Identification List? (This is to be completed for HVAC, plumbing, and electrical subcontractors if the estimate amount exceeds $1,000,000.)
10. Bid proposal to be submitted in a sealed envelope marked “Bid Enclosed” for:
CITY OF KIRKLAND

TABLE OF CONTENTS – CONTRACT DOCUMENTS

Contract ......................................................................................................................................... 2
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Labor and Material Payment Bond ......................................................................................... 5
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Retainage Bond ....................................................................................................................... 8
Retained Percentage Escrow Agreement .................................................................................. 9
Retainage Release Requirements ........................................................................................... 12
CITY OF KIRKLAND
PUBLIC WORKS AGREEMENT
108th Ave NE Sewer and Water Replacement
JOB NO. 48-19-PW

This agreement is made and entered into this _____ day of __________________, 20____, by and between CONTRACTOR NAME, hereinafter called the "Contractor" and the City of Kirkland, hereinafter called the "Owner."

W I T N E S S E T H:

Whereas, pursuant to the invitation of the Owner extended through an officially published "Invitation to Bid," the Contractor did, in accordance therewith, file with the Owner a proposal containing an offer which was invited by said notice, and

Whereas, the Owner has heretofore determined that said offer was the lowest responsible bid submitted; now, therefore, it is agreed:

Section 1. That Contractor shall comply in every way with the requirements of those certain specifications entitled: "108th Ave NE Sewer and Water Replacement, Job #48-19-PW"

The further terms, conditions and covenants of the contract are set forth in the following contract documents which are hereby made a part of this agreement by actual attachment or by this reference thereto as follows:

A. Any Invitation to Bid, as published by the Owner.
B. Any Specifications prepared for this project by the Owner and named above by title.
C. Any detailed Plans listed and described in said Specifications, together with those which may be issued as supplements thereof.
D. The bid proposals submitted by the Contractor as to those items and/or alternatives accepted by the Owner.
E. Any change orders, additions or deletions, if any, issued by the Owner.

Section 2. In consideration of faithful compliance with the terms and conditions of this agreement, whether set forth herein or incorporated by reference, the Owner shall pay to the Contractor, at the times and in the manner provided in said specifications, the total sum of ______________________ dollars ($____________) which sum is subject, however, to increase or decrease in such proportion as the quantities named in said proposal are so changed, all as in said specifications and proposal provided.

In witness whereof, said Contractor and said Owner have caused this agreement to be executed on the day and year first written above.

__________________________
Signature of authorized officer

__________________________
Name and title of officer (print or type)
WA Contractor's Registration Number  Industrial Insurance Account Number

Uniform Business Identification (UBI) Number  Phone Number

(For corporations, LLC’s and other legal entities)

STATE OF WASHINGTON  )
) SS
COUNTY OF KING  )

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared ________________________________, to me known to be the ______________________ of ______________________, the legal entity that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said legal entity, for the uses and purposes therein set forth, and on oath stated that he/she was authorized to sign said instrument.

Given under my hand and official seal this ______ day of ________________, 2____.

__________________________________
Print Name: ________________________
NOTARY PUBLIC in and for the State of Washington, residing __________
Commission expires: __________

(For individuals and d/b/a’s)

STATE OF WASHINGTON  )
) SS
COUNTY OF KING  )

On this day before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared ________________________________, and ___________________________________ to me known to be the individual(s) described herein and who executed the foregoing instrument, and acknowledged that he/she/they signed the same as his/her/their free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal this ______ day of ________________, 2____.

__________________________________
Print Name: ________________________
NOTARY PUBLIC in and for the State of Washington, residing __________
Commission expires: __________

CITY OF KIRKLAND

BY: Tracey Dunlap, Deputy City Manager
PERFORMANCE BOND

Surety to have an A.M. Best rating of A-:VII or better.

Bond No. __________________________

KNOW ALL PERSONS BY THESE PRESENTS, that CONTRACTOR NAME, as Principal, and __________________________, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of ______________, (insert Surety’s state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) in the sum of __________________________ dollars ($_____________), lawful money of the United States of America, plus the total amount of extra orders issued by the City to the Principal pursuant to the terms of the Contract referred to in the next succeeding paragraph hereof, for the payment whereof Principal and Surety bind ourselves, and our heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has been awarded, and is about to enter into, a written Contract with the City for 108th Ave NE Sewer and Water Replacement, Job #48-19-PW, which is hereby made a part of this bond as if fully set forth herein; 

NOW, THEREFORE, the condition of this bond is such that:

1. If the Principal shall completely and faithfully perform all of its obligations under the Contract, including any warranties required thereunder, and all modifications, amendments, additions, and alterations thereto, including modifications which increase the contract price or time for completion, with or without notice to the surety; and

2. If the Principal shall indemnify and hold the City harmless from any and all losses, liability, damages, claims, judgments, liens, costs, and fees of any type that the City may be subject to because of the failure or default of the Principal in the performance of any of the terms, conditions, or obligations of the Contract, including all modifications, amendments, additions, and alterations thereto, and any warranties required thereunder;

THEN THIS obligation shall be null and void; otherwise to remain in full force and effect. If the City shall declare Principal to be in default of the Contract, and shall so notify Surety, Surety shall, within a reasonable time which shall not exceed 14 days, except for good cause shown, notify the City in writing of the manner in which surety will satisfy its obligations under this Bond.

Nonpayment of the Bond premium will not invalidate this Bond nor shall the City be obligated for the payment thereof. The Surety hereby waives notice of any modification of the Contract or extension of time made by the City.

Signed this _________ day of ________________________, 2____.

Principal: __________________________

By: __________________________

Title: __________________________

Address: __________________________

City/Zip: __________________________

Telephone: (    ) __________________________

Surety: __________________________

By: __________________________

Title: __________________________

Address: __________________________

City/Zip: __________________________

Telephone: (    ) __________________________

Note: A power of attorney must be provided which appoints the Surety’s true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.
LABOR, MATERIAL AND TAXES PAYMENT BOND

Surety to have an A.M. Best rating of A-:VII or better.

Bond No. ________________________________

KNOW ALL PERSONS BY THESE PRESENTS, that, CONTRACTOR NAME, as Principal, and __________________________________________, (insert name of surety), as Surety, a corporation duly organized under the laws of the State of __________________ (insert Surety’s state of incorporation), and authorized to do business as a surety in the State of Washington, are held and firmly bound unto the City of Kirkland (City) for the use and benefit of claimants as hereinafter defined, in the sum of ___________________________ Dollars ($__________).

lawful money of the United States of America, plus the total amount of any extra orders issued by the City, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has been awarded, and is about to enter into, a Contract with City of Kirkland for 108th Ave NE Sewer and Water Replacement, Job #48-19-PW, which contract is by this reference made a part hereof;

WHEREAS, the contract is a public works contract, subject to the provisions of RCW Titles 39 and 60;

NOW, THEREFORE, the conditions of this obligation are such that, if the Principal shall promptly make payment to all claimants as hereinafter defined, for (a) all labor and material used or reasonably required for use in the performance of the contract and (b) all taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due, then this obligation shall be void; otherwise, it shall remain in full force and effect, subject, however, to the following conditions:

A claimant is defined as and includes (a) a person claiming to have supplied labor or materials for the prosecution of the work provided for in the contract, including any person having direct contractual relationship with the contractor furnishing the bond or direct contractual relationship with any subcontractor, or an assignee of such person, (b) the state with respect to taxes incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due and (c) any other person or entity as allowed or required by law.

3. The Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full prior to Final Acceptance of the project, or materials were furnished by such claimant, has an action on this bond for such sum or sums as may be justly due claimant, and may have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit or action.

(Form continues on next page)
4. No suit or action shall be commenced hereunder by any claimant (except the state with respect to taxes, increases, and penalties incurred on the above-referenced contract under Titles 50, 51, and 82 RCW which may be due) unless the claimant has sent the written notice required under RCW Title 39 to the Principal and to the City’s Purchasing Agent by registered or certified mail, or by hand delivery, no later than 30 days after Final Acceptance of the Project.

The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against the improvement, whether or not claim for the amount of such lien be presented under and against this bond.

The Surety hereby waives notice of any modification of the contract or extension of time made by the City.

Signed this ______________ day of ______________, 2_____  
Principal:                      Surety:                      
By:                           By:                           
Title:                       Title:                       
Address:                     Address:                     
City/Zip:                    City/Zip:                    
Telephone: (      )  Telephone: (      )  

Note: A power of attorney must be provided which appoints the Surety's true and lawful attorney-in-fact to make, execute, seal and deliver this performance bond.

END OF LABOR, MATERIAL AND TAXES PAYMENT BOND FORM
CITY OF KIRKLAND
CONTRACTOR'S DECLARATION OF OPTION FOR MANAGEMENT OF STATUTORY RETAINED PERCENTAGE
108th Ave NE Sewer and Water Replacement
JOB NO. 48-19-PW

Monies reserved under provisions of Chapter 60.28 RCW, at the option of the Contractor, shall be:

Select One
[ ] (1) Retained in a fund by the City. No interest will be earned on the retained percentage amount under this election.

[ ] (2) Retainage Bond

[ ] (3) Placed in escrow with a bank or trust company by the City. When the monies reserved are to be placed in escrow, the City will issue a check representing the sum of the monies reserved payable to the bank or trust company and the Contractor jointly. Such check shall be converted into bonds and securities chosen by the Contractor and approved by the City and the bonds and securities held in escrow. (For the convenience of those Contractors choosing option (3) a City approved Form of Escrow Agreement is included on the next page and should be completed and submitted with the executed contract.)

[ ] (4) Deposited by the City in an interest-bearing account at the FDIC insured bank currently providing contracted banking services to the City of Kirkland. Interest on such account shall be paid to the contractor. Any fees incurred shall be the responsibility of the contractor.

The Contractor in choosing option (3) agrees to assume full responsibility to pay all costs which may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retained percentages in securities.

CONTRACTOR:

Signature: __________________________________________

Print or Type Name: _________________________________________

Title: ___________________________________________________

Date: ____________________________________________________
RETAINAGE BOND
RETURN THIS FORM IF RETAINAGE BOND OPTION IS SELECTED

<table>
<thead>
<tr>
<th>Contract Title</th>
<th>108th Ave NE Sewer and Water Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Number</td>
<td>48-19-PW</td>
</tr>
<tr>
<td>Contractor Name</td>
<td></td>
</tr>
</tbody>
</table>

The Undersigned, existing under and by virtue of the laws of the State of Washington and authorized to do business in the State of Washington as Principal, and organized and existing under the laws of the State of____________________ and authorized to transact business in the State of Washington as Surety, are jointly and severally held and bound unto________________, hereinafter called Obligee, and are similarly held and bound unto the beneficiaries of the trust fund created by RCW 60.28, in the penal sum of ($______________), which is 5% of the principal’s price on Contract ID___________.

WHEREAS, on the __________ day of __________, 2____, the said principal herein executed a contract with the Obligee, for the Contract specified above, Contract ID Number_____.

WHEREAS, said contract and RCW 60.28 require the Obligee to withhold from the Principal the sum of ___% from monies earned on estimates during the progress of the construction, herein after referred to as earned retained funds.

NOW WHEREAS, Principal has requested that the Obligee not retain any earned retained funds as allowed under RCW 60.28.

NOW THEREFORE, the condition of the obligation is such that the Principal and Surety are held and bound unto the beneficiaries of the trust fund created by RCW 60.28 in the penal sum of ______________ percent (___%) of the final contract cost which shall include any increases due to change orders, increases in quantities of work or the addition of any new item of work. If the Principal shall use the earned retained funds, which will not be retained, for the trust fund purposes of RCW 60.28, then this obligation shall be null and void; otherwise, it shall remain in full force and effect until release is authorized in writing by the Obligee. This bond and any proceeds therefrom shall be made subject to all claims and liens and in the same manner and priority as set forth for retained percentages in RCW 60.28.

PROVIDED HOWEVER, that:
1. The liability of the surety under this bond shall not exceed 5% or 50% of the total amount earned by the Principal if no monies are retained by the Obligee on estimates during the progress of construction.
2. Any suit under this bond must be instituted within the time provided by applicable law.

Witness our hands this _________ day of ____________, 2____.

SURETY

By: _____________________________
Name/Title __________________________
OF: ______________________________

PRINCIPAL

By: _____________________________
Name/Title __________________________
OF: ______________________________

Surety Name and Local Office of Agent:

Surety Address and Phone of Local Office and Agent:
CITY OF KIRKLAND
RETAINED PERCENTAGE ESCROW AGREEMENT
108th Ave NE Sewer and Water Replacement
JOB NO. 48-19-PW

Escrow No. 

City of Kirkland
123 Fifth Avenue
Kirkland, Washington  98033

Contractor: 
Address: 

Project Description: 

TO: Escrow Bank or Trust Company:
Name: 
Address: 
Attention: 

The undersigned, _____________________________________________, herein referred to as the Contractor, has directed the City of Kirkland to deliver to you its warrants, which shall be payable to you and the Contractor jointly. Such warrants are to be held and disposed of by you in accordance with the following instructions and upon the terms and conditions hereinafter set forth.

INSTRUCTIONS

1. Warrants or checks made payable to you and the Contractor jointly upon delivery to you shall be endorsed by you and forwarded for collection. The moneys will then be used by you to purchase, as directed by the Contractor, bonds or other securities chosen by the Contractor and approved by the City of Kirkland. Attached is a list of such bonds, or other securities approved by the City of Kirkland. Other bonds or securities, except stocks, may be selected by the Contractor, subject to the express written approval of the City of Kirkland. Purchase of such bonds or other securities shall be in a form which shall allow you alone to reconvert such bonds or other securities into money if you are required to do so at the direction of the City of Kirkland and Contractor.

2. When and as interest on the securities held by you pursuant to this agreement accrues and is paid, you shall collect such interest and forward it to the Contractor at its address designated below unless otherwise directed by the Contractor.

3. You are not authorized to deliver to the Contractor all or any part of the securities held by you pursuant to this agreement (or any moneys derived from the sale of such securities, or the negotiation of the City of Kirkland’s warrants) except in accordance with written instructions from
the City of Kirkland. Compliance with such instructions shall relieve you of any further liability related thereto. The estimated completion date on the contract underlying this Escrow Agreement is ________________.

4. The Contractor agrees to pay you as compensation for your services hereunder as follows:

Payment of all fees shall be the sole responsibility of the Contractor and shall not be deducted from any property placed with you pursuant to this agreement until and unless the City of Kirkland directs the release to the Contractor of the securities and moneys held hereunder whereupon you shall be granted a first lien upon such property released and shall be entitled to reimburse yourself from such property for the entire amount of your fees as provided for hereinabove. In the event that you are made a party to any litigation with respect to the property held by you hereunder, or in the event that the conditions of this escrow are not promptly fulfilled or that you are required to render any service not provided for in these instructions, or that there is any assignment of the interests of this escrow or any modification hereof, you shall be entitled to reasonable compensation for such extraordinary services from the Contractor and reimbursement from the Contractor for all costs and expenses, including attorneys fees occasioned by such default, delay, controversy, or litigation.

5. This agreement shall not be binding until executed by the Contractor and the City of Kirkland and accepted by you.

6. This instrument contains the entire agreement between you, the Contractor and the City of Kirkland, with respect to this escrow and you are not a part nor bound by any instrument or agreement other than this; you shall not be required to take notice of any default or any other matter nor be bound by nor required to give notice or demand, nor required to take any action whatever, except as herein expressly provided; you shall not be liable for any loss or damage not caused by your own negligence or willful misconduct.

7. The foregoing provisions shall be binding upon the assigns, successors, personal representatives, and heirs of the parties hereto.

8. The Contractor’s Federal Income Tax Identification number is ________________.

** Please note: Written release will be issued by the Director of Finance & Administration. For further information, contact the Purchasing Agent at (425) 587-3123.
The undersigned have read and hereby approve the instructions as given above governing the administration of this escrow and do hereby execute this agreement on this _____ day of ____________________, 2____.

CONTRACTOR:  

By:  

Signature

Print or Type Name

Title

Address: ________________________________

CITY OF KIRKLAND:

By:  

Signature

Print or Type Name

Title

123 Fifth Avenue

Kirkland, Washington  98033

The above escrow instructions received and accepted this _____ day of ____________________, 2____.

ESCROW BANK OR TRUST CO:

By:  

Authorized Signature

Print or Type Name

Title

Securities Authorized by City of Kirkland (select one):

1. Bills, certificates, notes or bonds of the United States;
2. Other obligations of the United States or its agencies;
3. Obligations of any corporation wholly-owned by the government of the United States;
4. Indebtedness of the Federal National Mortgage Association; and
5. Time deposits in commercial banks.

RETURN THIS SIGNED AGREEMENT TO:

City of Kirkland
Attn:  Purchasing Agent
123 Fifth Avenue
Kirkland, Washington  98033
CITY OF KIRKLAND
RETAINAGE RELEASE REQUIREMENTS

DOCUMENTS REQUIRED TO BE ON FILE PRIOR TO RELEASE OF RETAINAGE

1. Intent to Pay Prevailing Wage (Contractor must generate including for subcontractors)

   Department of Labor/Industries
   Employment Standards Division
   General Administration Building
   Olympia, Washington  98504
   (360) 956-5335

2. Notice of Completion of Public Works Contract (City generates)

   Department of Revenue
   Excise Tax Division
   Olympia, Washington  98504

3. Affidavit of Wages Paid (Contractor must generate including for subcontractors)

   Department of Labor/Industries

4. Certificate of Release - State Excise Tax by Public Works Contractor (Letter from State to City)

   Department of Revenue
   Department of Labor and Industries
   Employment Security Department

5. Receipt for Payment in full or Release of Lien signed by Lien Claimant and filed with City (Responsibility of Contractor to obtain)

   Claims against retainage or Payment Bond filed with City by any such subcontractor, workman, or material supplier.

6. Current insurance certificate through retainage release (Contractor generates)

7. Produce final invoice for retainage if bond is not selected (Contractor generates)
AMENDMENTS TO THE STANDARD SPECIFICATIONS
INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2018 Standard Specifications for Road, Bridge, and Municipal Construction.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

The following Amendments to the Standard Specifications are made a part of this contract and supersede any conflicting provisions of the Standard Specifications. For informational purposes, the date following each Amendment title indicates the implementation date of the Amendment or the latest date of revision.

Each Amendment contains all current revisions to the applicable section of the Standard Specifications and may include references which do not apply to this particular project.

1-01.AP1

Section 1-01, Definitions and Terms
August 6, 2018

1-01.3 Definitions

The following new term and definition is inserted before the definition for “Shoulder”:

Sensitive Area – Natural features, which may be previously altered by human activity, that are present on or adjacent to the project location and protected, managed, or regulated by local, tribal, state, or federal agencies.

The following new term and definition is inserted after the definition for “Working Drawings”:

WSDOT Form – Forms developed and maintained by WSDOT that are required or available for use on a project. These forms can be downloaded from the forms catalogue at:

http://wsdot.wa.gov/forms/pdfForms.html

1-02.AP1

Section 1-02, Bid Procedures and Conditions
June 3, 2019

1-02.4(1) General

This section is supplemented with the following:

Prospective Bidders are advised that the Contracting Agency may include a partially completed Washington State Department of Ecology (Ecology) Transfer of Coverage (Ecology Form ECY 020-87a) for the Construction Stormwater General Permit (CSWGP) as part of the Bid Documents. When the Contracting Agency requires the transfer of coverage of the CSWGP to the Contractor, an informational copy of the Transfer of Coverage and the associated CSWGP will be included in the appendices. As a condition of Section 1-03.3, the Contractor is required to complete sections I, III, and VIII of the Transfer of Coverage and return the form to the Contracting Agency.
The Contracting Agency is responsible for compliance with the CSWGP until the end of day that the Contract is executed. Beginning on the day after the Contract is executed, the Contractor shall assume complete legal responsibility for compliance with the CSWGP and full implementation of all conditions of the CSWGP as they apply to the Contract Work.

1-02.5 Proposal Forms

The first sentence of the first paragraph is revised to read:

At the request of a Bidder, the Contracting Agency will provide a physical Proposal Form for any project on which the Bidder is eligible to Bid.

1-02.6 Preparation of Proposal

Item number 1 of the second paragraph is revised to read:

1. A unit price for each item (omitting digits more than two places to the right of the decimal point),

In the third sentence of the fourth paragraph, “WSDOT Form 422-031” is revised to read “WSDOT Form 422-031U”.

The following new paragraph is inserted before the last paragraph:

The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form (WSDOT Form 272-009). Failure to return this certification as part of the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

1-02.13 Irregular Proposals

Item 1(h) is revised to read:

h. The Bidder fails to submit Underutilized Disadvantaged Business Enterprise Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;

Item 1(i) is revised to read the following three items:

i. The Bidder fails to submit a UDBE Bid Item Breakdown form, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;

j. The Bidder fails to submit UDBE Trucking Credit Forms, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions; or

k. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation.
Section 1-03, Award and Execution of Contract

January 2, 2018

1-03.3 Execution of Contract

The first paragraph is revised to read:

Within 20 calendar days after the Award date, the successful Bidder shall return the signed Contracting Agency-prepared Contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided, and shall be registered as a contractor in the state of Washington.

1-03.5 Failure to Execute Contract

The first sentence is revised to read:

Failure to return the insurance certification and bond with the signed Contract as required in Section 1-03.3, or failure to provide Disadvantaged, Minority or Women’s Business Enterprise information if required in the Contract, or failure or refusal to sign the Contract, or failure to register as a contractor in the state of Washington, or failure to return the completed Transfer of Coverage for the Construction Stormwater General Permit to the Contracting Agency when provided shall result in forfeiture of the proposal bond or deposit of this Bidder.

Section 1-05, Control of Work

August 6, 2018

1-05.5 Vacant

This section, including title, is revised to read:

1-05.5 Tolerances

Geometrical tolerances shall be measured from the points, lines, and surfaces defined in Contract documents.

A plus (+) tolerance increases the amount or dimension to which it applies, or raises a deviation from level. A minus (-) tolerance decreases the amount or dimension to which it applies, or lowers a deviation from level. Where only one signed tolerance is specified (+ or -), there is no specified tolerance in the opposing direction.

Tolerances shall not be cumulative. The most restrictive tolerance shall control.

Tolerances shall not extend the Work beyond the Right of Way or other legal boundaries identified in the Contract documents. If application of tolerances causes the extension of the Work beyond the Right of Way or legal boundaries, the tolerance shall be reduced for that specific instance.

Tolerances shall not violate other Contract requirements. If application of tolerances causes the Work to violate other Contract requirements, the tolerance shall be reduced for that specific instance. If application of tolerances causes conflicts with other
components or aspects of the Work, the tolerance shall be reduced for that specific instance.

1-05.9 Equipment

The following new paragraph is inserted before the first paragraph:

Prior to mobilizing equipment on site, the Contractor shall thoroughly remove all loose dirt and vegetative debris from drive mechanisms, wheels, tires, tracks, buckets and undercarriage. The Engineer will reject equipment from the site until it returns clean.

This section is supplemented with the following:

Upon completion of the Work, the Contractor shall completely remove all loose dirt and vegetative debris from equipment before removing it from the job site.

1-06.AP1

Section 1-06, Control of Material
January 7, 2019

1-06.1(3) Aggregate Source Approval (ASA) Database

This section is supplemented with the following:

Regardless of status of the source, whether listed or not listed in the ASA database the source owner may be asked to provide testing results for toxicity in accordance with Section 9-03.21(1).

1-06.2(2)D Quality Level Analysis

This section is supplemented with the following new subsection:

1-06.2(2)D5 Quality Level Calculation – HMA Compaction

The procedures for determining the quality level and pay factor for HMA compaction are as follows:

1. Determine the arithmetic mean, $X_m$, for compaction of the lot:

$$X_m = \frac{\sum x}{n}$$

Where:

$x$ = individual compaction test values for each sublot in the lot.

$\sum x$ = summation of individual compaction test values

$n$ = total number test values

2. Compute the sample standard deviation, “$S$”, for each constituent:

$$S = \left[ \frac{n\sum x^2 - (\sum x)^2}{n(n-1)} \right]^{\frac{1}{2}}$$

Where:
\[ \sum x^2 = \text{summation of the squares of individual compaction test values} \]
\[ (\sum x)^2 = \text{summation of the individual compaction test values squared} \]

3. Compute the lower quality index \((Q_L)\):

\[ Q_L = \frac{X_m - LSL}{S} \]

Where:

\[ LSL = 92.0 \]

4. Determine \(P_L\) (the percent within the lower Specification limit which corresponds to a given \(Q_L\)) from Table 1. For negative values of \(Q_L\), \(P_L\) is equal to \(100\) minus the table \(P_L\). If the value of \(Q_L\) does not correspond exactly to a figure in the table, use the next higher value.

5. Determine the quality level (the total percent within Specification limits):

\[ \text{Quality Level} = P_L \]

6. Using the quality level from step 5, determine the composite pay factor (CPF) from Table 2.

7. If the CPF determined from step 6 is \(1.00\) or greater: use that CPF for the compaction lot; however, the maximum HMA compaction CPF using an \(LSL = 92.0\) shall be \(1.05\).

8. If the CPF from step 6 is not \(1.00\) or greater: repeat steps 3 through 6 using an \(LSL = 91.5\). The value thus determined shall be the HMA compaction CPF for that lot; however, the maximum HMA compaction CPF using an \(LSL = 91.5\) shall be \(1.00\).

1-06.2(2)D1 Quality Level Analysis

The following new sentence is inserted after the first sentence:

The quality level calculations for HMA compaction are completed using the formulas in Section 1-06.2(2)D5.

1-06.2(2)D4 Quality Level Calculation

The first paragraph (excluding the numbered list) is revised to read:

The procedures for determining the quality level and pay factors for a material, other than HMA compaction, are as follows:

1-06.6 Recycled Materials

The first three sentences of the second paragraph are revised to read:

The Contractor shall submit a Recycled Material Utilization Plan on WSDOT Form 350-075A within 30 calendar days after the Contract is executed. The plan shall provide the Contractor’s anticipated usage of recycled concrete aggregates for meeting the requirements of these Specifications. The quantity of recycled concrete aggregate will
be provided in tons and as a percentage of the Plan quantity for eligible material listed in Section 9-03.21(1)E Table on Maximum Allowable percent (By Weight) of Recycled Material.

The last paragraph is revised to read:

Within 30 calendar days after Physical Completion, the Contractor shall report the quantity of recycled concrete aggregates that were utilized in the construction of the project for each eligible item listed in Section 9-03.21(1)E. The Contractor’s report shall be provided on WSDOT Form 350-075A, Recycled Materials Reporting.

1-06.6(1)A General

Item 1(a) in the second paragraph is revised to read:

a. The estimated costs for the Work for each material with 25 percent recycled concrete aggregate. The cost estimate shall include for each material a documented price quote from the supplier with the lowest total cost for the Work.

1-07.AP1

Section 1-07, Legal Relations and Responsibilities to the Public

April 1, 2019

1-07.5 Environmental Regulations

This section is supplemented with the following new subsections:

1-07.5(5) U.S. Army Corps of Engineers
When temporary fills are permitted, the Contractor shall remove fills in their entirety and the affected areas returned to pre-construction elevations.

If a U.S. Army Corps of Engineers permit is noted in Section 1-07.6 of the Special Provisions, the Contractor shall retain a copy of the permit or the verification letter (in the case of a Nationwide Permit) on the worksite for the life of the Contract. The Contractor shall provide copies of the permit or verification letter to all subcontractors involved with the authorized work prior to their commencement of any work in waters of the U.S.

1-07.5(6) U.S. Fish/Wildlife Services and National Marine Fisheries Service
The Contracting Agency will provide fish exclusion and handling services if the Work dictates. However, if the Contractor discovers any fish stranded by the project and a Contracting Agency biologist is not available, they shall immediately release the fish into a flowing stream or open water.

1-07.5(1) General

The first sentence is deleted and replaced with the following:

No Work shall occur within areas under the jurisdiction of resource agencies unless authorized in the Contract.

The third paragraph is deleted.

1-07.5(2) State Department of Fish and Wildlife
This section is revised to read:
In doing the Work, the Contractor shall:

1. Not degrade water in a way that would harm fish, wildlife, or their habitat.

2. Not place materials below or remove them from the ordinary high water line except as may be specified in the Contract.

3. Not allow equipment to enter waters of the State except as specified in the Contract.

4. Revegetate in accordance with the Plans, unless the Special Provisions permit otherwise.

5. Prevent any fish-threatening silt buildup on the bed or bottom of any body of water.


7. Dispose of any project debris by removal, burning, or placement above high-water flows.

8. Immediately notify the Engineer and stop all work causing impacts, if at any time, as a result of project activities, fish are observed in distress or a fish kill occurs.

If the Work in (1) through (3) above differs little from what the Contract requires, the Contracting Agency will measure and pay for it at unit Contract prices. But if Contract items do not cover those areas, the Contracting Agency will pay pursuant to Section 1-09.4. Work in (4) through (8) above shall be incidental to Contract pay items.

1-07.5(3) State Department of Ecology
This section is revised to read:

In doing the Work, the Contractor shall:


2. Perform Work in such a manner that all materials and substances not specifically identified in the Contract documents to be placed in the water do not enter waters of the State, including wetlands. These include, but are not limited to, petroleum products, hydraulic fluid, fresh concrete, concrete wastewater, process wastewater, slurry materials and waste from shaft drilling, sediments, sediment-laden water, chemicals, paint, solvents, or other toxic or deleterious materials.

3. Use equipment that is free of external petroleum-based products.

4. Remove accumulations of soil and debris from drive mechanisms (wheels, tracks, tires) and undercarriage of equipment prior to using equipment below the ordinary high water line.
5. Clean loose dirt and debris from all materials placed below the ordinary high water line. No materials shall be placed below the ordinary high water line without the Engineer’s concurrence.

6. When a violation of the Construction Stormwater General Permit (CSWGP) occurs, immediately notify the Engineer and fill out WSDOT Form 422-011, Contractor ECAP Report, and submit the form to the Engineer within 48 hours of the violation.

7. Once Physical Completion has been given, prepare a Notice of Termination (Ecology Form ECY 020-87) and submit the Notice of Termination electronically to the Engineer in a PDF format a minimum of 7 calendar days prior to submitting the Notice of Termination to Ecology.

8. Transfer the CSWGP coverage to the Contracting Agency when Physical Completion has been given and the Engineer has determined that the project site is not stabilized from erosion.

9. Submit copies of all correspondence with Ecology electronically to the Engineer in a PDF format within four calendar days.

1-07.5(4) Air Quality
This section is revised to read:

The Contractor shall comply with all regional clean air authority and/or State Department of Ecology rules and regulations.

The air quality permit process may include additional State Environment Policy Act (SEPA) requirements. Contractors shall contact the appropriate regional air pollution control authority well in advance of beginning Work.

When the Work includes demolition or renovation of any existing facility or structure that contains Asbestos Containing Material (ACM) and/or Presumed Asbestos-Containing Material (PACM), the Contractor shall comply with the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Any requirements included in Federal and State regulations regarding air quality that applies to the “owner or operator” shall be the responsibility of the Contractor.

1-07.7(1) General
The first sentence of the third paragraph is revised to read:

When the Contractor moves equipment or materials on or over Structures, culverts or pipes, the Contractor may operate equipment with only the load-limit restrictions in Section 1-07.7(2).

The first sentence of the last paragraph is revised to read:

Unit prices shall cover all costs for operating over Structures, culverts and pipes.

1-07.9(1) General
The last sentence of the sixth paragraph is revised to read:
Generally, the Contractor initiates the request by preparing standard form 1444 Request for Authorization of Additional Classification and Rate, available at https://www.dol.gov/whd/recovery/dbsurvey/conformance.htm, and submitting it to the Engineer for further action.

1-07.9(2) Posting Notices
The second sentence of the first paragraph (up until the colon) is revised to read:

The Contractor shall ensure the most current edition of the following are posted:

The revision dates are deleted from all items in the numbered list.

The following new items are inserted after item number 1:

2. **Mandatory Supplement to EEOC P/E-1** published by US Department of Labor.
   Post for projects with federal-aid funding.


Item number 2 through 12 are renumbered to 4 through 14, respectively.

1-07.11(2) Contractual Requirements
In this section, “creed” is revised to read “religion”.

Item numbers 1 through 9 are revised to read 2 through 10, respectively.

After the preceding Amendment is applied, the following new item number 1 is inserted:

1. The Contractor shall maintain a Work site that is free of harassment, humiliation, fear, hostility and intimidation at all times. Behaviors that violate this requirement include but are not limited to:

   a. Persistent conduct that is offensive and unwelcome.

   b. Conduct that is considered to be hazing.

   c. Jokes about race, gender, or sexuality that are offensive.

   d. Unwelcome, unwanted, rude or offensive conduct or advances of a sexual nature which interferes with a person’s ability to perform their job or creates an intimidating, hostile, or offensive work environment.

   e. Language or conduct that is offensive, threatening, intimidating or hostile based on race, gender, or sexual orientation.

   f. Repeating rumors about individuals in the Work Site that are considered to be harassing or harmful to the individual’s reputation.

1-07.11(5) Sanctions
This section is supplemented with the following:
Immediately upon the Engineer’s request, the Contractor shall remove from the Work site any employee engaging in behaviors that promote harassment, humiliation, fear or intimidation including but not limited to those described in these specifications.

1-07.11(6) Incorporation of Provisions

The first sentence is revised to read:

The Contractor shall include the provisions of Section 1-07.11(2) Contractual Requirements (1) through (5) and the Section 1-07.11(5) Sanctions in every subcontract including procurement of materials and leases of equipment.

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

The last sentence of the first paragraph is revised to read:


1-07.16(2)A Wetland and Sensitive Area Protection

The first sentence of the first paragraph is revised to read:

Existing wetland and other sensitive areas, where shown in the Plans or designated by the Engineer, shall be saved and protected through the life of the Contract.

1-07.18 Public Liability and Property Damage Insurance

Item number 1 is supplemented with the following new sentence:

This policy shall be kept in force from the execution date of the Contract until the Physical Completion Date.

1-08.AP1

Section 1-08, Prosecution and Progress

1-08.1 Subcontracting

The first sentence of the seventh paragraph is revised to read:

All Work that is not performed by the Contractor will be considered as subcontracting except: (1) purchase of sand, gravel, crushed stone, crushed slag, batched concrete aggregates, ready-mix concrete, off-site fabricated structural steel, other off-site fabricated items, and any other materials supplied by established and recognized commercial plants; or (2) delivery of these materials to the Work site in vehicles owned or operated by such plants or by recognized independent or commercial hauling companies hired by those commercial plants.

The following new paragraph is inserted after the seventh paragraph:

The Contractor shall not use businesses (material suppliers, vendors, subcontractors, etc.) with federal purchasing exclusions. Businesses with exclusions are identified using the System for Award Management web page at www.SAM.gov.
1-08.5 Time for Completion

Item number 2 of the sixth paragraph is supplemented with the following:

f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).

1-08.7 Maintenance During Suspension

The fifth paragraph is revised to read:

The Contractor shall protect and maintain all other Work in areas not used by traffic. All costs associated with protecting and maintaining such Work shall be the responsibility of the Contractor.

1-09.AP1

Section 1-09, Measurement and Payment
August 6, 2018

1-09.2(1) General Requirements for Weighing Equipment

The last paragraph is supplemented with the following:

When requested by the Engineer, the Contractor’s representative shall collect the tickets throughout the day and provide them to the Engineer’s designated receiver, not later than the end of shift, for reconciliation. Tickets for loads not verified as delivered will receive no pay.

1-09.2(2) Specific Requirements for Batching Scales

The last sentence of the first paragraph is revised to read:

Batching scales used for concrete or hot mix asphalt shall not be used for batching other materials.

1-09.10 Payment for Surplus Processed Materials

The following sentence is inserted after the first sentence of the second paragraph:

For Hot Mix Asphalt, the Plan quantity and quantity used will be adjusted for the quantity of Asphalt and quantity of RAP or other materials incorporated into the mix.

2-01.AP2

Section 2-01, Clearing, Grubbing, and Roadside Cleanup
April 1, 2019

2-01.2(3) Disposal Method No. 3 – Chipping

Item number 2 of the first paragraph is revised to read:

2. Chips shall be disposed outside of sensitive areas, and in areas that aren’t in conflict with permanent Work.
Section 2-02, Removal of Structures and Obstructions  
April 2, 2018

2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters
In item number 3 of the first paragraph, the second sentence is revised to read:

For concrete pavement removal, a second vertical full depth relief saw cut offset 12 to 18 inches from and parallel to the initial saw cut is also required, unless the Engineer allows otherwise.

Section 2-03, Roadway Excavation and Embankment  
April 1, 2019

2-03.3(14)F Displacement of Unsuitable Foundation Materials
This section, including title, is revised to read:

2-03.3(14)F Vacant

Section 2-09, Structure Excavation  
April 1, 2019

2-09.2 Materials
In the first paragraph, the references to “Portland Cement” and “Aggregates for Portland Cement Concrete” are revised to read:

Cement 9-01
Fine Aggregate for Concrete 9-03.1(2)

2-09.3(3)B Excavation Using Open Pits – Extra Excavation
The last two paragraphs are deleted and replaced with the following:

The excavation height (Ht) shall be calculated within a vertical plane as the difference between the lowest elevation in the excavation and the highest elevation of the ground surface immediately adjacent to the excavation. Pavement thickness and other surface treatments existing at the time of the excavation shall be included in the height calculation.

Submittals and Design Requirements
Excavations 4-feet and less in height do not require design and submittals. The Contractor shall provide a safe work environment and shall execute the work in a manner that does not damage adjacent pavements, utilities, or structures. If the Engineer determines the Contractor’s work may potentially affect adjacent traffic, pavements, utilities, or structures, the Engineer may request a Type 1 Working Drawing from the Contractor. The Contractor shall explain in the Type 1 Working Drawing how the Engineer’s concerns will be addressed, why infrastructure will not be damaged by the work, and how worker safety will be preserved.
For excavations that have soil types and slope geometries defined in WAC 296-155 part N and are between 4-feet and 20-feet in height, the Contractor shall submit Type 2 Working Drawings. Required submittal elements include, at a minimum, the following:

1. A plan view showing the limits of the excavation and its relationship to traffic, structures, utilities and other pertinent project elements. If the stability of the excavation requires no-load zones or equipment setback distances, those shall be shown on the plan view.

2. A typical or controlling cross section showing the proposed excavation, original ground line, and locations of traffic, existing structures, utilities, site constraints, surcharge loads, or other conditions that could affect the stability of the slope. If the stability of the excavation requires no-load zones or equipment setback distances, those shall be shown in cross section.

3. A summary clearly describing subsurface conditions, soil type for WAC 296-155 part N, and groundwater conditions, sequencing considerations, and governing assumptions.

Where WAC 296-155 part N requires an engineer’s design, the Contractor shall submit Type 2E Working Drawings. Required submittal elements include, at a minimum, the three items above and the following additional items:

4. Supporting calculations for the design of the excavation, the soil and material properties selected for design, and the justification for the selection for those properties, in accordance with the WSDOT Geotechnical Design Manual M 46-03.

5. Safety factors, or load and resistance factors used, and justification for their selection, in accordance with the WSDOT Geotechnical Design Manual M 46-03, and referenced AASHTO design manuals.

6. A monitoring plan to evaluate the excavation performance throughout its design life.

7. Any supplemental subsurface explorations made by the Contractor to meet the requirements for geotechnical design of excavation slopes, in accordance with the WSDOT Geotechnical Design Manual M 46-03.

2-09.3(3)D Shoring and Cofferdams

The first sentence of the sixth paragraph is revised to read:

Structural shoring and cofferdams shall be designed for conditions stated in this Section using methods shown in Division I Section 5 of the AASHTO Standard Specifications for Highway Bridges Seventeenth Edition – 2002 for allowable stress design, or the AASHTO LRFD Bridge Design Specifications for load and resistance factor design.
3-01.AP3

Section 3-01, Production from Quarry and Pit Sites
April 2, 2018

3-01.1 Description
The first paragraph is revised to read:
This Work shall consist of manufacturing and producing crushed and screened aggregates including pit run aggregates of the kind, quality, and grading specified for use in the construction of concrete, hot mix asphalt, crushed surfacing, maintenance rock, ballast, gravel base, gravel backfill, gravel borrow, riprap, and bituminous surface treatments of all descriptions.

4-04.AP4

Section 4-04, Ballast and Crushed Surfacing
April 2, 2018

4-04.3(5) Shaping and Compaction
This section is supplemented with the following new paragraph:
When using 100% Recycled Concrete Aggregate, the Contractor may submit a written request to use a test point evaluation for compaction acceptance testing in lieu of compacting to 95% of the standard density as determined by the requirements of Section 2-03.3(14)D. The test point evaluation shall be performed in accordance with SOP 738.

5-01.AP5

Section 5-01, Cement Concrete Pavement Rehabilitation
January 7, 2019

5-01.2 Materials
The reference for Concrete Patching Material is revised to read:
Concrete Patching Material, Grout, and Mortar 9-20.1

5-01.3(1)A1 Concrete Patching Materials
In this section, each reference to “9-20” is revised to read “9-20.1”.

5-01.3(4) Replace Cement Concrete Panel
This section’s content is deleted and replaced with the following new subsections:
5-01.3(4)A General
Curing, cold weather work, concrete pavement construction in adjacent lines, and protection of pavement shall meet the requirements of Section 5-05.3(13) through Section 5-05.3(15). The Contractor, at no cost to the Contracting Agency, shall repair any damage to existing pavement caused by the Contractor’s operations.

5-01.3(4)B Sawing and Dimensional Requirements
Concrete slabs to be replaced as shown in the Plans or staked by the Engineer shall be at least 6.0 feet long and full width of an existing pavement panel. The portion of the panel to remain in place shall have a minimum dimension of 6 feet in length and full...
panel width; otherwise the entire panel shall be removed and replaced. There shall be no new joints closer than 3.0 feet to an existing transverse joint or crack. A vertical full depth saw cut is required along all longitudinal joints and at transverse locations and, unless the Engineer allows otherwise, an additional vertical full depth relief saw cut located 12 to 18 inches from and parallel to the initial longitudinal and transverse saw cut locations is also required. Removal of existing cement concrete pavement shall not cause damage to adjacent slabs that are to remain in place. In areas that will be ground, slab replacements shall be performed prior to pavement grinding.

Side forms shall meet the requirements of Section 5-05.3(7)B whenever a sawed full depth vertical face cannot be maintained.

**5-01.3(4)C Dowel Bars and Tie Bars**

For the half of a dowel bar or tie bar placed in fresh concrete, comply with the requirements of Section 5-05.

For the half of a dowel bar or tie bar placed in hardened concrete, comply with the Standard Plans and the following.

After drilling, secure dowel bars and tie bars into the existing pavement with either an epoxy bonding agent Type I or IV as specified in Section 9-26.1, or a grout Type 2 for non-shrink applications as specified in Section 9-20.3.

Dowel bars shall be placed at the mid depth of the concrete slab, centered over the transverse joint, and parallel to the centerline and to the roadway surface, within the tolerances in the table below. Dowel bars may be adjusted to avoid contact with existing dowel bars in the transverse joint at bridge approach slabs or existing panels provided the adjusted dowel bars meet the tolerances below.

Tie bars shall be placed at the mid depth of the concrete slab, centered over the joint, perpendicular to centerline, and parallel to the roadway surface, within the tolerances in the table below. The horizontal position of tie bars may be adjusted to avoid contact with existing tie bars in the longitudinal joint where panel replacement takes place, provided the adjusted tie bars meet the tolerances below.

<table>
<thead>
<tr>
<th>Placement Tolerances</th>
<th>Dowel Bars</th>
<th>Tie Bars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical: Center of Bar to Center of Slab Depth</td>
<td>± 1.00 inch max</td>
<td>± 1.00 inch max</td>
</tr>
<tr>
<td>Dowel Bar Centered Over the Transverse Joint</td>
<td>± 1.00 inch max</td>
<td>N/A</td>
</tr>
<tr>
<td>Tie Bar Centered Over the Longitudinal Joint</td>
<td>N/A</td>
<td>± 1.00 inch max</td>
</tr>
<tr>
<td>Parallel to Centerline Over the Length of the Dowel Bar</td>
<td>± 0.50 inch max</td>
<td>N/A</td>
</tr>
<tr>
<td>Perpendicular to Longitudinal Joint Over the Length of the Tie Bar</td>
<td>N/A</td>
<td>± 1.00 inch max</td>
</tr>
<tr>
<td>Parallel to Roadway Surface Over the Length of the Bar</td>
<td>± 0.50 inch max</td>
<td>± 1.00 inch max</td>
</tr>
</tbody>
</table>

Dowel bars and tie bars shall be placed according to the Standard Plan when multiple panels are placed. Panels shall be cast separately from the bridge approach slab.
Dowel bars to be drilled into existing concrete or at a new transverse contraction joint shall have a parting compound, such as curing compound, grease, or other Engineer accepted equal, applied to them prior to placement.

Clean the drilled holes in accordance with the epoxy or grout manufacturer’s instructions. Holes shall be clean and dry at the time of placing the epoxy, or grout and tie bars. Completely fill the void between the tie bar and the outer limits of the drilled hole with epoxy or grout. Use retention rings to prevent leakage of the epoxy or grout and support the tie bar to prevent movement until the epoxy or grout has cured the minimum time recommended by the manufacturer.

5-01.3(4)D Foundation Preparation

The Contractor shall smooth the surfacing below the removed panel and compact it to the satisfaction of the Engineer. Crushed surfacing base course, or hot mix asphalt may be needed to bring the surfacing to grade prior to placing the new concrete.

If the material under the removed panel is uncompactable and the Engineer requires it, the Contractor shall excavate the Subgrade 2 feet, place a soil stabilization construction geotextile meeting the requirements of Section 9-33, and backfill with crushed surfacing base course. This Work may include:

1. Furnishing and hauling crushed surfacing base course to the project site.
2. Excavating uncompactable material.
3. Furnishing and placing a soil stabilization construction geotextile.
4. Backfilling and compacting crushed surfacing base course.
5. Removing, hauling and restocking any unused crushed surfacing base course.

5-01.3(4)E Concrete Finishing

Grade control shall be the responsibility of the Contractor.

All panels shall be struck off level with the adjacent panels and floated to a smooth surface.

Final finish texturing shall meet the requirements of Section 5-05.3(11).

In areas where the Plans do not require grinding, the surface smoothness will be measured with a 10-foot straightedge by the Engineer in accordance with Section 5-05.3(12). If the replacement panel is located in an area that will be ground as part of concrete pavement grinding in accordance with Section 5-01.3(9), the surface smoothness shall be measured, by the Contractor, in conjunction with the smoothness measurement done in accordance with Section 5-01.3(10).

5-01.3(4)F Joints

All transverse and longitudinal joints shall be sawed and sealed in accordance with Section 5-05.3(8). The Contractor may use a hand pushed single blade saw for sawing joints.
5-01.3(4)G Cracked Panels

Replacement panels that crack shall be repaired as specified in Section 5-05.3(22) at no cost to the Contracting Agency. When repairing replacement panels that have cracked, epoxy-coated dowel bars meeting the requirements of Section 9-07.5(1) may be substituted for the corrosion resistant dowel bars specified.

5-01.3(4)H Opening to Traffic

Opening to traffic shall meet the requirements of Section 5-05.3(17).

5-01.3(5) Partial Depth Spall Repair

The second sentence of the third paragraph is revised to read:

All sandblasting residue shall be removed.

5-01.3(7) Sealing Existing Concrete Random Cracks

The second sentence of the second paragraph is revised to read:

Immediately prior to sealing, the cracks shall be clean.

5-01.3(8) Sealing Existing Longitudinal and Transverse Joint

The first sentence of the fifth paragraph is revised to read:

Immediately prior to sealing, the cracks shall be clean.

5-01.3(10) Pavement Smoothness

This section is revised to read:

Pavement surface smoothness for cement concrete pavement grinding on this project will include International Roughness Index (IRI) testing. Ride quality will be evaluated using the Mean Roughness Index (MRI) calculated by averaging the IRI data for the left and right wheel path within the section.

Smoothness Testing Equipment and Operator Certification

Use an inertial profiler and operator that meet the requirements of Section 5-05.3(3)E.

Surface Smoothness

Operate the inertial profiler in accordance with AASHTO R 57. Collect two longitudinal traces, one in each wheel path. Collect the control profile at locations designated in Table 2 prior to any pavement rehabilitation Work on the areas to be tested. Collect an acceptance profile at locations designated in Table 2 after completion of all cement concrete pavement grinding on the project. Profiles shall be collected in a continuous pass including areas excluded from pay adjustments. Provide notice to the Engineer a minimum of seven calendar days prior to testing.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Locations Requiring MRI Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel lanes where cement concrete grinding is shown in the plans</td>
<td>Control profile</td>
</tr>
<tr>
<td>Additional locations designated by the Engineer</td>
<td>Control profile</td>
</tr>
</tbody>
</table>
Within 30 calendar days after the Contractor’s testing, the Engineer may perform verification testing. If the verification testing shows a difference in MRI greater than the 10 percent, the following resolution process will be followed:

1. The profiles, equipment and procedures will be evaluated to determine the cause of the difference.

2. If the cause of the discrepancy cannot be resolved the pavement shall be retested with both profilers at a mutually agreed time. The two profilers will test the section within 30 minutes of each other. If the retest shows a difference in MRI equal or greater than the percentages shown in Table 2 of AASHTO R 54 the Engineer’s test results will be used for pavement smoothness acceptance.

The Contractor shall evaluate profiles for acceptance or corrective action using the current version of ProVAL and provide the results including the profile data in unfiltered electronic Engineering Research Division (ERD) file format to the Engineer within 3 calendar days of completing each days profile testing. If the profile data files are created using an export option in the manufacturer’s software where filter settings can be specified, use the filter settings that were used to create data files for certification.

Analyze the entire profile. Exclude areas listed in Table 3.

<table>
<thead>
<tr>
<th>Location</th>
<th>Exclude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning and end of grinding</td>
<td>Pavement within 0.02 mile</td>
</tr>
<tr>
<td>Bridges and approach slabs</td>
<td>The bridge and approach slab and 0.02 mile from the ends of the bridge or approach slab</td>
</tr>
<tr>
<td>Defects in the existing roadway identified by the Contractor that adversely affect the MRI such as dips, depressions and wheel path longitudinal joints.¹</td>
<td>0.01-mile section containing the defect and the 0.01-mile section following the section with the defect.</td>
</tr>
</tbody>
</table>

¹The presence of defects is subject to verification by the Engineer.

Report the MRI results in inches per mile for each 0.01-mile section and each 0.10-mile section. Do not truncate 0.10-mile sections for areas excluded from MRI acceptance requirements. MRI requirements will not apply to 0.10-mile sections with more than three 0.01 mile-sections excluded. MRI requirements for the individual 0.01-mile sections shall still apply. The Engineer will verify the analysis.
The MRI for each 0.10 mile of ground lane will comply with the following:

<table>
<thead>
<tr>
<th>Control Profile MRI per 0.10 Mile</th>
<th>Maximum MRI of Acceptance Profile per 0.10 Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤130 inches/mile</td>
<td>78 inches/mile</td>
</tr>
<tr>
<td>&gt;130 inches/mile</td>
<td>0.6 x Control Profile MRI</td>
</tr>
</tbody>
</table>

The MRI for each 0.01 mile of the completed cement concrete grinding shall not exceed 160 inches/mile.

All Work is subject to parallel and transverse 10-foot straightedge requirements, corrective work and disincentive adjustments.

Surface smoothness of travel lanes including areas subject to MRI testing shall not vary more than ½ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline.

The smoothness perpendicular to the centerline will be measured with a 10-foot straightedge within the lanes. There shall be not vertical elevation difference of more than a ¼ inch between lanes.

Pavement that does not meet these requirements will be subject to corrective Work. All corrective Work shall be completed at no additional expense, including traffic control, to the Contracting Agency. Pavement shall be repaired by one or more of the following methods:

1. Diamond grinding.
2. By other method accepted by the Engineer.

Repair areas shall be re-profiled to ensure they no longer require corrective Work. With concurrence of the Engineer, a 10-foot straight edge may be used in place of the inertial profiler.

If correction of the roadway as listed above either will not or does not produce satisfactory results as to smoothness or serviceability the Engineer may accept the completed pavement and a credit will be calculated in accordance with Section 5-01.5. Under these circumstances, the decision whether to accept the completed pavement or to require corrective work as described above shall be vested entirely in the Engineer.

5-01.5 Payment
This section is supplemented with the following:

“Grinding Smoothness Compliance Adjustment”, by calculation.
Grinding Smoothness Compliance Adjustments will be based on the requirements in Section 5-01.3(10) and the following calculations:

A smoothness compliance adjustment will be calculated in the sum of minus $100 for each and every section of single traffic lane 0.01 mile in length and $1,000 for each and every section of single traffic lane 0.10 mile in length that does not meet the requirements in Section 5-01.3(10) after corrective Work.
Section 5-02, Bituminous Surface Treatment
April 1, 2019

5-02.3(5) Application of Aggregates

The first sentence of the eleventh paragraph is revised to read:

The Contractor shall use a pickup broom in all curbed areas, on all bridges, within city limits, within sensitive areas, and where shown in the Plans both before the application of emulsified asphalt and during the final brooming operation.

Section 5-04, Hot Mix Asphalt
April 1, 2019

5-04.1 Description

The last sentence of the first paragraph is revised to read:

The manufacture of HMA may include additives or processes that reduce the optimum mixing temperature (Warm Mix Asphalt) or serve as a compaction aid in accordance with these Specifications.

5-04.2 Materials

The reference to "Warm Mix Asphalt Additive" is revised to read "HMA Additive".

5-04.2(1) How to Get an HMA Mix Design on the QPL

The last bullet in the first paragraph is revised to read:

• Do not include HMA additives that reduce the optimum mixing temperature or serve as a compaction aid when developing a mix design or submitting a mix design for QPL evaluation. The use of HMA additives is not part of the process for obtaining approval for listing a mix design on the QPL. Refer to Section 5-04.2(2)B.

In the table, "WSDOT Standard Practice QC-8" is revised to read "WSDOT Standard Practice QC-8 located in the WSDOT Materials Manual M 46-01".

5-04.2(1)C Mix Design Resubmittal for QPL Approval

Item number 3 of the first paragraph is revised to read:

3. Changes in modifiers used in the asphalt binder.

5-04.2(2)B Using Warm Mix Asphalt Processes

This section, including title, is revised to read:

5-04.2(2)B Using HMA Additives

The Contractor may, at the Contractor’s discretion, elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:
• Do not use additives that reduce the mixing temperature in accordance with
Section 5-04.3(6) in the production of High RAP/Any RAS mixtures.

• Before using additives, obtain the Engineer’s approval using WSDOT Form
350-076 to describe the proposed additive and process.

5-04.3(3)A  Mixing Plant
Item number 5 of the first paragraph is revised to read:

5. Provide HMA sampling equipment that complies with FOP for AASHTO T 168:

• Use a mechanical sampling device accepted by the Engineer, or

• Platforms or devices to enable sampling from the truck transport without
entering the truck transport for sampling HMA.

5-04.3(4) Preparation of Existing Paved Surfaces
The first sentence of the fourth paragraph is revised to read:

Unless otherwise allowed by the Engineer, use cationic emulsified asphalt CSS-1, CSS-
1h, or Performance Graded (PG) asphalt for tack coat.

5-04.3(6) Mixing
The first paragraph is revised to read:

The asphalt supplier shall introduce recycling agent and anti-stripping additive, in the
amount designated on the QPL for the mix design, into the asphalt binder prior to
shipment to the asphalt mixing plant.

The seventh paragraph is revised to read:

Upon discharge from the mixer, ensure that the temperature of the HMA does not
exceed the optimum mixing temperature shown on the accepted Mix Design Report by
more than 25°F, or as allowed by the Engineer. When an additive is included in the
manufacture of HMA, do not heat the additive (at any stage of production including in
binder storage tanks) to a temperature higher than the maximum recommended by the
manufacturer of the additive.

5-04.3(7) Spreading and Finishing
The last row of the table is revised to read:

| 7∕8 inch | 0.25 feet | 0.30 feet |

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA
The following new paragraph is inserted after the first paragraph:

The Contracting Agency’s combined aggregate bulk specific gravity (Gsb) blend as
shown on the HMA Mix Design will be used for VMA calculations until the Contractor
submits a written request for a Gsb test. The new Gsb will be used in the VMA
calculations for HMA from the date the Engineer receives the written request for a Gsb
retest. The Contractor may request aggregate specific gravity (Gsb) testing be
performed by the Contracting Agency twice per project. The Gsb blend of the combined
stockpiles will be used to calculate voids in mineral aggregate (VMA) of any HMA produced after the new Gsb is determined.

5-04.3(9)A1 Test Section – When Required, When to Stop
The following new row is inserted after the second row in Table 9:

<table>
<thead>
<tr>
<th>VMA</th>
<th>Minimum PF, of 0.95 based on the criteria in Section 5-04.3(9)B4²</th>
<th>None⁴</th>
</tr>
</thead>
</table>

5-04.3(9)A2 Test Section – Evaluating the HMA Mixture in a Test Section
In Table 9a, the test property “Gradation, Asphalt Binder, and V<sub>a</sub>” is revised to read “Gradation, Asphalt Binder, VMA, and V<sub>a</sub>”.

5-04.3(9)A3 Test Section – Evaluating the HMA Mixture in a Test Section
The following new row is inserted after the second row in Table 9:

<table>
<thead>
<tr>
<th>Aggregates:</th>
<th>Sand Equivalent</th>
<th>Uncompacted Void Content</th>
<th>Fracture</th>
</tr>
</thead>
</table>

5-04.3(9)B3 Mixture Statistical Evaluation – Acceptance Testing
In Table 11, “V<sub>a</sub>” is revised to read “VMA and V<sub>a</sub>”.

5-04.3(9)B5 Mixture Statistical Evaluation – Composite Pay Factors (CPF)
The following new row is inserted above the last row in Table 12:

<table>
<thead>
<tr>
<th>Voids in Mineral Aggregate (VMA)</th>
<th>2</th>
</tr>
</thead>
</table>

5-04.3(9)B7 Mixture Statistical Evaluation – Retests
The second to last sentence is revised to read:

The sample will be tested for a complete gradation analysis, asphalt binder content, VMA and V<sub>a</sub>, and the results of the retest will be used for the acceptance of the HMA mixture in place of the original mixture sublot sample test results.

5-04.3(10)A HMA Compaction – General Compaction Requirements
The last paragraph is revised to read:

On bridge decks and on roadway approaches within five feet of a bridge/back of pavement seat, rollers shall not be operated in a vibratory mode, defined as a mode in which the drum vibrates vertically. However, unless otherwise noted on the plans, rollers may be operated in an oscillatory mode, defined as a mode in which the drum vibrates in the horizontal direction only.

5-04.3(10)C1 HMA Compaction Statistical Evaluation – Lots and Sublots
The bulleted item in the fourth paragraph is revised to read:

• For a compaction lot in progress with a compaction CPF less than 0.75 using an LSL = 91.5, a new compaction lot will begin at the Contractor’s request after the
Engineer is satisfied that material conforming to the Specifications can be produced. See also Section 5-04.3(11)F.

5-04.3(10)C2 HMA Compaction Statistical Evaluation – Acceptance Testing

In the table, “WSDOT FOP for AASHTO T 355” is revised to read “FOP for AASHTO T 355”.

5-04.3(10)C3 HMA Statistical Compaction – Price Adjustments

In the first paragraph, “WSDOT FOP for AASHTO T 355” is revised to read “FOP for AASHTO T 355”.

The first sentence in the second paragraph is revised to read:

For each HMA compaction lot (that is accepted by Statistical Evaluation) which does not meet the criteria in the preceding paragraph, the compaction lot shall be evaluated in accordance with Section 1-06.2(2)D5 to determine the appropriate Composite Pay Factor (CPF).

The last two paragraphs are revised to read:

Determine the Compaction Price Adjustment (CPA) from the table below, selecting the equation for CPA that corresponds to the value of CPF determined above.

<table>
<thead>
<tr>
<th>Calculating HMA Compaction Price Adjustment (CPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value of CPF</strong></td>
</tr>
<tr>
<td>When CPF &gt; 1.00</td>
</tr>
<tr>
<td>When CPF = 1.00</td>
</tr>
<tr>
<td>When CPF &lt; 1.0</td>
</tr>
</tbody>
</table>

Where

- \( \text{CPA} \) = Compaction Price Adjustment for the compaction lot ($)
- \( \text{CPF} \) = Composite Pay Factor for the compaction lot (maximum is 1.05)
- \( Q \) = Quantity in the compaction lot (tons)
- \( \text{UP} \) = Unit price of the HMA in the compaction lot ($/ton)

5-04.3(10)C4 HMA Statistical Compaction – Requests for Retesting

The first sentence is revised to read:

For a compaction sublot that has been tested with a nuclear density gauge that did not meet the minimum of 91.5 percent of the theoretical maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core, taken at the same location as the nuclear density test, be used for determination of the relative density of the compaction sublot.

5-04.3(13) Surface Smoothness

The second to last paragraph is revised to read:

When concrete pavement is to be placed on HMA, the surface tolerance of the HMA shall be such that no surface elevation lies above the Plan grade minus the specified Plan depth of concrete pavement. Prior to placing the concrete pavement, bring any
such irregularities to the required tolerance by grinding or other means allowed by the Engineer.

5-04.5 Payment
The paragraph following the Bid item “Crack Sealing-LF”, per linear foot is revised to read:

The unit Contract price per linear foot for “Crack Sealing-LF” shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4)A.

5-05.AP5
Section 5-05, Cement Concrete Pavement
April 1, 2019

5-05.1 Description
In the first paragraph, “portland cement concrete” is revised to read “cement concrete”.

5-05.2 Materials
In the first paragraph, the reference to “Portland Cement” is revised to read:

> Cement 9-01

In the first paragraph, the section reference for Concrete Patching Material is revised to read “9-20.1”.

The second paragraph is revised to read:

Cementitious materials are considered to be the following: portland cement, blended hydraulic cement, fly ash, ground granulated blast furnace slag and microsilica fume.

5-05.3(1) Concrete Mix Design for Paving
The table title in item number 4 is revised to read Concrete Batch Weights.

In item 4a, “Portland Cement” is revised to read “Cement”.

5-05.3(3)E Smoothness Testing Equipment
This section is revised to read:

Inertial profilers shall meet all requirements of AASHTO M 328 and be certified in accordance with AASHTO R 56 within the preceding 12 months.

The inertial profiler operator shall be certified as required by AASHTO R 56 within three years preceding profile measurement.

Equipment or operator certification by other states or a profiler certification facility will be accepted provided the certification meets the requirements of AASHTO R 56. Documentation verifying certification by another state shall be submitted to the Engineer a minimum of 14 calendar days prior to profile measurement. Equipment certification documentation shall include the information required by part 8.5 and 8.6 of AASHTO R 56. Operator documentation shall include a statement from the certifying state that indicates the operator is certified to operate the inertial profiler to be used on the project. The decision whether another state’s certification meets the requirements of AASHTO R 56 shall be vested entirely in the Engineer.
5-05.3(4) Measuring and Batching Materials

Item number 2 is revised to read:

2. **Batching Materials** – On all projects requiring more than 2,500 cubic yards of concrete for paving, the batching plant shall be equipped to proportion aggregates and cement by weight by means of automatic and interlocked proportioning devices of accepted type.

5-05.3(4)A Acceptance of Portland Cement Concrete Pavement

This section’s title is revised to read:

Acceptance of Portland Cement or Blended Hydraulic Cement Concrete Pavement

The first sentence is revised to read:

Acceptance of portland cement or blended hydraulic cement concrete pavement shall be as provided under statistical or nonstatistical acceptance.

5-05.3(7) Placing, Spreading, and Compacting Concrete

This section’s content is deleted.

5-05.3(10) Tie Bars and Corrosion Resistant Dowel Bars

The first sentence of the last paragraph is revised to read:

The tie bar holes shall be clean before grouting.

5-05.3(12) Surface Smoothness

This section is revised to read:

Pavement surface smoothness for this project will include International Roughness Index (IRI) testing. The Contractor shall perform IRI testing on each through lane, climbing lane, and passing lane, greater than 0.25 mile in length and these lanes will be subject to incentive/disincentive adjustments. Ride quality will be evaluated using the Mean Roughness Index (MRI) calculated by averaging the IRI data for the left and right wheel path within the section.

Ramps, shoulders and tapers will not be included in MRI testing for pavement smoothness and will not be subject to incentive adjustments. All Work is subject to parallel and transverse 10-foot straightedge requirements, corrective work and disincentive adjustments.

Operate the inertial profiler in accordance with AASHTO R 57. Collect two longitudinal traces, one in each wheel path. Collect profile data after completion of all concrete paving on the project in a continuous pass including areas excluded from pay adjustments. Provide notice to the Engineer a minimum of seven calendar days prior to testing.

Within 30 calendar days after the Contractor’s testing, the Engineer may perform verification testing. If the verification testing shows a difference in MRI greater than the percentages shown in Table 2 of AASHTO R 54 the following resolution process will be followed:
1. The profiles, equipment and procedures will be evaluated to determine the cause of the difference.

2. If the cause of the discrepancy cannot be resolved the pavement shall be retested with both profilers at a mutually agreed time. The two profilers will test the section within 30 minutes of each other. If the retest shows a difference in MRI equal or greater than the percentages shown in Table 2 of AASHTO R 54 the Engineer’s test results will be used to establish pay adjustments.

Surface smoothness of travel lanes not subject to MRI testing will be measured with a 10-foot straightedge no later than 5:00 p.m. of the day following the placing of the concrete. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline.

Smoothness perpendicular to the centerline will be measured with a 10-foot straightedge across all lanes with the same cross slope, including shoulders when composed of cement concrete pavement. The overlapping 10-foot straightedge measurement shall be discontinued at a point 6 inches from the most extreme outside edge of the finished cement concrete pavement. The completed surface of the wearing course shall not vary more than ¼ inch from the lower edge of a 10-foot straightedge placed on the surface perpendicular to the centerline. Any deviations in excess of the above tolerances shall be corrected.

The Contractor shall evaluate profiles for acceptance, incentive payments, disincentive payments, or corrective action using the current version of ProVAL and provide the results including the profile data in unfiltered electronic Engineering Research Division (ERD) file format to the Engineer within 2 calendar days of completing testing each section of pavement. If the profile data files are created using an export option in the manufacturer’s software where filter settings can be specified, use the filter settings that were used to create data files for certification. Analyze the entire profile. Exclude any areas specifically identified in the Contract. Exclude from the analysis the first 100 feet after the start of the paving operations and last 100 feet prior to the end of the paving operation, the first 100 feet on either side of bridge Structures and bridge approach slab. Report the MRI results in inches per mile for each 52.8 foot section and horizontal distance measurements in project stationing to the nearest foot. Include pay adjustments in the results. The Engineer will verify the analysis.

Corrective work for pavement smoothness may be taken by the Contractor prior to MRI testing. After completion of the MRI testing the Contractor shall measure the smoothness of each 52.8-foot section with an MRI greater than 125 inches per mile with a 10-foot straightedge within 14 calendar days or as allowed by the Engineer. The Contractor shall identify all locations that require corrective work and provide the straight edge measurements at each location that exceeds the allowable limit to the Engineer. If all measurements in a 52.8-foot section comply with smoothness requirements, the Contractor shall provide the maximum measurement to the Engineer and a statement that corrective work is not required. Unless allowed by the Engineer, corrective work shall be taken by the Contractor for pavement identified by the Contractor or Engineer that does not meet the following requirements:
1. The completed surface shall be of uniform texture, smooth, uniform as to
crown and grade, and free from defects of all kinds.

2. The completed surface shall not vary more than 1/8 inch from the lower edge of
a 10-foot straightedge placed on the surface parallel to the centerline.

3. The completed surface shall vary not more than 1/4 inch in 10 feet from the rate
of transverse slope shown in the Plans.

All corrective work shall be completed at no additional expense, including traffic control,
to the Contracting Agency. Corrective work shall not begin until the concrete has
reached its design strength unless allowed by the Engineer. Pavement shall be repaired
by one or more of the following methods:

1. Diamond grinding; repairs shall not reduce pavement thickness by more than
1/4 inch less than the thickness shown in the Plans. When required by the
Engineer, the Contractor shall verify the thickness of the concrete pavement by
coring. Thickness reduction due to corrective work will not be included in
thickness measurements for calculating the Thickness Deficiency in Section 5-05.5(1)A.

2. Removal and replacement of the cement concrete pavement.

3. By other method allowed by the Engineer.

For repairs following MRI testing the repaired area shall be checked by the Contractor
with a 10-foot straightedge to ensure it no longer requires corrective work. With
concurrence of the Engineer an inertial profiler may be used in place of the 10-foot
straight edge.

If correction of the roadway as listed above either will not or does not produce
satisfactory results as to smoothness or serviceability the Engineer may accept the
completed pavement and a credit will be calculated in accordance with Section 5-05.5.
The credit will be in addition to the price adjustment for MRI. Under these
circumstances, the decision whether to accept the completed pavement or to require
corrective work as described above shall be vested entirely in the Engineer.

5-05.3(22) Repair of Defective Pavement Slabs
The last sentence of the fourth paragraph is revised to read:

All sandblasting residue shall be removed.

5-05.4 Measurement
Item number 3 of the second paragraph is revised to read:

3. The depth shall be determined in accordance with Section 5-05.5(1). The depth
utilized to calculate the volume shall not exceed the Plan depth plus 0.04 feet.

The third paragraph is revised to read:

The volume of cement concrete pavement in each thickness lot shall equal the
measured length × width × thickness measurement.
The last paragraph is revised to read:

The calculation for cement concrete compliance adjustment is the volume of concrete represented by the CPF and the Thickness deficiency adjustment.

5-05.5 Payment

The paragraph following the Bid item “Cement Conc. Pavement”, per cubic yard is supplemented with the following:

All costs associated with performing the magnetic pulse induction thickness testing shall be included in the unit Contract price per cubic yard for “Cement Conc. Pavement”.

The Bid item “Ride Smoothness Compliance Adjustment”, by calculation, and the paragraph following this bid item are revised to read:

“Ride Smoothness Compliance Adjustment”, by calculation.

Smoothness Compliance Adjustments will be based on the requirements in Section 5-05.3(12) and the following calculations:

1. Final MRI acceptance and incentive/disincentive payments for pavement smoothness will be calculated as the average of the ten 52.8-foot sections in each 528 feet in accordance with the price adjustment schedule.

   a. For sections of a lane that are a minimum of 52.8 feet and less than 528 feet, the price adjustment will be calculated using the average of the 52.8 foot MRI values and the price adjustment prorated for the length of the section.

   b. MRI values per 52.8-feet that were measured prior to corrective work will be included in the 528 foot price adjustment for sections with corrective work.

2. In addition to the price adjustment for MRI a smoothness compliance adjustment will be calculated in the sum of minus $1000.00 for each and every section of single traffic lane 52.8 feet in length in that does not meet the 10-foot straight edge requirements in Section 5-05.3(12) after corrective Work.

<table>
<thead>
<tr>
<th>Price Adjustment Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI for each 528 ft. section</td>
</tr>
<tr>
<td>in. / mi.</td>
</tr>
<tr>
<td>&lt; 30</td>
</tr>
<tr>
<td>30</td>
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<td>31</td>
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<td>85</td>
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<tr>
<td>86</td>
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<tr>
<td>87</td>
</tr>
</tbody>
</table>
The bid item “Portland Cement Concrete Compliance Adjustment”, by calculation, and the paragraph following this bid item are revised to read:

“Cement Concrete Compliance Adjustment”, by calculation.

Payment for “Cement Concrete Compliance Adjustment” will be calculated by multiplying the unit Contract price for the cement concrete pavement, times the volume for adjustment, times the percent of adjustment determined from the calculated CPF and the Deficiency Adjustment listed in Section 5-05.5(1)A.

### 5-05.5(1) Pavement Thickness

This section is revised to read:

<table>
<thead>
<tr>
<th>Value</th>
<th>CPF Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td>-1040</td>
</tr>
<tr>
<td>89</td>
<td>-1120</td>
</tr>
<tr>
<td>90</td>
<td>-1200</td>
</tr>
<tr>
<td>91</td>
<td>-1280</td>
</tr>
<tr>
<td>92</td>
<td>-1360</td>
</tr>
<tr>
<td>93</td>
<td>-1440</td>
</tr>
<tr>
<td>94</td>
<td>-1520</td>
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<tr>
<td>95</td>
<td>-1600</td>
</tr>
<tr>
<td>96</td>
<td>-1680</td>
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<td>97</td>
<td>-1760</td>
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<td>98</td>
<td>-1840</td>
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<td>99</td>
<td>-1920</td>
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<td>100</td>
<td>-2000</td>
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<td>101</td>
<td>-2080</td>
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<tr>
<td>102</td>
<td>-2160</td>
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<td>103</td>
<td>-2240</td>
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<td>104</td>
<td>-2320</td>
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<td>105</td>
<td>-2400</td>
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<td>106</td>
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<td>107</td>
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<td>114</td>
<td>-3120</td>
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<tr>
<td>115</td>
<td>-3200</td>
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<td>116</td>
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<td>121</td>
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<td>122</td>
<td>-3760</td>
</tr>
<tr>
<td>123</td>
<td>-3840</td>
</tr>
<tr>
<td>124</td>
<td>-3920</td>
</tr>
<tr>
<td>≥125</td>
<td>-4000</td>
</tr>
</tbody>
</table>
Cement concrete pavement shall be constructed in accordance with the thickness requirements in the Plans and Specifications. Tolerances allowed for Subgrade construction and other provisions, which may affect thickness, shall not be construed to modify such thickness requirements.

Thickness measurements in each lane paved shall comply with the following:

<table>
<thead>
<tr>
<th>Thickness Testing of Cement Concrete Pavement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness Lot Size</td>
</tr>
<tr>
<td>Thickness test location determined by</td>
</tr>
<tr>
<td>Sample method</td>
</tr>
<tr>
<td>Sample preparation performed by</td>
</tr>
<tr>
<td>Measurement method</td>
</tr>
<tr>
<td>Thickness measurement performed by</td>
</tr>
</tbody>
</table>

¹Reflectors shall be located at within 0.5 feet of the center of the panel. The Contractor shall supply a sufficient number of 300 mm-diameter round reflectors meeting the requirements of AASHTO T 359 to accomplish the required testing.

²The Contractor shall provide all equipment and materials needed to perform the testing.

Thickness measurements shall be rounded to the nearest 0.01 foot.

Each thickness test location where the pavement thickness is deficient by more than 0.04 foot, shall be subject to price reduction or corrective action as shown in Table 2.

<table>
<thead>
<tr>
<th>Thickness Deficiency</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04' &lt; Thickness Deficiency ≤ 0.06'</td>
<td>10</td>
</tr>
<tr>
<td>0.06' &lt; Thickness deficiency ≤ 0.08'</td>
<td>25</td>
</tr>
<tr>
<td>Thickness deficiency &gt; 0.08'</td>
<td>Remove and replace the panels or the panels may be accepted with no payment at the discretion of the Engineer.</td>
</tr>
</tbody>
</table>

The price reduction shall be computed by multiplying the percent price reduction in Table 2 by the unit Contract price by the volume of pavement represented by the thickness test lot.

Additional cores may be taken by the Contractor to determine the limits of an area that has a thickness deficiency greater than 0.04 feet. Cores shall be taken at the approximate center of the panel. Only the panels within the limits of the deficiency area as determined by the cores will be subject to a price reduction or corrective action. The cores shall be taken in the presence of the Engineer and delivered to the Engineer for measurement. All costs for the additional cores including filling the core holes with patching material meeting the requirements of Section 9-20 will be the responsibility of the Contractor.

5-05.5(1)A Thickness Deficiency of 0.05 Foot or Less

This section, including title, is revised to read:
5-05.5(1)A Vacant

5-05.5(1)B Thickness Deficiency of More Than 0.05 Foot

This section, including title, is revised to read:

5-05.5(1)B Vacant

6-01.AP6

Section 6-01, General Requirements for Structures
January 7, 2019

This section is supplemented with the following new subsections:

6-01.16 Repair of Defective Work

6-01.16(1) General

When using repair procedures that are described elsewhere in the Contract Documents, the Working Drawing submittal requirements of this Section shall not apply to those repairs unless noted otherwise.

Repair procedures for defective Work shall be submitted as Type 2 Working Drawings. Type 2E Working Drawings shall be submitted when required by the Engineer. As an alternative to submitting Type 2 or 2E Working Drawings, defective Work within the limits of applicability of a pre-approved repair procedure may be repaired using that procedure. Repairs using a pre-approved repair procedure shall be submitted as a Type 1 Working Drawing.

Pre-approved repair procedures shall consist of the following:

- The procedures listed in Section 6-01.16(2)
- For precast concrete, repair procedures in the annual plant approval process documents that have been approved for use by the Contracting Agency.

All Working Drawings for repair procedures shall include:

- A description of the defective Work including location, extent and pictures
- Materials to be used in the repair. Repairs using manufactured products shall include written manufacturer recommendations for intended uses of the product, surface preparation, mixing, aggregate extension (if applicable), ambient and surface temperature limits, placement methods, finishing and curing.
- Construction procedures
- Plan details of the area to be repaired
- Calculations for Type 2E Working Drawings

Material manufacturer’s instructions and recommendations shall supersede any conflicting requirements in pre-approved repair procedures.
The Engineer shall be notified prior to performing any repair procedure and shall be given an opportunity to inspect the repair work being performed.

6-01.16(2) Pre-Approved Repair Procedures

6-01.16(2)A Concrete Spalls and Poor Consolidation (Rock Pockets, Honeycombs, Voids, etc.)

This repair shall be limited to the following areas:

- Areas that are not on top Roadway surfaces (with or without an overlay) including but not limited to concrete bridge decks, bridge approach slabs or cement concrete pavement

- Areas that are not underwater

- Areas that are not on precast barrier, except for the bottom 4 inches (but not to exceed 1 inch above blockouts)

- Areas that do not affect structural adequacy as determined by the Engineer.

The repair procedure is as follows:

1. Remove all loose and unsound concrete. Impact breakers shall not exceed 15 pounds in weight when removing concrete adjacent to reinforcement or other embedments and shall not exceed 30 pounds in weight otherwise. Operate impact breakers at angles less than 45 degrees as measured from the surface of the concrete to the tool and moving away from the edge of the defective Work. Concrete shall be completely removed from exposed surfaces of existing steel reinforcing bars. If half or more of the circumference of any steel reinforcing bar is exposed, if the reinforcing bar is loose or if the bond to existing concrete is poor then concrete shall be removed at least ¾ inch behind the reinforcing bar. Do not damage any existing reinforcement. Stop work and allow the Engineer to inspect the repair area after removing all loose and unsound concrete. Submit a modified repair procedure when required by the Engineer.

2. Square the edges of the repair area by cutting an edge perpendicular to the concrete surface around the repair area. The geometry of the repair perimeter shall minimize the edge length and shall be rectangular with perpendicular edges, avoiding reentrant corners. The depth of the cut shall be a minimum of ¾ inch, but shall be reduced if necessary to avoid damaging any reinforcement. For repairs on vertical surfaces, the top edge shall slope up toward the front at a 1-vertical-to-3-horizontal slope.

3. Remove concrete within the repair area to a depth at least matching the cut depth at the edges. Large variations in the depth of removal within short distances shall be avoided. Roughen the concrete surface. The concrete surface should be roughened to at least Concrete Surface Profile (CSP) 5 in accordance with ICRI Guideline
No. 310.2R, unless a different CSP is recommended by the patching material manufacturer.

4. Inspect the concrete repair surface for delaminations, debonding, microcracking and voids using hammer tapping or a chain drag. Remove any additional loose or unsound concrete in accordance with steps 1 through 3.

5. Select a patching material in accordance with Section 9-20.2 that is appropriate for the repair location and thickness. The concrete patching material shall be pumpable or self-consolidating as required for the type of placement that suits the repair. The patching material shall have a minimum compressive strength at least equal to the specified compressive strength of the concrete.

6. Prepare the concrete surface and reinforcing steel in accordance with the patching material manufacturer’s recommendations. At a minimum, clean the concrete surfaces (including perimeter edges) and reinforcing steel using oil-free abrasive blasting or high-pressure (minimum 5,000 psi) water blasting. All dirt, dust, loose particles, rust, laitance, oil, film, microcracked/bruised concrete or foreign material of any sort shall be removed. Damage to the epoxy coating on steel reinforcing bars shall be repaired in accordance with Section 6-02.3(24)H.

7. Construct forms if necessary, such as for patching vertical or overhead surfaces or where patching extends to the edge or corner of a placement.

8. When recommended by the patching material manufacturer, saturate the concrete in the repair area and remove any free water at the concrete surface to obtain a saturated surface dry (SSD) substrate. When recommended by the patching material manufacturer, apply a primer, scrub coat or bonding agent to the existing surfaces. Epoxy bonding agents, if used, shall be Type II or Type V in accordance with Section 9-26.1.

9. Place and consolidate the patching material in accordance with the manufacturer’s recommendations. Work the material firmly into all surfaces of the repair area with sufficient pressure to achieve proper bond to the concrete.

10. The patching material shall be textured, cured and finished in accordance with the patching material manufacturer’s recommendations and/or the requirements for the repaired component. Protect the newly placed patch from vibration in accordance with Section 6-02.3(6)D.

11. When the completed repair does not match the existing concrete color and will be visible to the public, a sand and cement mixture that is color matched to the existing concrete shall be rubbed, brushed, or applied to the surface of the patching material and the concrete.
6-01.10 Utilities Supported by or Attached to Bridges
In the third paragraph, “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

6-01.12 Final Cleanup
The second sentence of the first paragraph is revised to read:

Structure decks shall be clean.

The second paragraph is deleted.

6-02.AP6
Section 6-02, Concrete Structures
April 1, 2019

6-02.1 Description
The first sentence is revised to read:

This Work consists of the construction of all Structures (and their parts) made of
portland cement or blended hydraulic cement concrete with or without reinforcement,
including bridge approach slabs.

6-02.2 Materials
In the first paragraph, the references to “Portland Cement” and “Aggregates for Portland
Cement Concrete” are revised to read:

<table>
<thead>
<tr>
<th>Material</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cement</td>
<td>9-01</td>
</tr>
<tr>
<td>Aggregates for Concrete</td>
<td>9-03.1</td>
</tr>
</tbody>
</table>

The reference to metakaolin is deleted.

6-02.3(2) Proportioning Materials
The second paragraph is revised to read:

Unless otherwise specified, the Contractor shall use Type I or II portland cement or
blended hydraulic cement in all concrete as defined in Section 9-01.2(1).

The last sentence of the fifth paragraph is revised to read:

With the Engineer’s written concurrence, microsilica fume may be used in all
classifications of Class 4000, Class 3000, and commercial concrete and is limited to a
maximum of 10 percent of the cementitious material.

6-02.3(2)A Contractor Mix Design
The last sentence of the last paragraph is revised to read:

For all other concrete, air content shall be a minimum of 4.5 percent and a maximum of
7.5 percent for all concrete placed above the finished ground line unless noted
otherwise.
6-02.3(2)A1 Contractor Mix Design for Concrete Class 4000D
Item number 5 of the first paragraph is deleted.

Item number 6 of the first paragraph (after the preceding Amendment is applied) is renumbered to 5.

6-02.3(2)B Commercial Concrete
The second paragraph is revised to read:

Where concrete Class 3000 is specified for items such as, culvert headwalls, plugging culverts, concrete pipe collars, pipe anchors, monument cases, Type PPB, PS, I, FB and RM signal standards, pedestals, cabinet bases, guardrail anchors, fence post footings, sidewalks, concrete curbs, curbs and gutters, and gutters, the Contractor may use commercial concrete. If commercial concrete is used for sidewalks, concrete curbs, curbs and gutters, and gutters, it shall have a minimum cementitious material content of 564 pounds per cubic yard of concrete, shall be air entrained, and the tolerances of Section 6-02.3(5)C shall apply.

6-02.3(4) Ready-Mix Concrete
The first sentence of the first paragraph is revised to read:

All concrete, except lean concrete, shall be batched in a prequalified manual, semi-automatic, or automatic plant as described in Section 6-02.3(4)A.

6-02.3(4)D Temperature and Time For Placement
The following is inserted after the first sentence of the first paragraph:

The upper temperature limit for placement for Class 4000D concrete may be increased to a maximum of 80°F if allowed by the Engineer.

6-02.3(5)C Conformance to Mix Design
Item number 1 of the second paragraph is revised to read:

1. Cement weight plus 5 percent or minus 1 percent of that specified in the mix design.

6-02.3(6)A1 Hot Weather Protection
The first paragraph is revised to read:

The Contractor shall provide concrete within the specified temperature limits. Cooling of the coarse aggregate piles by sprinkling with water is permitted provided the moisture content is monitored, the mixing water is adjusted for the free water in the aggregate and the coarse aggregate is removed from at least 1 foot above the bottom of the pile. Sprinkling of fine aggregate piles with water is not allowed. Refrigerating mixing water or replacing all or part of the mixing water with crushed ice is permitted, provided the ice is completely melted by placing time.

The second sentence of the second paragraph is revised to read:

These surfaces include forms, reinforcing steel, steel beam flanges, and any others that touch the concrete.
6-02.3(7) Tolerances

Unless noted otherwise, concrete construction tolerances shall be in accordance with this section. Tolerances in this section do not apply to cement concrete pavement.

Horizontal deviation of roadway crown points, cross-slope break points, and curb, barrier or railing edges from alignment or work line: ±1.0 inch

Deviation from plane: ±0.5 inch in 10 feet

Deviation from plane for roadway surfaces: ±0.25 inch in 10 feet

Deviation from plumb or specified batter: ±0.5 inch in 10 feet, but not to exceed a total of ±1.5 inches

Vertical deviation from profile grade for roadway surfaces: ±1 inch

Vertical deviation of top surfaces (except roadway surfaces): ±0.75 inch

Thickness of bridge decks and other structural slabs not at grade: ±0.25 inch

Length, width and thickness of elements such as columns, beams, crossbeams, diaphragms, corbels, piers, abutments and walls, including dimensions to construction joints in initial placements: +0.5 inch, -0.25 inch

Length, width and thickness of spread footing foundations: +2 inches, -0.5 inch

Horizontal location of the as-placed edge of spread footing foundations: The greater of ±2% of the horizontal dimension of the foundation perpendicular to the edge and ±0.5 inch. However, the tolerance shall not exceed ±2 inches.

Location of opening, insert or embedded item at concrete surface: ±0.5 inch

Cross-sectional dimensions of opening: ±0.5 inch

Bridge deck, bridge approach slab, and bridge traffic barrier expansion joint gaps with a specified temperature range, measured at a stable temperature: ±0.25 inch

Horizontal deviation of centerline of bearing pad, oak block or other bearing assembly: ±0.125 inch

Horizontal deviation of centerline of supported element from centerline of bearing pad, oak block or other bearing assembly ±0.25 inch

Vertical deviation of top of bearing pad, oak block or other bearing assembly: ±0.125 inch

6-02.3(10)C Finishing Equipment

The first paragraph is revised to read:
The finishing machine shall be self-propelled and be capable of forward and reverse movement under positive control. The finishing machine shall be equipped with augers and a rotating cylindrical single or double drum screed. The finishing machine shall have the necessary adjustments to produce the required cross section, line, and grade. The finishing machine shall be capable of raising the screeds, augers, and any other parts of the finishing mechanical operation to clear the screeded surface, and returning to the specified grade under positive control. Unless otherwise allowed by the Engineer, a finishing machine manufacturer technical representative shall be on site to assist the first use of the machine on the Contract.

The first sentence of the second paragraph is revised to read:

For bridge deck widening of 20 feet or less, and for bridge approach slabs, or where jobsite conditions do not allow the use of the conventional configuration finishing machines, or modified conventional machines as described above; the Contractor may submit a Type 2 Working Drawing proposing the use of a hand-operated motorized power screed such as a "Texas" or "Bunyan" screed.

6-02.3(10)D4 Monitoring Bridge Deck Concrete Temperature After Placement
This section, including title, is revised to read:

6-02.3(10)D4 Vacant

6-02.3(10)D5 Bridge Deck Concrete Finishing and Texturing
In the third subparagraph of the first paragraph, the last sentence is revised to read:

The Contractor shall texture the bridge deck surface to within 3-inches minimum and 24-inches maximum of the edge of concrete at expansion joints, within 1-foot minimum and 2-feet maximum of the curb line, and within 3-inches minimum and 9-inches maximum of the perimeter of bridge drain assemblies.

6-02.3(10)F Bridge Approach Slab Orientation and Anchors
The second to last paragraph is revised to read:

The compression seal shall be a 2½ inch wide gland and shall conform to Section 9-04.1(4).

The last paragraph is deleted.

6-02.3(13)A Strip Seal Expansion Joint System
In item number 3 of the third paragraph, “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

6-02.3(13)B Compression Seal Expansion Joint System
The first paragraph is revised to read:

Compression seal glands shall conform to Section 9-04.1(4) and be sized as shown in the Plans.

6-02.3(14)C Pigmented Sealer for Concrete Surfaces
This section is supplemented with the following new paragraph:
Pigmented Sealer Materials shall be a product listed in the current WSDOT Qualified Products List (QPL). If the pigmented sealer material is not listed in the current WSDOT QPL, a sample shall be submitted to the State Materials Laboratory in Tumwater for evaluation and acceptance in accordance with Section 9-08.3.

6-02.3(20) Grout for Anchor Bolts and Bridge Bearings

The second, third and fourth paragraphs are revised to read:

Grout shall be a workable mix with a viscosity that is suitable for the intended application. Grout shall not be placed outside of the manufacturer recommended range of thickness. The Contractor shall receive concurrence from the Engineer before using the grout.

Field grout cubes and cylinders shall be fabricated and tested in accordance with Section 9-20.3 when requested by the Engineer, but not less than once per bridge pier or once per day.

Before placing grout, the substrate on which it is to be placed shall be prepared as recommended by the manufacturer to ensure proper bonding. The grout shall be cured as recommended by the manufacturer. The grout may be loaded when a minimum of 4,000 psi compressive strength is attained.

The fifth paragraph is deleted.

6-02.3(23) Opening to Traffic

This section is supplemented with the following new paragraph:

After curing bridge approach slabs in accordance with Section 6-02.3(11), the bridge approach slabs may be opened to traffic when a minimum compressive strength of 2,500 psi is achieved.

6-02.3(24)C Placing and Fastening

This section is revised to read:

The Contractor shall position reinforcing steel as the Plans require and shall ensure that the steel is set within specified tolerances. Adjustments to reinforcing details outside of specified tolerances to avoid interferences and for other purposes are acceptable when approved by the Engineer.

When spacing between bars is 1 foot or more, they shall be tied at all intersections. When spacing is less than 1 foot, every other intersection shall be tied. If the Plans require bundled bars, they shall be tied together with wires at least every 6 feet. All epoxy-coated bars in the top mat of the bridge deck shall be tied at all intersections, however they may be tied at alternate intersections when spacing is less than 1 foot in each direction and they are supported by continuous supports meeting all other requirements of supports for epoxy-coated bars. Other epoxy-coated bars shall also be tied at all intersections, but shall be tied at alternate intersections when spacing is less than 1 foot in each direction. Wire used for tying epoxy-coated reinforcing steel shall be plastic coated. **Tack welding is not permitted on reinforcing steel.**
Abrupt bends in the steel are permitted only when one steel member bends around another. Vertical stirrups shall pass around main reinforcement or be firmly attached to it.

For slip-formed concrete, the reinforcing steel bars shall be tied at all intersections and cross braced to keep the cage from moving during concrete placement. Cross bracing shall be with additional reinforcing steel. Cross bracing shall be placed both longitudinally and transversely.

After reinforcing steel bars are placed in a traffic or pedestrian barrier and prior to slip-form concrete placement, the Contractor shall check clearances and reinforcing steel bar placement. This check shall be accomplished by using a template or by operating the slip-form machine over the entire length of the traffic or pedestrian barrier. All clearance and reinforcing steel bar placement deficiencies shall be corrected by the Contractor before slip-form concrete placement.

Precast concrete supports (or other accepted devices) shall be used to maintain the concrete coverage required by the Plans. The precast concrete supports shall:

1. Have a bearing surface measuring not greater than 2 inches in either dimension, and

2. Have a compressive strength equal to or greater than that of the concrete in which they are embedded.

In slabs, each precast concrete support shall have either: (1) a grooved top that will hold the reinforcing bar in place, or (2) an embedded wire that protrudes and is tied to the reinforcing steel. If this wire is used around epoxy-coated bars, it shall be coated with plastic.

Precast concrete supports may be accepted based on a Manufacturer’s Certificate of Compliance.

In lieu of precast concrete supports, the Contractor may use metal or all-plastic supports to hold uncoated bars. Any surface of a metal support that will not be covered by at least ½ inch of concrete shall be one of the following:

1. Hot-dip galvanized after fabrication in keeping with AASHTO M232 Class D;

2. Coated with plastic firmly bonded to the metal. This plastic shall be at least 3/32 inch thick where it touches the form and shall not react chemically with the concrete when tested in the State Materials Laboratory. The plastic shall not shatter or crack at or above -5°F and shall not deform enough to expose the metal at or below 200°F; or

3. Stainless steel that meet the requirements of ASTM A493, Type 302. Stainless steel chair supports are not required to be galvanized or plastic coated.

In lieu of precast concrete supports, epoxy-coated reinforcing bars may be supported by one of the following:
1. Metal supports coated entirely with a dielectric material such as epoxy or plastic,

2. Other epoxy-coated reinforcing bars, or

3. All-plastic supports.

Damaged coatings on metal bar supports shall be repaired prior to placing concrete.

All-plastic supports shall be lightweight, non-porous, and chemically inert in concrete. All-plastic supports shall have rounded seatings, shall not deform under load during normal temperatures, and shall not shatter or crack under impact loading in cold weather. All-plastic supports shall be placed at spacings greater than 1 foot along the bar and shall have at least 25 percent of their gross place area perforated to compensate for the difference in the coefficient of thermal expansion between plastic and concrete. The shape and configuration of all-plastic supports shall permit complete concrete consolidation in and around the support.

A “mat” is two adjacent and perpendicular layers of reinforcing steel. In bridge decks, top and bottom mats shall be supported adequately enough to hold both in their proper positions. If bar supports directly support, or are directly supported on No. 4 bars, they shall be spaced at not more than 3-foot intervals (or not more than 4-foot intervals for bars No. 5 and larger). Wire ties to girder stirrups shall not be considered as supports. To provide a rigid mat, the Contractor shall add other supports and tie wires to the top mat as needed.

Unless noted otherwise, the minimum concrete cover for main reinforcing bars shall be:

- 3 inches to a concrete surface deposited against earth without intervening forms.
- 2½ inches to the top surface of a concrete bridge deck or bridge approach slab.
- 2 inches to a concrete surface when not specified otherwise in this section or in the Contract documents.
- 1½ inches to a concrete barrier or curb surface.

Except for top cover in bridge decks and bridge approach slabs, minimum concrete cover to ties and stirrups may be reduced by ½ inch but shall not be less than 1 inch. Minimum concrete cover shall also be provided to the outermost part of mechanical splices and headed steel reinforcing bars.

Reinforcing steel bar location, concrete cover and clearance shall not vary more than the following tolerances from what is specified in the Contract documents:

- Reinforcing bar location for members 12 inches or less in thickness: ±0.25 inch
- Reinforcing bar location for members greater than 12 inches in thickness: ±0.375 inch
Reinforcing bar location for bars placed at equal spacing within a plane: the greater of either ±1 inch or ±1 bar diameter within the plane. The total number of bars shall not be fewer than that specified.

The clearance between reinforcement shall not be less than the greater of the bar diameter or 1 inch for unbundled bars. For bundled bars, the clearance between bundles shall not be less than the greater of 1 inch or a bar diameter derived from the equivalent total area of all bars in the bundle.

Longitudinal location of bends and ends of bars: ±1 inch

Embedded length of bars and length of bar lap splices:

No. 3 through No. 11: -1 inch
No. 14 through No. 18: -2 inches

Concrete cover measured perpendicular to concrete surface (except for the top surface of bridge decks, bridge approach slabs and other roadway surfaces): ±0.25 inch

Concrete cover measured perpendicular to concrete surface for the top surface of bridge decks, bridge approach slabs and other roadway surfaces: +0.25 inch, -0 inch

Before placing any concrete, the Contractor shall:

1. Clean all mortar from reinforcement, and
2. Obtain the Engineer’s permission to place concrete after the Engineer has inspected the placement of the reinforcing steel. (Any concrete placed without the Engineer’s permission shall be rejected and removed.)

6-02.3(25)H  Finishing
The last paragraph is revised to read:

The Contractor may repair defects in prestressed concrete girders in accordance with Section 6-01.16.

6-02.3(25)I  Fabrication Tolerances
Item number 12 of the first paragraph is revised to read:

12. Stirrup Projection from Top of Girder:

Wide flange thin deck and slab girders: ± ½ inch
All other girders: ± ¾ inch

6-02.3(27)  Concrete for Precast Units
The last sentence of the first paragraph is revised to read:
Type III portland cement or blended hydraulic cement is permitted to be used in precast concrete units.

6-02.3(28)B Casting
In the second paragraph, the reference to Section 6-02.3(25)B is revised to read Section 6-02.3(25)C.

6-02.3(28)D Contractors Control Strength
In the first paragraph, “WSDOT FOP for AASHTO T 23” is revised to read “FOP for AASHTO T 23”.

6-02.3(28)E Finishing
This section is supplemented with the following:

The Contractor may repair defects in precast panels in accordance with Section 6-01.16.

6-03.AP6
Section 6-03, Steel Structures
January 7, 2019

6-03.2 Materials
In the first paragraph, the material reference for Paints is revised to read:

Paints and Related Materials 9-08

6-03.3(25)A3 Ultrasonic Inspection
The first paragraph (up until the colon) is revised to read:

Complete penetration groove welds on plates 5/16 inch and thicker in the following welded assemblies or Structures shall be 100 percent ultrasonically inspected:

6-03.3(33) Bolted Connections
The first paragraph is supplemented with the following:

After final tightening of the fastener components, the threads of the bolts shall at a minimum be flush with the end of the nut.

The following is inserted after the third sentence of the fourth paragraph:

When galvanized bolts are specified, tension-control galvanized bolts are not permitted.

6-05.AP6
Section 6-05, Piling
January 2, 2018

6-05.3(9)A Pile Driving Equipment Approval
The fourth sentence of the second paragraph is revised to read:
For prestressed concrete piles, the allowable driving stress in kips per square inch shall be \( 0.095 \cdot \sqrt{f'_{c}} \) plus prestress in tension, and \( 0.85f'_{c} \) minus prestress in compression, where \( f'_{c} \) is the concrete compressive strength in kips per square inch.

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Section 6-07, Painting
January 7, 2019

6-07.1 Description
The first sentence is revised to read:

This work consists of containment, surface preparation, shielding adjacent areas from work, testing and disposing of debris, furnishing and applying paint, and cleaning up after painting is completed.

6-07.2 Materials
The material reference for Paint is revised to read:

Paint and Related Materials 9-08

6-07.3(1)A Work Force Qualifications for Shop Application of Paint
This section is supplemented with the following new sentence:

The work force may be accepted based on the approved facility.

6-07.3(1)B Work Force Qualifications for Field Application of Paint
The first two paragraphs are revised to read:

The Contractor preparing the surface and applying the paint shall be certified under SSPC-QP 1 or NACE International Institute Contractor Accreditation Program (NIICAP) AS 1.

The Contractor removing and otherwise disturbing existing paint containing lead and other hazardous materials shall be certified under SSPC-QP 2, Category A or NIICAP AS 2.

The third paragraph (up until the colon) is revised to read:

In lieu of the above SSPC or NIICAP certifications, the Contractor performing the specified work shall complete both of the following actions:

Item number 2 of the third paragraph is revised to read:

2. The Contractor’s quality control inspector(s) for the project shall be NACE-certified CIP Level 3 or SSPC Protective Coating Inspector (PCI) Level 3.

6-07.3(2) Submittals
The first paragraph is supplemented with the following:

Each component of the plan shall identify the specification section it represents.
6-07.3(2)B  Contractor’s Quality Control Program Submittal Component

The numbered list in the first paragraph is revised to read:

1. Description of the inspection procedures, tools, techniques and the acceptance criteria for all phases of work.
2. Procedure for implementation of corrective action for non-conformance work.
3. The paint system manufacturer’s recommended methods of preventing defects.
4. The Contractor’s frequency of quality control inspection for each phase of work.
5. Example of each completed form(s) of the daily quality control report used to document the inspection work and tests performed by the Contractor’s quality control personnel.

6-07.3(2)C  Paint System Manufacturer and Paint System Information Submittal Component

Item number 1 is revised to read:

1. Product data sheets and Safety Data Sheets (SDS) on the paint materials, paint preparation, and paint application, as specified by the paint manufacturer, including:
   a. All application instructions, including the mixing and thinning directions.
   b. Recommended spray nozzles and pressures.
   c. Minimum and maximum drying time between coats.
   d. Restrictions on temperature and humidity.
   e. Repair procedures for shop and field applied coatings.
   f. Maximum dry film thickness for each coat.
   g. Minimum wet film thickness for each coat to achieve the specified minimum dry film thickness.

6-07.3(2)D  Hazardous Waste Containment, Collection, Testing, and Disposal Submittal Component

The first paragraph (up until the colon) is revised to read:

The hazardous waste containment, collection, testing, and disposal shall meet all Federal and State requirements, and the submittal component of the painting plan shall include the following:

6-07.3(2)E  Cleaning and Surface Preparation Submittal Component

Item 1(b) of the first paragraph is revised to read:

b. Type, manufacturer, and brand of abrasive blast material and all associated additives, including Safety Data Sheets (SDS).
6-07.3(3)B Quality Control and Quality Assurance for Field Application of Paint

The last sentence of the first paragraph (excluding the numbered list) is revised to read:

The Contractor’s quality control operations shall include a minimum monitoring and documenting the following for each working day:

Item number 1 in the fourth paragraph is revised to read:

1. Environmental conditions for painting in accordance with ASTM E 337.

Item number 4 in the fourth paragraph is revised to read:

4. Pictorial of surface preparation guides in accordance with SSPC-VIS 1, 3, 4, and 5.

Item number 5 in the fourth paragraph is revised to read:

5. Surface profile by Keanne-Tator comparator in accordance with ASTM D 4417 and SSPC PA17.

6-07.3(4) Paint System Manufacturer's Technical Representative

This section is revised to read:

The paint system manufacturer’s representative shall be present at the jobsite for the pre-painting conference and for the first day of paint application, and shall be available to the Contractor and Contracting Agency for consultation for the full project duration.

6-07.3(5) Pre-Painting Conference

The second paragraph is revised to read:

If the Contractor’s key personnel change between any work operations, an additional conference shall be held if requested by the Engineer.

6-07.3(6)A Paint Containers

In item number 2 of the first paragraph, “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

6-07.3(6)B Paint Storage

Item number 2 of the second paragraph is revised to read:

2. The Contractor shall monitor and document daily the paint material storage facility with a high-low recording thermometer device.

6-07.3(7) Paint Sampling and Testing

The first two paragraphs are revised to read:

The Contractor shall provide the Engineer 1 quart of each paint representing each lot. Samples shall be accompanied with a Safety Data Sheet.

If the quantity of paint required for each component of the paint system for the entire project is 20 gallons or less, then the paint system components will be accepted as specified in Section 9-08.1(7).
6-07.3(8)A Paint Film Thickness Measurement Gages

The first paragraph is revised to read:

Paint dry film thickness measurements shall be performed with either a Type 1 pull-off gage or a Type 2 electronic gage as specified in SSPC Paint Application Specification No. 2, Procedure for Determining Conformance to Dry Coating Thickness Requirements.

6-07.3(9) Painting New Steel Structures

The last sentence of the second paragraph is revised to read:

Welded shear connectors are not required to be painted.

The last paragraph is revised to read:

Temporary attachments or supports for scaffolding, containment or forms shall not damage the paint system.

6-07.3(9)A Paint System

The first paragraph is revised to read:

The paint system applied to new steel surfaces shall consist of the following:

Option 1 (component based paint system):

| Primer Coat – Inorganic Zinc Rich | 9-08.1(2)C |
| Intermediate Coat – Moisture Cured Polyurethane | 9-08.1(2)G |
| Intermediate Stripe Coat – Moisture Cured Polyurethane | 9-08.1(2)G |
| Top Coat – Moisture Cured Polyurethane | 9-08.1(2)H |

Option 2 (performance based paint system):

| Primer Coat – Inorganic Zinc Rich | 9-08.1(2)M |
| Intermediate Coat – Epoxy | 9-08.1(2)M |
| Intermediate Stripe Coat – Epoxy | 9-08.1(2)M |
| Top Coat – Polyurethane | 9-08.1(2)M |

The following new paragraph is inserted after the first paragraph:

Paints and related materials shall be products listed in the current WSDOT Qualified Products List (QPL). Component based paint systems shall be listed on the QPL in the applicable sections of Section 9-08. Performance based systems shall be listed on the current Northeast Protective Coatings Committee (NEPCOAT) Qualified Products List "A" as listed on the WSDOT QPL in Section 9-08.1(2)M. If the paint and related materials for the component based system is not listed in the current WSDOT QPL, a sample shall be submitted to the State Materials Laboratory in Tumwater for evaluation and acceptance in accordance with Section 9-08.

6-07.3(9)C Mixing and Thinning Paint

This section is revised to read:
The Contractor shall thoroughly mix paint in accordance with the manufacturer’s written recommendations and by mechanical means to ensure a uniform and lump free composition. Paint shall not be mixed by means of air stream bubbling or boxing. Paint shall be mixed in the original containers and mixing shall continue until all pigment or metallic powder is in suspension. Care shall be taken to ensure that the solid material that has settled to the bottom of the container is thoroughly dispersed. After mixing, the Contractor shall inspect the paint for uniformity and to ensure that no unmixed pigment or lumps are present.

Catalysts, curing agents, hardeners, initiators, or dry metallic powders that are packaged separately may be added to the base paint in accordance with the paint manufacturer’s written recommendations and only after the paint is thoroughly mixed to achieve a uniform mixture with all particles wetted. The Contractor shall then add the proper volume of curing agent to the correct volume of base and mix thoroughly. The mixture shall be used within the pot life specified by the manufacturer. Unused portions shall be discarded at the end of each work day. Accelerants are not permitted except as allowed by the Engineer.

The Contractor shall not add additional thinner at the application site except as allowed by the Engineer. The amount and type of thinner, if allowed, shall conform to the manufacturer’s specifications. If recommended by the manufacturer and allowed by the Engineer, a measuring cup shall be used for the addition of thinner to any paint with graduations in ounces. No un-measured addition of thinner to paint will be allowed. Any paint found to be thinned by unacceptable methods will be rejected.

When recommended by the manufacturer, the Contractor shall constantly agitate paint during application by use of paint pots equipped with mechanical agitators.

The Contractor shall strain all paint after mixing to remove undesirable matter, but without removing the pigment or metallic powder.

Paint shall be stored and mixed in a secure, contained location to eliminate the potential for spills into State waters and onto the ground and highway surfaces.

**6-07.3(9)D Coating Thickness**

This section is revised to read:

Dry film thickness shall be measured in accordance with SSPC Paint Application Specification No. 2, *Procedure for Determining Conformance to Dry Coating Thickness Requirements*.

The minimum dry film thickness of the primer coat shall not be less than 2.5 mils.

The minimum dry film thickness of each coat (combination of intermediate and intermediate stripe, and top) shall be not less than 3.0 mils.

The dry film thickness of each coat shall not be thicker than the paint manufacturer’s recommended maximum thickness.

The minimum wet film thickness of each coat shall be specified by the paint manufacturer to achieve the minimum dry film thickness.
Film thickness, wet and dry, will be measured by gages conforming to Section 6-07.3(8)A.

Wet measurements will be taken immediately after the paint is applied in accordance with ASTM D4414. Dry measurements will be taken after the coating is dry and hard in accordance with SSPC Paint Application Specification No. 2.

Each painter shall be equipped with wet film thickness gages and shall be responsible for performing frequent checks of the paint film thickness throughout application.

Coating thickness measurements may be made by the Engineer after the application of each coat and before the application of the succeeding coat. In addition, the Engineer may inspect for uniform and complete coverage and appearance. One hundred percent of all thickness measurements shall meet or exceed the minimum wet film thickness. In areas where wet film thickness measurements are impractical, dry film thickness measurements may be made. If a question arises about an individual coat’s thickness or coverage, it may be verified by the use of a Tooke gage in accordance with ASTM D4138.

If the specified number of coats does not produce a combined dry film thickness of at least the sum of the thicknesses required per coat, if an individual coat does not meet the minimum thickness, or if visual inspection shows incomplete coverage, the coating system will be rejected and the Contractor shall discontinue painting and surface preparation operations and shall submit a Type 2 Working Drawing of the repair proposal. The repair proposal shall include documentation demonstrating the cause of the less-than-minimum thickness, along with physical test results, as necessary, and modifications to Work methods to prevent similar results. The Contractor shall not resume painting or surface preparation operations until receiving the Engineer’s acceptance of the completed repair.

6-07.3(9)E Surface Temperature Requirements Prior to Application of Paint
This section, including title, is revised to read:

6-07.3(9)E Environmental Condition Requirements Prior to Application of Paint
Paint shall be applied only during periods when:

1. Air and steel temperatures are in accordance with the paint manufacturer’s recommendations but in no case less than 35°F nor greater than 115°F.
2. Steel surface temperature is a minimum of 5°F above the dew point.
3. Steel surface is not wet.
4. Relative humidity is within the manufacturer’s recommended range.
5. The anticipated ambient temperature will remain above 35°F or the manufacturer’s minimum temperature, whichever is greater, during the paint drying and curing period.

Application will not be allowed if conditions are not favorable for proper application and performance of the paint.
Paint shall not be applied when weather conditions are unfavorable to proper curing. If a paint system manufacturer’s recommendations allow for application of a paint under environmental conditions other than those specified, the Contractor shall submit a Type 2 Working Drawing consisting of a letter from the paint manufacturer specifying the environmental conditions under which the paint can be applied. Application of paint under environmental conditions other than those specified in this section will not be allowed without the Engineer’s concurrence.

6-07.3(9)F Shop Surface Cleaning and Preparation

The last sentence is revised to read:

The entire steel surface to be painted, including surfaces specified in Section 6-07.3(9)G to receive a mist coat of primer, shall be cleaned to a near white condition in accordance with SSPC-SP 10, *Near-white Metal Blast Cleaning*, and shall be in this condition immediately prior to paint application.

6-07.3(9)G Application of Shop Primer Coat

The first paragraph is supplemented with the following:

Repairs of the shop primer coat shall be prepared in accordance with the painting plan. Shop primer coat repair paint shall be selected from the approved component based or performance based paint system in accordance with Section 6-07.3(10)H.

6-07.3(9)H Containment for Field Coating

This section is revised to read:

The Contractor shall use a containment system in accordance with Section 6-07.3(10)A for surface preparation and prime coating of all uncoated areas remaining, including bolts, nuts, washers, and splice plates.

During painting operations of the intermediate, stripe and top coats the Contractor shall furnish, install, and maintain drip tarps below the areas to be painted to contain all spilled paint, buckets, brushes, and other deleterious material, and prevent such materials from reaching the environment below or adjacent to the structure being painted. Drip tarps shall be absorbent material and hung to minimize puddling. The Contractor shall evaluate the project-specific conditions to determine the specific type and extent of containment needed to control the paint emissions and shall submit a containment plan in accordance with Section 6-07.3(2).

6-07.3(9)I Application of Field Coatings

This section is revised to read:

An on-site supervisor shall be present for each work shift at the bridge site.

Upon completion of erection Work, all uncoated or damaged areas remaining, including bolts, nuts, washers, and splice plates, shall be prepared in accordance with Section 6-07.3(9)F, followed by a field primer coat of a zinc-rich primer and final coats of paint selected from the approved component or performance based paint system in accordance with Section 6-07.3(10)H. The intermediate, intermediate stripe, and top coats shall be applied in accordance with the manufacturer’s written recommendations.
Upon completion of erection Work, welds for steel column jackets may be prepared in accordance with SSPC-SP 15, Commercial Grade Power Tool Cleaning.

The minimum drying time between coats shall be as shown in the product data sheets, but not less than 12 hours. The Contractor shall determine whether the paint has cured sufficiently for proper application of succeeding coats.

The maximum time between intermediate and top coats shall be in accordance with the manufacturer’s written recommendations. If the maximum time between coats is exceeded, all newly coated surfaces shall be prepared to SSPC-SP 7, Brush-off Blast Cleaning, and shall be repainted with the same paint that was cleaned, at no additional cost to the Contracting Agency.

Each coat shall be applied in a uniform layer, completely covering the preceding coat. The Contractor shall correct runs, sags, skips, or other deficiencies before application of succeeding coats. Such corrective work may require re-cleaning, application of additional paint, or other means as determined by the Engineer, at no additional cost to the Contracting Agency.

Dry film thickness measurements will be made in accordance with Section 6-07.3(9)D.

All paint damage that occurs shall be repaired in accordance with the manufacturer’s written recommendations. On bare areas or areas of insufficient primer thickness, the repair shall include field-applied zinc-rich primer and the final coats of paint selected from the approved component or performance based paint system in accordance with Section 6-07.3(10)H. On areas where the primer is at least equal to the minimum required dry film thickness, the repair shall include the application of the final two coats of the paint system. All paint repair operations shall be performed by the Contractor at no additional cost or time to the Contracting Agency.

6-07.3(10)A Containment
The first sentence of the third paragraph is revised to read:

Emissions shall be assessed by Visible Emission Observations (Method A) in SSPC Technology Update No. 7, Conducting Ambient Air, Soil, and Water Sampling of Surface Preparation and Paint Disturbance Activities, Section 6.2 and shall be limited to the Level A Acceptance Criteria Option Level 0 Emissions standard.

6-07.3(10)D Surface Preparation Prior to Overcoat Painting
The first paragraph is revised to read:

The Contractor shall remove any visible oil, grease, and road tar in accordance with SSPC-SP 1, Solvent Cleaning.

The second paragraph is revised to read:

Following any preparation by SSPC-SP1, all steel surfaces to be painted shall be prepared in accordance with SSPC-SP 7, Brush-off Blast Cleaning. Surfaces inaccessible to brush-off blast shall be prepared in accordance with SSPC-SP 3, Power Tool Cleaning, as allowed by the Engineer.

The first sentence of the third paragraph is revised to read:
Following brush-off blast cleaning, the Contractor shall perform spot abrasive blast
cleaning in accordance with SSPC-SP 6, *Commercial blast Cleaning*.

The second to last sentence of the third paragraph is revised to read:

For small areas, as allowed by the Engineer, the Contractor may substitute cleaning in
accordance with SSPC-SP 15, *Commercial Grade Power Tool Cleaning*.

**6-07.3(10)G Treatment of Pack and Rust Gaps**

The second paragraph is revised to read:

Pack rust forming a gap between steel surfaces of $\frac{3}{16}$ to $\frac{1}{4}$ inch shall be cleaned to a
depth of at least one half of the gap width. The gaps shall be cleaned and prepared in
accordance with SSPC-SP6. The cleaned gap shall be treated with rust penetrating
sealer, prime coated, and then caulked to form a watertight seal along the top edge and
the two sides of the steel pieces involved, using the rust penetrating sealer and caulk as
accepted by the Engineer. The bottom edge or lowest edge of the steel pieces involved
shall not be caulked.

The third paragraph is supplemented with the following:

Caulk shall be a single-component urethane sealant conforming to Section 9-08.7.

The fifth paragraph is revised to read:

At locations where gaps between steel surfaces exceed $\frac{1}{4}$ inch, the Contractor shall
clean and prepare the gap in accordance SSPC-SP6, apply the rust penetrating sealer,
apply the prime coat, and then fill the gap with foam backer rod material as accepted by
the Engineer. The foam backer rod material shall be of sufficient diameter to fill the
crevise or gap. The Contractor shall apply caulk over the foam backer rod material to
form a watertight seal.

This section is supplemented with the following new paragraph:

Caulk and backer rod, if needed, shall be placed prior to applying the top coat. The
Contractor, with the concurrence of the Engineer, may apply the rust penetrating sealer
after application of the prime coat provided the primer is removed in the areas to be
sealed. The areas to be sealed shall be re-cleaned and re-prepared in accordance with
SSPC-SP6.

**6-07.3(10)H Paint System**

The first paragraph is revised to read:

The paint system applied to existing steel surfaces shall consist of the following five-
coat system:

<table>
<thead>
<tr>
<th>Option 1 (component based system):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primer Coat – Zinc-filled Moisture Cured Polyurethane</td>
</tr>
<tr>
<td>Primer Stripe Coat - Moisture Cured Polyurethane</td>
</tr>
<tr>
<td>Intermediate Coat - Moisture Cured Polyurethane</td>
</tr>
</tbody>
</table>
Intermediate Stripe Coat - Moisture Cured Polyurethane  9-08.1(2)G
Top Coat - Moisture Cured Polyurethane  9-08.1(2)H

Option 2 (performance based system):

Primer Coat  – Zinc-rich Epoxy  9-08.1(2)N
Primer Stripe Coat  – Epoxy  9-08.1(2)N
Intermediate Coat  – Epoxy  9-08.1(2)N
Intermediate Stripe Coat  – Epoxy  9-08.1(2)N
Top Coat  – Polyurethane  9-08.1(2)N

The following new paragraph is inserted after the first paragraph:

Paints and related materials shall be a product listed in the current WSDOT Qualified Products List (QPL). Component based paint systems shall be listed on the QPL in the applicable sections of Section 9-08. Performance based systems shall be listed on the current Northeast Protective Coatings Committee (NEPCOAT) Qualified Products List “B” as listed on the WSDOT QPL in Section 9-08.1(2)N. If the paint and related material for the component based system is not listed in the current WSDOT QPL, a sample shall be submitted to the State Materials Laboratory in Tumwater for evaluation and acceptance in accordance with Section 9-08.

6-07.3(10)J  Mixing and Thinning Paint
This section is revised to read:

Mixing and thinning paint shall be in accordance with Section 6-07.3(9)C.

6-07.3(10)K  Coating Thickness
This section is revised to read:

Coating thickness shall be in accordance with Section 6-07.3(9)D except the minimum dry film thickness of each coat (combination of primer and primer stripe, combination of intermediate and intermediate stripe, and top) shall not be less than 3.0 mils.

6-07.3(10)L  Environmental Condition Requirements Prior to Application of Paint
This section is revised to read:

Environmental conditions shall be in accordance with Section 6-07.3(9)E.

6-07.3(10)M  Steel Surface Condition Requirements Prior to Application of Paint
The third paragraph is revised to read:

Edges of existing paint shall be feathered in accordance with SSPC-PA 1, Shop, Field, and Maintenance Coating of Metals, Note 15.20.

6-07.3(10)N  Field Coating Application Methods
The third sentence is revised to read:

The Contractor may apply stripe coat paint using spray or brush but shall follow spray application using a brush to ensure complete coverage around structural geometric
irregularities and to push the paint into gaps between existing steel surfaces and around rivets and bolts.

6-07.3(10)O Applying Field Coatings
The second to last paragraph is revised to read:

Each application of primer, primer stripe, intermediate, intermediate stripe, and top coat shall be considered as separately applied coats. The Contractor shall not use a preceding or subsequent coat to remedy a deficiency in another coat. The Contractor shall apply the top coat to at least the minimum specified top coat thickness, to provide a uniform appearance and consistent finish coverage.

6-07.3(10)P Field Coating Repair
The second sentence is revised to read:

Repair areas shall be cleaned of all damaged paint and the system reapplied using all coats typical to the paint system and shall meet the minimum coating thickness.

6-07.3(11)A Painting of Galvanized Surfaces
This section is revised to read:

All galvanized surfaces receiving paint shall be prepared for painting in accordance with the ASTM D 6386. The method of preparation shall be brush-off in accordance with SSPC-SP16 Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals or as otherwise allowed by the Engineer. The Contractor shall not begin painting until receiving the Engineer’s acceptance of the prepared galvanized surface. For galvanized bolts used for replacement of deteriorated existing rivets, the Contractor, with the concurrence of the Engineer and after successful demonstration testing, may prepare galvanized surfaces in accordance with SSPC-SP1 followed by SSPC-SP2, Hand Tool Cleaning or SSPC-SP3, Power Tool Cleaning. The demonstration testing shall include adhesion testing of the first coat of paint over galvanized bolts, nuts, and washers or a representative galvanized surface. Adhesion testing shall be performed in accordance with ASTM D 4541 for 600 psi minimum adhesion. A minimum of 3 successful tests shall be performed on the galvanized surface prepared and painted using the same methods and materials to be used on the galvanized bolts, nuts and washers in the field.

6-07.3(11)A2 Paint Coat Materials
This section is revised to read:

The Contractor shall paint the dry surface as follows:

1. The first coat over a galvanized surface shall be an epoxy polyamide conforming to Section 9-08.1(2)E. In the case of galvanized bolts used for replacement of deteriorated existing rivets and for small surface areas less than or equal to one square foot, an intermediate moisture cured polyurethane conforming to Section 9-08.1(2)G may be used as a first coat. In both cases the first coat shall be compatible with galvanizing and as recommended by the top coat manufacturer.

2. The second coat shall be a top coat moisture cured aliphatic polyurethane conforming to Section 9-08.1(2)H or a top coat polyurethane conforming to
Section 6-07.3(10)H Option 2 NEPCOAT performance based paint specification compatible with the first coat as recommended by the manufacturer.

Each coat shall be dry before the next coat is applied. All coats applied in the shop shall be dried hard before shipment.

6-07.3(11)B Powder Coating of Galvanized Surfaces

This section is revised to read:

Powder coating of galvanized surfaces shall consist of the following coats:

1. The first coat shall be an epoxy powder primer coat conforming to Section 9-08.2.

2. The second coat shall be a polyester finish coat conforming to Section 9-08.2.

6-07.3(11)B3 Galvanized Surface Cleaning and Preparation

The first three paragraphs are revised to read:

Galvanized surfaces receiving the powder coating shall be cleaned and prepared for coating in accordance with ASTM D 7803, and the project-specific powder coating plan.

Assemblies conforming to the ASTM D 7803 definition for newly galvanized steel shall receive surface smoothing and surface cleaning in accordance with ASTM D 7803, Section 5, and surface preparation in accordance with ASTM D 7803, Section 5.1.3.

Assemblies conforming to the ASTM D 7803 definition for partially weathered galvanized steel shall be checked and prepared in accordance with ASTM D 7803, Section 6, before then receiving surface smoothing and surface cleaning in accordance with ASTM D 7803, Section 5, and surface preparation in accordance with ASTM D 7803, Section 5.1.3.

The fourth paragraph (up until the colon) is revised to read:

Assemblies conforming to the ASTM D 7803 definition for weathered galvanized steel shall be prepared in accordance with ASTM D 7803, Section 7 before then receiving surface smoothing and surface cleaning in accordance with ASTM D 7803, Section 5, and surface preparation in accordance with ASTM D 7803, Section 5.3 except as follows:

6-07.3(11)B5 Testing

Item number 4 in the first paragraph is revised to read:

4. Adhesion testing in accordance with ASTM D 4541 for 600 psi minimum adhesion for the complete two-component system.

The second sentence of the fourth paragraph is revised to read:

Rejected assemblies shall be repaired or recoated by the Contractor, at no additional expense to the Contracting Agency, in accordance with the powder coating.
manufacturer's recommendation as detailed in the project-specific powder coating plan, until the assemblies satisfy the acceptance testing requirements.

6-07.3(12) Painting Ferry Terminal Structures
This section is revised to read:

Painting of ferry terminal Structures shall be in accordance with Section 6-07.3 as supplemented below.

This section is supplemented with the following new subsections:

6-07.3(12)A Painting New Steel Ferry Terminal Structures
Painting of new steel Structures shall be in accordance with Section 6-07.3(9) except that all coatings (primer, intermediate, intermediate stripe, and top) shall be applied in the shop with the following exceptions:

1. Steel surfaces to be field welded.
2. Steel surfaces to be greased.
3. The length of piles designated in the Plans not requiring painting.

The minimum drying time between coats shall be as shown in the product data sheets, but not less than 12 hours. The Contractor shall determine whether the paint has cured sufficiently for proper application of succeeding coats.

6-07.3(12)A1 Paint Systems
Paint systems for Structural Steel, which includes vehicle transfer spans and towers, pedestrian overhead loading structures and towers, upland structural steel and other elements as designated in the Special Provisions shall be as specified in Section 6-07.3(9)A.

Paint systems for Piling, Landing Aids and Life Ladders shall be as specified in the Special Provisions.

6-07.3(12)A2 Paint Color
Paint colors shall be as specified in the Special Provisions.

6-07.3(12)A3 Coating Thickness
Coating thicknesses shall be as specified in the Special Provisions.

6-07.3(12)A4 Application of Field Coatings
An on-site supervisor shall be present for each work shift at the project site.

Upon completion of erection Work, all uncoated or damaged areas remaining, including bolts, nuts, washers, splice plates, and field welds shall be prepared in accordance with SSPC-SP 1, Solvent Cleaning, followed by SSPC-SP 11, Power Tool Cleaning to Bare Metal. Surface preparation shall be measured according to SSPC-VIS 3. SSPC-SP 11 shall be performed for a minimum distance of 1 inch from the uncoated or damaged area. In addition, intact shop-applied coating surrounding the area shall be abraded or sanded for a distance of 6 inches out from the properly prepared clean/bare metal areas to provide adequate roughness for
application of field coatings. All sanding dust and contamination shall be removed prior to application of field coatings.

Field applied paint for Structural Steel shall conform to Section 6-07.3(10)H, as applicable. Field applied paint for Piling, Landing Aids and Life Ladders shall be as specified in the Special Provisions.

For areas above the tidal zone, the minimum drying time between coats shall be as shown in the product data sheets, but not less than 12 hours. For areas within the tidal zone, the minimum drying time between coats shall be as recommended by the paint system manufacturer. The Contractor shall determine whether the paint has cured sufficiently for proper application of succeeding coats.

The maximum time between intermediate and top coats shall be in accordance with the manufacturer’s written recommendations. If the maximum time between coats is exceeded, all newly coated surfaces shall be prepared to SSPC-SP 3, Power Tool Cleaning, and shall be repainted with the same paint that was cleaned, at no additional cost to the Contracting Agency.

Each coat shall be applied in a uniform layer, completely covering the preceding coat. The Contractor shall correct runs, sags, skips, or other deficiencies before application of succeeding coats. Such corrective work may require re-cleaning, application of additional paint, or other means as determined by the Engineer, at no additional cost to the Contracting Agency.

Surface preparation for underwater locations shall consist of removing all dirt, oil, grease, loose paint, loose rust, and marine growth from the area that is to be repaired. The sound paint surrounding the damaged area shall be roughened to meet the requirements of the manufacturer. Paint for underwater applications shall be as specified in the Special Provisions and shall be applied in accordance with the manufacturer’s recommendations.

6-07.3(12)B Painting Existing Steel Ferry Terminal Structures

Painting of existing steel structures shall be in accordance with Section 6-07.3(10) as supplemented by the following.

6-07.3(12)B1 Containment

Containment for full removal shall be in accordance with Section 6-07.3(10)A. Containment for overcoat systems shall be in accordance with all applicable Permits as required in the Special Provisions.

Prior to cleaning the Contractor shall enclose all exposed electrical and mechanical equipment to seal out dust, water, and paint. Non-metallic surfaces shall not be abrasive blasted or painted. Unless otherwise specified, the following metallic surfaces shall not be painted and shall be protected from abrasive blasting and painting:

1. Galvanized and stainless steel surfaces not previously painted,
2. Non-skid surfaces,
3. Unpainted intentionally greased surfaces,
4. Equipment labels, identification plates, tags, etc.,

5. Fire and emergency containers or boxes,

6. Mechanical hardware such as hoist sheaves, hydraulic cylinders, gear boxes, wire rope, etc.

The Contractor shall submit a Type 2 Working Drawing consisting of materials and equipment used to shield components specified to not be cleaned and painted. The Contractor shall shut off the power prior to working around electrical equipment. The Contractor shall follow the lock-out/tag-out safety provisions of the WAC 296-803 and all other applicable safety standards.

6-07.3(12)B2 Surface Preparation

For applications above high water and within the tidal zone, surface preparation for overcoat painting shall be in accordance with SSPC-SP 1, Solvent Cleaning, followed by SSPC-SP 3, Power Tool Cleaning. Use of wire brushes is not allowed. After SP 3 cleaning has been completed all surfaces exhibiting coating failure down to the steel substrate, and those exhibiting visible corrosion, shall be prepared down to clean bare steel in accordance with SSPC-SP 15, Commercial Grade Power Tool Cleaning. Surface preparation shall be measured according to SSPC-VIS 3. SSPC-SP 15 shall be performed for a minimum distance of 1 inch from the area exhibiting failure or visible corrosion. In addition, intact shop-applied coating surrounding the repair area shall be abraded or sanded for a distance of 6 inches out from the properly prepared clean/bare metal areas to provide adequate roughness for application of repair coatings. All sanding dust and contamination shall be removed prior to application of repair coatings. Surface preparation for full paint removal shall be in accordance with Section 6-07.3(10)E except SSPC-SP 11 will be permitted as detailed in the Contractor’s painting plan and as allowed by the Engineer.

Surface preparation for underwater locations shall consist of removing all dirt, oil, grease, loose paint, loose rust, and marine growth from the area that is to be repaired. The sound paint surrounding the damaged area shall be roughened as required by the coating manufacturer.

Removed marine growth may be released to state waters provided the marine growth is not mixed with contaminants (paint, oil, rust, etc.) and it shall not accumulate on the sea bed. All marine growth containing contaminants shall be collected for proper disposal.

Surface preparation for the underside of bridge decks (consisting of either a steel grid system of main bars or tees and a light gauge metal form, in-filled with concrete or a corrugated light gauge metal form, infilled with concrete) shall be in accordance with SSPC-SP 2, Hand Tool Cleaning or SSPC-SP 3, Power Tool Cleaning with the intent of not causing further damage to the light gauge metal form. Following removal of any pack rust and corroded sections from the underside of the bridge deck, cleaning and flushing to remove salts and prior to applying the primer coat, the Contractor shall seal the entire underside of the deck system with rust-penetrating sealer. Damage to galvanized metal forms and/or grids shall be
repaired in accordance with ASTM A 780, with the preferred method of repair using paints containing zinc dust.

6-07.3(12)B3 Paint Systems
Paint systems for Structural Steel, which includes vehicle transfer spans and towers, pedestrian overhead loading structures and towers, upland structural steel and other elements as designated in the Special Provisions shall be as specified in Section 6-07.3(10)H.

Paint systems for Piling, Landing Aids, Life Ladders, underside of vehicle transfer span bridge decks, non-skid surface treated areas, and anti-graffiti coatings shall be as specified in the Special Provisions.

6-07.3(12)B4 Paint Color
Paint colors shall be as specified in the Special Provisions.

6-07.3(12)B5 Coating Thickness
Coating thicknesses shall be as specified in the Special Provisions.

6-07.3(12)B6 Application of Field Coatings
Application of field coatings shall be in accordance with Section 6-07.3(10)O and Section 6-07.3(12)A2 except for the following:

1. All coatings applied in the field shall be applied using a brush or roller. Spray application methods may be used if allowed by the Engineer.

2. Applied coatings shall not be immersed until the coating has been cured as required by the coating manufacturer.

3. Non-skid surface treatment products shall be applied in accordance with the manufacturer’s recommendations.

4. Anti-graffiti coatings shall be applied in one coat following application of the top coat, where specified in the Plans.

6-07.3(14)B Reference Standards
The second standard reference (to SSPC CS 23.00), and its accompanying title, is revised to read:

SSPC CS 23.00 Specification for the Application of Thermal Spray Coatings (Metallizing) of Aluminum, Zinc, and Their Alloys and Composites for the Corrosion Protection of Steel

6-08.AP6 Section 6-08, Bituminous Surfacing on Structure Decks January 7, 2019

6-08.3(7)A Concrete Deck Preparation
The first sentence of the first paragraph is revised to read:

The Contractor, with the Engineer, shall inspect the exposed concrete deck to establish the extent of bridge deck repair in accordance with Section 6-09.3(6).
6-09.3 Construction Requirements

This section is supplemented with the following new subsection:

6-09.3(15) Sealing and Texturing Concrete Overlay

After the requirements for checking for bond have been met, all joints and visible cracks shall be filled and sealed with a high molecular weight methacrylate resin (HMWM). Cracks 1/16 inch and greater in width shall receive two applications of HMWM. Immediately following the application of HMWM, the wetted surface shall be coated with sand for abrasive finish.

After all cracks have been filled and sealed and the HMWM resin has cured, the concrete overlay surface shall receive a longitudinally sawn texture in accordance with Section 6-02.3(10)D5.

Traffic shall not be permitted on the finished concrete until it has reached a minimum compressive strength of 3,000 psi as verified by rebound number determined in accordance with ASTM C805 and the longitudinally sawn texture is completed.

6-09.3(1)B Rotary Milling Machines

This section is revised to read:

Rotary milling machines used to remove an upper layer of existing concrete overlay, when present, shall have a maximum operating weight of 50,000 pounds and conform to Section 6-08.3(5)B.

6-09.3(1)C Hydro-Demolition Machines

The first sentence of this section is revised to read:

Hydro-demolition machines shall consist of filtering and pumping units operating in conjunction with a remote-controlled robotic device, using high-velocity water jets to remove sound concrete to the nominal scarification depth shown in the Plans with a single pass of the machine, and with the simultaneous removal of deteriorated concrete.

6-09.3(1)D Shot Blasting Machines

This section, including title, is revised to read:

6-09.3(1)D Vacant

6-09.3(1)E Air Compressor

This section is revised to read:
Air compressors shall be equipped with oil traps to eliminate oil from being blown onto the bridge deck.

6-09.3(1)J Finishing Machine
This section is revised to read:

The finishing machine shall meet the requirements of Section 6-02.3(10) and the following requirements:

The finishing machine shall be equipped with augers, followed by an oscillating, vibrating screed, vibrating roller tamper, or a vibrating pan, followed by a rotating cylindrical double drum screed. The vibrating screed, roller tamper or pan shall be of sufficient length and width to properly consolidate the mixture. The vibrating frequency of the vibrating screed, roller tamper or pan shall be variable with positive control.

6-09.3(2) Submittals
Item number 1 and 2 are revised to read:

1. A Type 1 Working Drawing consisting of catalog cuts and operating parameters of the hydro-demolition machine selected by the Contractor for use in this project to scarify concrete surfaces.

2. A Type 1 Working Drawing consisting of catalog cuts, operating parameters, axle loads, and axle spacing of the rotary milling machine (if used to remove an upper layer of existing concrete overlay when present).

The first sentence of item number 3 is revised to read:

A Type 2 Working Drawing of the Runoff Water Disposal Plan.

6-09.3(5)A General
This section is revised to read:

All areas of the deck that are inaccessible to the selected scarifying machine shall be scarified to remove the concrete surface matrix to a maximum nominal scarification depth shown in the Plans by a method acceptable to the Engineer.

This section is supplemented with the following:

Concrete process water generated by scarifying concrete surface and removing existing concrete overlay operations shall be contained, collected, and disposed of in accordance with Section 5-01.3(11) and Section 6-09.3(5)C, and the Section 6-09.3(2) Runoff Water Disposal Plan.

6-09.3(5)B Testing of Hydro-Demolition and Shot Blasting Machines
This section’s title is revised to read:

Testing of Hydro-Demolition Machines

The second paragraph is revised to read:
In the “sound” area of concrete, the equipment shall be programmed to remove
cement to the nominal scarification depth shown in the Plans with a single pass of the
machine.

6-09.3(5)D  Shot Blasting
This section, including title, is revised to read:

6-09.3(5)D  Vacant

6-09.3(5)E  Rotomilling
This section, including title, is revised to read:

6-09.3(5)E  Removing Existing Concrete Overlay Layer by Rotomilling
When the Contractor elects to remove the upper layer of existing concrete overlay,
when present, by rotomilling prior to final scarifying, the entire concrete surface of the
bridge deck shall be milled to remove the surface matrix to the depth specified in the
Plans with a tolerance as specified in Section 6-08.3(5)B. The operating parameters of
the rotary milling machine shall be monitored in order to prevent the unnecessary
removal of concrete below the specified removal depth.

6-09.3(6)  Further Deck Preparation
The first paragraph is revised to read::

Once the lane or strip being overlaid has been cleaned of debris from scarifying, the
Contractor, with the Engineer, shall perform a visual inspection of the scarified surface.
The Contractor shall mark those areas of the existing bridge deck that are authorized by
the Engineer for further deck preparation by the Contractor.

6-09.3(6)A  Equipment for Further Deck Preparation
This section is revised to read:

Further deck preparation shall be performed using either power driven hand tools
conforming to Section 6-09.3(1)A, or hydro-demolition machines conforming to Section
6-09.3(1)C.

6-09.3(6)B  Deck Repair Preparation
The second paragraph is deleted.

The last sentence of the second paragraph (after the preceding Amendment is applied) is
revised to read:

In no case shall the depth of a sawn vertical cut exceed ¾ inch or to the top of the top
steel reinforcing bars, whichever is less.

The first sentence of the third to last paragraph is revised to read:
Where existing steel reinforcing bars inside deck repair areas show deterioration greater
than 20-percent section loss, the Contractor shall furnish and place steel reinforcing
bars alongside the deteriorated bars in accordance with the details shown in the
Standard Plans.

The last paragraph is deleted.

6-09.3(7) Surface Preparation for Concrete Overlay

The first seven paragraphs are deleted and replaced with the following:

Following the completion of any required further deck preparation the entire lane or strip
being overlaid shall be cleaned to be free from oil and grease, rust and other foreign
material that may still be present. These materials shall be removed by detergent-
cleaning or other method accepted by the Engineer followed by sandblasting.

After detergent cleaning and sandblasting is completed, the entire lane or strip being
overlaid shall be cleaned in final preparation for placing concrete.

Hand tool chipping, sandblasting and cleaning in areas adjacent to a lane or strip being
cleaned in final preparation for placing concrete shall be discontinued when final
preparation is begun. Scarifying and hand tool chipping shall remain suspended until
the concrete has been placed and the requirement for curing time has been satisfied.
Sandblasting and cleaning shall remain suspended for the first 24 hours of curing time
after the completion of concrete placing.

Scarification, and removal of the upper layer of concrete overlay when present, may
proceed during the final cleaning and overlay placement phases of the Work on
adjacent portions of the Structure so long as the scarification and concrete overlay
removal operations are confined to areas which are a minimum of 100 feet away from
the defined limits of the final cleaning or overlay placement in progress. If the
scarification and concrete overlay removal impedes or interferes in any way with the
final cleaning or overlay placement as determined by the Engineer, the scarification and
concrete overlay removal Work shall be terminated immediately and the scarification
and concrete overlay removal equipment removed sufficiently away from the area being
prepared or overlaid to eliminate the conflict. If the grade is such that water and
contaminants from the scarification and concrete overlay removal operation will flow into
the area being prepared or overlaid, the scarification and concrete overlay removal
operation shall be terminated and shall remain suspended for the first 24 hours of curing
time after the completion of concrete placement.

6-09.3(11) Placing Concrete Overlay

The first sentence of item number 3 in the fourth paragraph is revised to read:

Concrete shall not be placed when the temperature of the concrete surface is less than
45°F or greater than 75°F, and wind velocity at the construction site is in excess of 10
mph.

6-09.3(12) Finishing Concrete Overlay

The third paragraph is deleted.

The last paragraph is deleted.
6-09.3(13) Curing Concrete Overlay
The first sentence of the first paragraph is revised to read:

As the finishing operation progresses, the concrete shall be immediately covered with a single layer of clean, new or used, wet burlap.

The last sentence of the second paragraph is deleted.

The following two new paragraphs are inserted after the second paragraph:

As an alternative to the application of burlap and fog spraying described above, the Contractor may propose a curing system using proprietary curing blankets specifically manufactured for bridge deck curing. The Contractor shall submit a Type 2 Working Drawing consisting of details of the proprietary curing blanket system, including product literature and details of how the system is to be installed and maintained.

The wet curing regimen as described shall remain in place for a minimum of 42-hours.

The last paragraph is deleted.

6-09.3(14) Checking for Bond
The first sentence of the first paragraph is revised to read:

After the requirements for curing have been met, the entire overlaid surface shall be sounded by the Contractor, in a manner accepted by and in the presence of the Engineer, to ensure total bond of the concrete to the bridge deck.

The last sentence of the first paragraph is deleted.

The second paragraph is deleted.

6-10, Concrete Barrier
August 6, 2018

6-10.2 Materials
In the first paragraph, the reference to “Portland Cement” is revised to read:

Cement 9-01

6-10.3(6) Placing Concrete Barrier
The first two sentences of the first paragraph are revised to read:

Precast concrete barriers Type 2, Type 4, Type F, precast single slope barrier, and transitions shall rest on a paved foundation shaped to a uniform grade and section. The foundation surface for precast concrete barriers Type 2, Type 4, Type F, precast single slope barrier, and transitions shall meet this test for uniformity: When a 10-foot straightedge is placed on the surface parallel to the centerline for the barrier, the surface shall not vary more than ¼ inch from the lower edge of the straightedge.
Section 6-11, Reinforced Concrete Walls
April 2, 2018

6-11.2 Materials
In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised to read:

Aggregates for Concrete 9-03.1

Section 6-12, Noise Barrier Walls
August 6, 2018

6-12.2 Materials
In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised to read:

Aggregates for Concrete 9-03.1

The first paragraph is supplemented with the following new material reference:

Noise Barrier Wall Access Door 9-06.17

6-12.3(9) Access Doors and Concrete Landing Pads
The second paragraph is deleted and replaced with the following:

All frame and door surfaces, except stainless steel surfaces, shall be painted in accordance with Section 6-07.3(9). Primer shall be applied to all non-stainless steel surfaces. All primer coated exposed metal surfaces shall be field painted with the remaining Section 6-07.3(9)A paint system coats. The top coat, when dry, shall match the color specified in the Plans or Special Provisions.

This section is supplemented with the following:

Access door deadbolt locks shall be capable of accepting a Best CX series core. The Contractor shall furnish and install a spring-loaded construction core lock with each lock. The Engineer will furnish the permanent Best CX series core for the Contractor to install at the conclusion of the project.

Section 6-13, Structural Earth Walls
August 6, 2018

6-13.2 Materials
In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised to read:

Aggregates for Concrete 9-03.1
6-13.3(4) Precast Concrete Facing Panel and Concrete Block Fabrication

Item number 1 of the sixth paragraph is revised to read:

1. Vertical dimensions shall be $\pm \frac{1}{16}$ inch of the Plan dimension, and the rear height shall not exceed the front height.

Item number 3 of the sixth paragraph is revised to read:

3. All other dimensions shall be $\pm \frac{1}{4}$ inch of the Plan dimension.

6-14.AP6
Section 6-14, Geosynthetic Retaining Walls
April 2, 2018

6-14.2 Materials
In the first paragraph, the references to “Portland Cement” and “Aggregates for Portland Cement Concrete” are revised to read:

Cement 9-01
Aggregates for Concrete 9-03.1

6-15.AP6
Section 6-15, Soil Nail Walls
January 7, 2019

6-15.3(7) Shotcrete Facing
The last paragraph is supplemented with the following:

After final tightening of the nut, the threads of the soil nail shall at a minimum be flush with the end of the nut.

6-16.AP6
Section 6-16, Soldier Pile and Soldier Pile Tieback Walls
April 2, 2018

6-16.2 Materials
In the first paragraph, the reference to “Aggregates for Portland Cement Concrete” is revised to read:

Aggregates for Concrete 9-03.1

6-18.AP6
Section 6-18, Shotcrete Facing
April 1, 2019

6-18.2 Materials
The reference to metakaolin is deleted.

6-18.3(3) Testing
In the last sentence of the first paragraph, “AASHTO T 24” is revised to read “ASTM C1604”.

AMENDMENTS TO THE 2018 STANDARD SPECIFICATIONS BOOK
Revised: 6/3/19
6-18.3(3)B Production Testing
In the last sentence, “AASHTO T 24” is revised to read “ASTM C1604”.

6-18.3(4) Qualifications of Contractor’s Personnel
In the last sentence of the second paragraph, “AASHTO T 24” is revised to read “ASTM C1604”.

6-19.2 Materials
In the first paragraph, the references to “Portland Cement” and “Aggregates for Portland Cement Concrete” are revised to read:

- Cement 9-01
- Aggregates for Concrete 9-03.1

6-19.3(1)A Shaft Construction Tolerances
The last paragraph is supplemented with the following:

- The elevation of the top of the reinforcing cage for drilled shafts shall be within +6 inches and -3 inches from the elevation shown in the Plans.

6-19.3(2)D Nondestructive QA Testing Organization and Personnel
Item number 4 in the first paragraph is revised to read:

- Personnel preparing test reports shall be a Professional Engineer, licensed under Title 18 RCW, State of Washington, and shall seal the report in accordance with WAC 196-23-020.

6-19.3(3)C Conduct of Shaft Casing Installation and Removal and Shaft Excavation Operations
The first paragraph is supplemented with the following:

- In no case shall shaft excavation and casing placement extend below the bottom of shaft excavation as shown in the Plans.

6-19.3(6)E Thermal Wire and Thermal Access Point (TAPS)
The third sentence of the third paragraph is revised to read:

- The thermal wire shall extend from the bottom of the reinforcement cage to the top of the shaft, with a minimum of 5-feet of slack wire provided above the top of shaft.

The following new sentence is inserted after the third sentence of the third paragraph:

- All thermal wires in a shaft shall be equal lengths.

6-19.3(9)D Nondestructive QA Testing Results Submittal
The last sentence of the first paragraph is revised to read:
Results shall be a Type 2E Working Drawing presented in a written report.

Section 7-02, Culverts
April 2, 2018

7-02.2 Materials
In the first paragraph, the references to “Portland Cement” and “Aggregates for Portland Cement Concrete” are revised to read:

Cement 9-01
Aggregates for Concrete 9-03.1

7-02.3(6)A4 Excavation and Bedding Preparation
The first sentence of the third paragraph is revised to read:

The bedding course shall be a 6-inch minimum thickness layer of culvert bedding material, defined as granular material either conforming to Section 9-03.12(3) or to AASHTO Grading No. 57 as specified in Section 9-03.1(4)C.

Section 7-05, Manholes, Inlets, Catch Basins, and Drywells
August 6, 2018

7-05.3 Construction Requirements
The fourth sentence of the third paragraph is deleted.

Section 7-08, General Pipe Installation Requirements
April 2, 2018

7-08.3(3) Backfilling
The fifth sentence of the fourth paragraph is revised to read:

All compaction shall be in accordance with the Compaction Control Test of Section 2-03.3(14)D except in the case that 100% Recycled Concrete Aggregate is used.

The following new sentences are inserted after the fifth sentence of the fourth paragraph:

When 100% Recycled Concrete Aggregate is used, the Contractor may submit a written request to use a test point evaluation for compaction acceptance. Test Point evaluation shall be performed in accordance with SOP 738.

Section 8-01, Erosion Control and Water Pollution Control
April 1, 2019

8-01.1 Description
This section is revised to read:
This Work consists of furnishing, installing, maintaining, removing and disposing of best management practices (BMPs), as defined in the Washington Administrative Code (WAC) 173-201A, to manage erosion and water quality in accordance with these Specifications and as shown in the Plans or as designated by the Engineer.

The Contracting Agency may have a National Pollution Discharge Elimination System Construction Stormwater General Permit (CSWGP) as identified in the Contract Special Provisions. The Contracting Agency may or may not transfer coverage of the CSWGP to the Contractor when a CSWGP has been obtained. The Contracting Agency may not have a CSWGP for the project but may have another water quality related permit as identified in the Contract Special Provisions or the Contracting Agency may not have water quality related permits but the project is subject to applicable laws for the Work. Section 8-01 covers all of these conditions.

This section is supplemented with the following new subsection:

8-01.1(1) Definitions

1. pH Affected Stormwater

   a. Stormwater contacting green concrete (concrete that has set/stiffen but is still curing), recycled concrete, or engineered soils (as defined in the Construction Stormwater General Permit (CSWGP)) as a natural process

   b. pH monitoring shall be performed in accordance with the CSWGP, or Water Quality Standards (WQS in accordance with WAC 173-201A (surface) or 173-200C (ground)) when the CSWGP does not apply

   c. May be neutralized and discharged to surface waters or infiltrated

2. pH Affected Non-Stormwater

   a. Conditionally authorized in accordance with CSWGP Special Condition S.1.C., uncontaminated water contacting green concrete, recycled concrete, or engineered soils (as defined in the CSWGP)

   b. Shall not be categorized as cementitious wastewater/concrete wastewater, as defined below

   c. Shall be managed and treated in accordance with the CSWGP, or WQS when the CSWGP does not apply

   d. pH adjustment and dechlorination may be necessary, as specified in the CSWGP or in accordance with WQS when the CSWGP does not apply

   e. May be neutralized, treated, and discharged to surface waters in accordance with the CSWGP, with the exception of water-only shaft drilling slurry. Water-only shaft drilling slurry may be treated, neutralized, and infiltrated but not discharged to surface waters (Refer to Special Conditions S1.C. Authorized Discharges and S1.d Prohibited Discharges of the CSWGP)

3. Cementitious Wastewater/Concrete Wastewater
a. Any water that comes into contact with fine cementitious particles or slurry; any water used in the production, placement and/or clean-up of cementitious products; any water used to cut, grind, wash, or otherwise modify cementitious products

b. When any water, including stormwater, commingles with cementitious wastewater/concrete wastewater, the resulting water is considered cementitious wastewater/concrete wastewater and shall be managed to prevent discharge to waters of the State, including ground water

c. CSWGP Examples include: water used for or resulting from concrete truck/mixer/pumper/tool/chute rinsing or washing, concrete saw cutting and surfacing (sawing, coring, grinding, roughening, hydro-demolition, bridge and road surfacing)

d. Cannot be neutralized and discharged or infiltrated

8-01.2 Materials

The first paragraph is revised to read:

Materials shall meet the requirements of the following sections:

<table>
<thead>
<tr>
<th>Material</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrugated Polyethylene Drain Pipe</td>
<td>9-05.1(6)</td>
</tr>
<tr>
<td>Quarry Spalls and Permeable Ballast</td>
<td>9-13</td>
</tr>
<tr>
<td>Erosion Control and Roadside Planting</td>
<td>9-14</td>
</tr>
<tr>
<td>Construction Geotextile</td>
<td>9-33</td>
</tr>
</tbody>
</table>

The second paragraph is deleted.

8-01.3(1) General

This section is revised to read:

Adaptive management shall be employed throughout the duration of the project for the implementation of erosion and water pollution control permit requirements for the current condition of the project site. The adaptive management includes the selection and utilization of BMPs, scheduling of activities, prohibiting unacceptable practices, implementing maintenance procedures, and other managerial practices that when used singularly or in combination, prevent or reduce the release of pollutants to waters of the State. The adaptive management shall use the means and methods identified in this section and means and methods identified in the Washington State Department of Transportation's Temporary Erosion and Sediment Control Manual or the Washington State Department of Ecology’s Stormwater Management Manuals for construction stormwater.

The Contractor shall install a high visibility fence along the lines shown in the Plans or as instructed by the Engineer.

Throughout the life of the project, the Contractor shall preserve and protect the delineated preservation area, acting immediately to repair or restore any high visibility fencing damaged or removed.
All discharges to surface waters shall comply with surface water quality standards as defined in Washington Administrative Code (WAC) Chapter 173-201A. All discharges to groundwater shall comply with groundwater quality standards WAC Chapter 173-200. The Contractor shall comply with the CSWGP when the project is covered by the CSWGP.

Work, at a minimum, shall include the implementation of:

1. Sediment control measures prior to ground disturbing activities to ensure all discharges from construction areas receive treatment prior to discharging from the site.

2. Flow control measures to prevent erosive flows from developing.

3. Water management strategies and pollution prevention measures to prevent contamination of waters that will be discharged to surface waters or the ground.

4. Erosion control measures to stabilize erodible earth not being worked.

5. Maintenance of BMPs to ensure continued compliant performance.

6. Immediate corrective action if evidence suggests construction activity is not in compliance. Evidence includes sampling data, olfactory or visual evidence such as the presence of suspended sediment, turbidity, discoloration, or oil sheen in discharges.

To the degree possible, the Contractor shall coordinate this Work with permanent drainage and roadside restoration Work the Contract requires.

Clearing, grubbing, excavation, borrow, or fill within the Right of Way shall never expose more erodible earth than as listed below:

<table>
<thead>
<tr>
<th>Western Washington (West of the Cascade Mountain Crest)</th>
<th>Eastern Washington (East of the Cascade Mountain Crest)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1 through September 30</td>
<td>April 1 through October 31</td>
</tr>
<tr>
<td>October 1 through April 30</td>
<td>November 1 through March 31</td>
</tr>
<tr>
<td>17 Acres</td>
<td>17 Acres</td>
</tr>
<tr>
<td>5 Acres</td>
<td>5 Acres</td>
</tr>
</tbody>
</table>

The Engineer may increase or decrease the limits based on project conditions.

Erodible earth is defined as any surface where soils, grindings, or other materials may be capable of being displaced and transported by rain, wind, or surface water runoff.

Erodible earth not being worked, whether at final grade or not, shall be covered within the specified time period (see the table below), using BMPs for erosion control.
When applicable, the Contractor shall be responsible for all Work required for compliance with the CSWGP including annual permit fees.

If the Engineer, under Section 1-08.6, orders the Work suspended, the Contractor shall continue to comply with this division during the suspension.

8-01.3(1)A  Submittals

This section’s content is deleted.

This section is supplemented with the following new subsection:

8-01.3(1)A1  Temporary Erosion and Sediment Control Plan

Temporary Erosion and Sediment Control (TESC) Plans consist of a narrative section and plan sheets that meet the Washington State Department of Ecology’s Stormwater Pollution Prevention Plan (SWPPP) requirement in the CSWGP. For projects that do not require a CSWGP but have the potential to discharge to surface waters of the state, an abbreviated TESC plan shall be used, which may consist of a narrative and/or plan sheets and shall demonstrate compliance with applicable codes, ordinances and regulations, including the water quality standards for surface waters; Chapter 173-201A of the Washington Administrative Code (WAC) and water quality standards for groundwaters in accordance with Chapter 173-200 WAC.

The Contractor shall either adopt the TESC Plan in the Contract or develop a new TESC Plan. If the Contractor adopts the TESC Plan in scenarios in which the CSWGP is transferred to the Contractor, the Contractor shall modify the TESC Plan to match the Contractor’s schedule, method of construction, and to include all areas that will be used to directly support construction activity such as equipment staging yards, material storage areas, or borrow areas. TESC Plans shall include all high visibility fence shown in the Plans. All TESC Plans shall meet the requirements of the current edition of the WSDOT Temporary Erosion and Sediment Control Manual M 3109 and be adaptively managed throughout construction based on site inspections and required sampling to maintain compliance with the CSWGP, or WQS when no CSWGP applies. The Contractor shall develop a schedule for implementation of the TESC work and incorporate it into the Contractor’s progress schedule.

The Contractor shall submit their TESC Plan (either the adopted plan or new plan) as Type 2 Working Drawings. At the request of the Engineer, updated TESC Plans shall be submitted as Type 1 Working Drawings.

8-01.3(1)B  Erosion and Sediment Control (ESC) Lead

This section is revised to read:
The Contractor shall identify the ESC Lead at the preconstruction discussions and in the TESC Plan. The ESC Lead shall have, for the life of the Contract, a current Certificate of Training in Construction Site Erosion and Sediment Control from a course approved by the Washington State Department of Ecology. The ESC Lead must be onsite or on call at all times throughout construction. The ESC Lead shall be listed on the Emergency Contact List required under Section 1-05.13(1).

The ESC Lead shall implement the TESC Plan. Implementation shall include, but is not limited to:

1. Installing, adaptively managing, and maintaining temporary erosion and sediment control BMPs to assure continued performance of their intended function. Damaged or inadequate BMPs shall be corrected immediately.

2. Updating the TESC Plan to reflect current field conditions.

3. Discharge sampling and submitting Discharge Monitoring Reports (DMRs) to the Washington State Department of Ecology in accordance with the CSWGP.

4. Develop and maintain the Site Log Book as defined in the CSWGP. When the Site Log Book or portion thereof is electronically developed, the electronic documentation must be accessible onsite. As a part of the Site Log Book, the Contractor shall develop and maintain a tracking table to show that identified TESC compliance issues are fully resolved within 10 calendar days. The table shall include the date an issue was identified, a description of how it was resolved, and the date the issue was fully resolved.

The ESC Lead shall also inspect all areas disturbed by construction activities, all on-site erosion and sediment control BMPs, and all stormwater discharge points at least once every calendar week and within 24-hours of runoff events in which stormwater discharges from the site. Inspections of temporarily stabilized, inactive sites may be reduced to once every calendar month. The Washington State Department of Ecology’s Erosion and Sediment Control Site Inspection Form, located at https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Construction-stormwater-permit, shall be completed for each inspection and a copy shall be submitted to the Engineer no later than the end of the next working day following the inspection.

8-01.3(1)C Water Management
This section is supplemented with the following new subsections:

8-01.3(1)C5 Water Management for In-Water Work Below Ordinary High Water Mark (OHWM)
Work over surface waters of the state (defined in WAC 173-201A-010) or below the OHWM (defined in RCW 90.58.030) shall comply with water quality standards for surface waters of the State of Washington.

8-01.3(1)C6 Environmentally Acceptable Hydraulic Fluid
All equipment containing hydraulic fluid that extends from a bridge deck over surface waters of the state or below the OHWM, shall be equipped with a biodegradable hydraulic fluid. The fluid shall achieve either a Pw1 Environmental Persistence Classification stated in ASTM D6046 (≥60% biodegradation in 28 days) or equivalent
standard. Alternatively, hydraulic fluid that meets International Organization for Standardization (ISO 15380), the European Union Ecolabel, or equivalent certification will also be accepted.

The Contractor shall submit a Type 1 Working Drawing consisting of a manufacturer catalog cut of the hydraulic fluid used.

The designation of biodegradable hydraulic fluid does not mean fluid spills are acceptable. The Contractor shall respond to spills to land or water in accordance with the Contract, the associated SPCC Plan, and all applicable local, state, and federal regulations.

8-01.3(1)C7 Turbidity Curtain
All Work for the turbidity curtain shall be in accordance with the manufacturer’s recommendations for the site conditions. Removal procedures shall be developed and used to minimize silt release and disturbance of silt. The Contractor shall submit a Type 2 Working Drawing, detailing product information, installation and removal procedures, equipment and workforce needs, maintenance plans, and emergency repair/replacement plans.

Turbidity curtain materials, installation, and maintenance shall be sufficient to comply with water quality standards.

The Contractor shall notify the Engineer 10 days in advance of removing the turbidity curtain. All components of the turbidity curtain shall be removed from the project.

8-01.3(1)C1 Disposal of Dewatering Water
This section is revised to read:

When uncontaminated groundwater is encountered in an excavation on a project it may be infiltrated within vegetated areas of the right of way not designated as Sensitive Areas or incorporated into an existing stormwater conveyance system at a rate that will not cause erosion or flooding in any receiving surface water.

Alternatively, the Contractor may pursue independent disposal and treatment alternatives that do not use the stormwater conveyance system provided it is in compliance with the applicable WACs and permits.

8-01.3(1)C2 Process Wastewater
This section is revised to read:

Wastewater generated on-site as a byproduct of a construction process shall not be discharged to surface waters of the State. Some sources of process wastewater may be infiltrated in accordance with the CSWGP. Some sources of process wastewater may be disposed via independent disposal and treatment alternatives in compliance with the applicable WACs and permits.

8-01.3(1)C3 Shaft Drilling Slurry Wastewater
This section is revised to read:

Wastewater generated on-site during shaft drilling activity shall be managed and disposed of in accordance with the requirements below. No shaft drilling slurry
wastewater shall be discharged to surface waters of the State. Neither the sediment nor
liquid portions of the shaft drilling slurry wastewater shall be contaminated, as
detectable by visible or olfactory indication (e.g., chemical sheen or smell).

1. Water-only shaft drilling slurry or water slurry with accepted flocculants may be
infiltrated on-site. Flocculants used shall meet the requirements of Section 9-
14.5(1) or shall be chitosan products listed as General Use Level Designation
(GULD) on the Washington State Department of Ecology’s stormwater
treatment technologies webpage for construction treatment. Infiltration is
permitted if the following requirements are met:

a. Wastewater shall have a pH of 6.5 – 8.5 prior to discharge.

b. The amount of flocculant added to the slurry shall be kept to the minimum
needed to adequately settle out solids. The flocculant shall be thoroughly
mixed into the slurry.

c. The slurry removed from the shaft shall be contained in a leak proof cell or
tank for a minimum of 3 hours.

d. The infiltration rate shall be reduced if needed to prevent wastewater from
leaving the infiltration location. The infiltration site shall be monitored
regularly during infiltration activity. All wastewater discharged to the
ground shall fully infiltrate and discharges shall stop before the end of
each work day.

e. Drilling spoils and settled sediments remaining in the containment cell or
tank shall be disposed of in accordance with Section 6-19.3(4)F.

f. Infiltration locations shall be in upland areas at least 150 feet away from
surface waters, wells, on-site sewage systems, aquifer sensitive recharge
areas, sole source aquifers, well head protection areas, and shall be
marked on the plan sheets before the infiltration activity begins.

g. Prior to infiltration, the Contractor shall submit a Shaft Drilling Slurry
Wastewater Management and Infiltration Plan as a Type 2 Working
Drawing. This Plan shall be kept on-site, adapted if needed to meet the
construction requirements, and updated to reflect what is being done in
the field. The Working Drawing shall include, at a minimum, the following
information:

i. Plan sheet showing the proposed infiltration location and all surface
waters, wells, on-site sewage systems, aquifer-sensitive recharge
areas, sole source aquifers, and well-head protection areas within
150 feet.

ii. The proposed elevation of soil surface receiving the wastewater for
infiltration and the anticipated phreatic surface (i.e., saturated soil).

iii. The source of the water used to produce the slurry.

iv. The estimated total volume of wastewater to be infiltrated.
The accepted flocculant to be used (if any).

The controls or methods used to prevent surface wastewater runoff from leaving the infiltration location.

The strategy for removing slurry wastewater from the shaft and containing the slurry wastewater once it has been removed from the shaft.

The strategy for monitoring infiltration activity and adapting methods to ensure compliance.

A contingency plan that can be implemented immediately if it becomes evident that the controls in place or methods being used are not adequate.

The strategy for cleaning up the infiltration location after the infiltration activity is done. Cleanup shall include stabilizing any loose sediment on the surface within the infiltration area generated as a byproduct of suspended solids in the infiltrated wastewater or soil disturbance associated with BMP placement and removal.

Shaft drilling mineral slurry, synthetic slurry, or slurry with polymer additives not allowed for infiltration shall be contained and disposed of by the Contractor at an accepted disposal facility in accordance with Section 2-03.3(7)C. Spoils that have come into contact with mineral slurry shall be disposed of in accordance with Section 6-19.3(4)F.

**8-01.3(1)C4 Management of Off-Site Water**

This section is revised to read:

Prior to clearing and grubbing, the Contractor shall intercept all sources of off-site surface water and overland flow that will run-on to the project. Off-site surface water run-on shall be diverted through or around the project in a way that does not introduce construction related pollution. It shall be diverted to its preconstruction discharge location in a manner that does not increase preconstruction flow rate and velocity and protects contiguous properties and waterways from erosion. The Contractor shall submit a Type 2 Working Drawing consisting of the method for performing this Work.

**8-01.3(1)E Detention/Retention Pond Construction**

This section is revised to read:

Permanent or temporary ponds shall be constructed before beginning other grading and excavation Work in the area that drains into that pond. Detention/retention ponds may be constructed concurrently with grading and excavation when allowed by the Engineer. Temporary conveyances shall be installed concurrently with grading in accordance with the TESC Plan so that newly graded areas drain to the pond as they are exposed.

**8-01.3(2) Seeding, Fertilizing, and Mulching**

This section’s title is revised to read:
8-01.3(2) Temporary Seeding and Mulching

8-01.3(2)A Preparation for Application

This section is revised to read:

A cleated roller, crawler tractor, or similar equipment, which forms longitudinal depressions at least 2 inches deep shall be used for compaction and preparation of the surface to be seeded. The entire area shall be uniformly covered with longitudinal depressions formed perpendicular to the natural flow of water on the slope. The soil shall be conditioned with sufficient water so the longitudinal depressions remain in the soil surface until completion of the seeding.

8-01.3(2)A1 Seeding

This section is deleted in its entirety.

8-01.3(2)A2 Temporary Seeding

This section is deleted in its entirety.

8-01.3(2)B Seeding and Fertilizing

This section, including title, is revised to read:

8-01.3(2)B Temporary Seeding

Temporary grass seed shall be a commercially prepared mix, made up of low growing grass species that will grow without irrigation at the project location, and accepted by the Engineer. The application rate shall be two pounds per 1000 square feet.

The Contractor shall notify the Engineer not less than 24 hours in advance of any seeding operation and shall not begin the Work until areas prepared or designated for seeding have been accepted. Following the Engineer’s acceptance, seeding of the accepted slopes shall begin immediately.

Temporary seeding may be sown at any time allowed by the Engineer. Temporary seeding shall be sown by one of the following methods:

1. A hydro seeder that utilizes water as the carrying agent, and maintains continuous agitation through paddle blades. It shall have an operating capacity sufficient to agitate, suspend, and mix into a homogeneous slurry the specified amount of seed and water or other material. Distribution and discharge lines shall be large enough to prevent stoppage and shall be equipped with a set of hydraulic discharge spray nozzles that will provide a uniform distribution of the slurry.

2. Blower equipment with an adjustable disseminating device capable of maintaining a constant, measured rate of material discharge that will ensure an even distribution of seed at the rates specified.

3. Power-drawn drills or seeders.

4. Areas in which the above methods are impractical may be seeded by hand methods.
When seeding by hand, the seed shall be incorporated into the top ¼ inch of soil by hand raking or other method that is allowed by the Engineer.

Seed applied using a hydroseeder shall have a tracer added to visibly aid uniform application. This tracer shall not be harmful to plant, aquatic, or animal life. If Short-Term Mulch is used as a tracer, the application rate shall not exceed 250 pounds per acre.

Seed and fertilizer may be applied in one application provided that the fertilizer is placed in the hydroseeder tank no more than 1 hour prior to application.

8-01.3(2)D Mulching

This section, including title, is revised to read:

8-01.3(2)D Temporary Mulching

Temporary mulch shall be straw, wood strand, or HECP mulch and shall be used for the purpose of erosion control by protecting bare soil surface from particle displacement. Mulch shall not be applied below the anticipated water level of ditch slopes, pond bottoms, and stream banks. HECP mulch shall not be used within the Ordinary High Water Mark. Non-HECP mulches applied below the anticipated water level shall be removed or anchored down so that it cannot move or float, at no additional expense to the Contracting Agency.

Straw or wood strand mulch shall be applied at a rate to achieve at least 95 percent visual blockage of the soil surface.

Short Term Mulch shall be hydraulically applied at the rate of 2500 pounds per acre and may be applied in one lift.

Moderate Term Mulch and Long Term Mulch shall be hydraulically applied at the rate of 3500 pounds per acre with no more than 2000 pounds applied in any single lift.

Mulch sprayed on signs or sign Structures shall be removed the same day.

Areas not accessible by mulching equipment shall be mulched by accepted hand methods.

8-01.3(2)F Dates for Application of Final Seed, Fertilizer, and Mulch

This section is deleted in its entirety.

8-01.3(2)G Protection and Care of Seeded Areas

This section is deleted in its entirety.

8-01.3(2)H Inspection

This section is deleted in its entirety.

8-01.3(2)I Mowing

This section is deleted in its entirety.

8-01.3(3) Placing Biodegradable Erosion Control Blanket

This section’s title is revised to read:
8-01.3(3) Placing Erosion Control Blanket

The first sentence of the first paragraph is revised to read:

Erosion Control Blankets are used as an erosion prevention device and to enhance the establishment of vegetation.

The second paragraph is revised to read:

When used to enhance the establishment of seeded areas, seeding and fertilizing shall be done prior to blanket installation.

8-01.3(4) Placing Compost Blanket

This section is revised to read:

Compost blankets are used for erosion control. Compost blanket shall be only be placed on ground surfaces that are steeper than 3-foot horizontal and 1-foot vertical though steeper slopes shall be broken by wattles or compost socks placed according to the Standard Plans. Compost shall be placed to a depth of 3 inches over bare soil. An organic tackifier shall be placed over the entire composted area when dry or windy conditions are present or expected. The tackifier shall be applied immediately after the application of compost to prevent compost from leaving the composted area.

Medium compost shall be used for the compost blanket. Compost may serve the purpose of soil amendment as specified in Section 8-02.3(6).

8-01.3(5) Plastic Covering

The first paragraph is revised to read:

Erosion Control – Plastic coverings used to temporarily cover stockpiled materials, slopes or bare soils shall be installed and maintained in a way that prevents water from intruding under the plastic and prevents the plastic cover from being damaged by wind. Plastic coverings shall be placed with at least a 12-inch overlap of all seams and be a minimum of 6 mils thick. Use soil stabilization and energy dissipation BMPs to minimize the erosive energy flows coming off sloped areas of plastic (e.g., toe of slope). When feasible, prevent the clean runoff from plastic from hitting bare soil. Direct flows from plastic to stabilized outlet areas.

8-01.3(7) Stabilized Construction Entrance

The first paragraph is revised to read:

Temporary stabilized construction entrance shall be constructed in accordance with the Standard Plans, prior to construction vehicles entering the roadway from locations that generate sediment track out on the roadway. Material used for stabilized construction entrance shall be free of extraneous materials that may cause or contribute to track out.

8-01.3(8) Street Cleaning

This section is revised to read:

Self-propelled pickup street sweepers shall be used to remove and collect dirt and other debris from the Roadway. The street sweeper shall effectively collect these materials and prevent them from being washed or blown off the Roadway or into waters of the...
State. Street sweepers shall not generate fugitive dust and shall be designed and operated in compliance with applicable air quality standards. Material collected by the street sweeper shall be disposed of in accordance with Section 2-03.3(7)C.

When allowed by the Engineer, power broom sweepers may be used in non-sensitive areas. The broom sweeper shall sweep dirt and other debris from the roadway into the work area. The swept material shall be prevented from entering or washing into waters of the State.

Street washing with water will require the concurrence of the Engineer.

8-01.3(12) Compost Socks
The first two sentences of the first paragraph are revised to read:

Compost socks are used to disperse flow and sediment. Compost socks shall be installed as soon as construction will allow but before flow conditions create erosive flows or discharges from the site. Compost socks shall be installed prior to any mulching or compost placement.

8-01.3(13) Temporary Curb
The last two sentences of the second paragraph are revised to read:

Temporary curbs shall be a minimum of 4 inches in height. Temporary curb shall be installed so that ponding does not occur in the adjacent roadway.

8-01.3(14) Temporary Pipe Slope Drain
The third and fourth paragraphs are revised to read:

The pipe fittings shall be water tight and the pipe secured to the slope with metal posts, wood stakes, or sand bags.

The water shall be discharged to a stabilized conveyance, sediment trap, stormwater pond, rock splash pad, or vegetated strip, in a manner to prevent erosion and maintain water quality compliance.

The last paragraph is deleted.

8-01.3(15) Maintenance
This section is revised to read:

Erosion and sediment control BMPs shall be maintained or adaptively managed as required by the CSWGP until the Engineer determines they are no longer needed. When deficiencies in functional performance are identified, the deficiencies shall be rectified immediately.

The BMPs shall be inspected on the schedule outlined in Section 8-01.3(1)B for damage and sediment deposits. Damage to or undercutting of BMPs shall be repaired immediately.

In areas where the Contractor’s activities have compromised the erosion control functions of the existing grasses, the Contractor shall overseed at no additional cost to the Contracting Agency.
The quarry spalls of construction entrances shall be refreshed, replaced, or screened to maintain voids between the spalls for collecting mud and dirt.

Unless otherwise specified, when the depth of accumulated sediment and debris reaches approximately \( \frac{1}{3} \) the height of the BMP the deposits shall be removed. Debris or contaminated sediment shall be disposed of in accordance with Section 2-03.3(7)C. Clean sediments may be stabilized on-site using BMPs as allowed by the Engineer.

8-01.3(16) Removal

This section is revised to read:

The Contractor shall remove all temporary BMPs, all associated hardware and associated accumulated sediment deposition from the project limits prior to Physical Completion unless otherwise allowed by the Engineer. When the temporary BMP materials are made of natural plant fibers unaltered by synthetic materials the Engineer may allow leaving the BMP in place.

The Contractor shall remove BMPs and associated hardware in a way that minimizes soil disturbance. The Contractor shall permanently stabilize all bare and disturbed soil after removal of BMPs. If the installation and use of the erosion control BMPs have compacted or otherwise rendered the soil inhospitable to plant growth, such as construction entrances, the Contractor shall take measures to rehabilitate the soil to facilitate plant growth. This may include, but is not limited to, ripping the soil, incorporating soil amendments, or seeding with the specified seed.

At the request of the Contractor and at the sole discretion of the Engineer the CSWGP may be transferred back to the Contracting Agency. Approval of the Transfer of Coverage request will require the following:

1. All other Work required for Contract Completion has been completed.

2. All Work required for compliance with the CSWGP has been completed to the maximum extent possible. This includes removal of BMPs that are no longer needed and the site has undergone all Stabilization identified for meeting the requirements of Final Stabilization in the CSWGP.

3. An Equitable Adjustment change order for the cost of Work that has not been completed by the Contractor.


If the Engineer approves the transfer of coverage back to the Contracting Agency, the requirement in Section 1-07.5(3) for the Contractor’s submittal of the Notice of Termination form to the Washington State Department of Ecology will not apply.

8-01.4 Measurement

This section’s content is deleted and replaced with the following new subsections:
8-01.4(1) Lump Sum Bid for Project (No Unit Items)

When the Bid Proposal contains the item “Erosion Control and Water Pollution Prevention” there will be no measurement of unit or force account items for Work defined in Section 8-01 except as described in Sections 8-01.4(3) and 8-01.4(4). Also, except as described in Section 8-01.4(3), all of Sections 8-01.4(2) and 8-01.5(2) are deleted.

8-01.4(2) Item Bids

When the Proposal does not contain the items “Erosion Control and Water Pollution Prevention”, Section 8-01.4(1) and 8-01.5(1) are deleted and the Bid Proposal will contain some or all of the following items measured as noted.

ESC lead will be measured per day for each day that an inspection is made and a report is filed.

Erosion control blanket and plastic covering will be measured by the square yard along the ground slope line of surface area covered and accepted.

Turbidity curtains will be measured by the linear foot along the ground line of the installed curtain.

Check dams will be measured per linear foot one time only along the ground line of the completed check dam. No additional measurement will be made for check dams that are required to be rehabilitated or replaced due to wear.

Stabilized construction entrances will be measured by the square yard by ground slope measurement for each entrance constructed.

Tire wash facilities will be measured per each for each tire wash installed.

Street cleaning will be measured by the hour for the actual time spent cleaning pavement, refilling with water, dumping and transport to and from cleaning locations within the project limits, as authorized by the Engineer. Time to mobilize the equipment to or from the project limits on which street cleaning is required will not be measured.

Inlet protections will be measured per each for each initial installation at a drainage structure.

Silt fence, gravel filter, compost berms, and wood chip berms will be measured by the linear foot along the ground line of the completed barrier.

Wattles and compost socks will be measured by the linear foot.

Temporary curbs will be measured by the linear foot along the ground line of the completed installation.

Temporary pipe slope drains will be measured by the linear foot along the flow line of the pipe.

Coir logs will be measured by the linear foot along the ground line of the completed installation.
Outlet protections will be measured per each initial installation at an outlet location.

Temporary seeding, temporary mulching, and tackifiers will be measured by the acre by ground slope measurement.

Compost blanket will be measured by the square yard by ground slope surface area covered and accepted.

8-01.4(3) Reinstating Unit Items with Lump Sum Erosion Control and Water Pollution Prevention
The Contract Provisions may establish the project as lump sum, in accordance with Section 8-01.4(1) and also include one or more of the items included above in Section 8-01.4(2). When that occurs, the corresponding measurement provision in Section 8-01.4(2) is not deleted and the Work under that item will be measured as specified.

8-01.4(4) Items not included with Lump Sum Erosion Control and Water Pollution Prevention
Compost blanket will be measured by the square yard by ground slope surface area covered and accepted.

Temporary mulch will be measured by the acre by ground slope surface area covered and accepted.

High visibility fence will be measured by the linear foot along the ground line of the completed fence.

8-01.5 Payment
This section’s content is deleted and replaced with the following new subsections:

8-01.5(1) Lump Sum Bid for Project (No Unit Items)
Payment will be made for the following Bid item when it is included in the Proposal:

“Erosion Control and Water Pollution Prevention”, lump sum.

The lump sum Contract price for “Erosion Control and Water Pollution Prevention” shall be full pay to perform the Work as described in Section 8-01 except for costs compensated by Bid Proposal items inserted through Contract Provisions as described in Section 8-01.4(2). Progress payments for the lump sum item “Erosion Control and Water Pollution Prevention” will be made as follows:

1. The Contracting Agency will pay 15 percent of the bid amount for the initial set up for the item. Initial set up includes the following:

   a. Acceptance of the TESC Plan provided by the Contracting Agency or submittal of a new TESC Plan,

   b. Submittal of a schedule for the installation of the BMPs, and

   c. Identifying water quality sampling locations.
2. 70 percent of the bid amount will be paid in accordance with Section 1-09.9.

3. Once the project is physically complete and copies of the all reports submitted to the Washington State Department of Ecology have been submitted to the Engineer, and, if applicable, transference of the CSWGP back to the Contracting Agency is complete, the remaining 15 percent of the bid amount shall be paid in accordance with Section 1-09.9.

**8-01.5(2) Item Bids**

- "ESC Lead", per day.
- "Turbidity Curtain", per linear foot.
- "Erosion Control Blanket", per square yard.
- "Plastic Covering", per square yard.
- "Check Dam", per linear foot.
- "Inlet Protection", per each.
- "Gravel Filter Berm", per linear foot.
- "Stabilized Construction Entrance", per square yard.
- "Street Cleaning", per hour.
- "Silt Fence", per linear foot.
- "Wood Chip Berm", per linear foot.
- "Compost Berm", per linear foot.
- "Wattle", per linear foot.
- "Compost Sock", per linear foot.
- "Coir Log", per linear foot.
- "Temporary Curb", per linear foot.
- "Temporary Pipe Slope Drain", per linear foot.
- "Temporary Seeding", per acre.
- "Temporary Mulching", per acre.
- "Compost Blanket", per square yard.
- "Outlet Protection", per each.
“Tackifier”, per acre.

“Erosion/Water Pollution Control”, by force account as provided in Section 1-09.6.

Maintenance and removal of erosion and water pollution control devices including removal and disposal of sediment, stabilization and rehabilitation of soil disturbed by these activities, and any additional Work deemed necessary by the Engineer to control erosion and water pollution will be paid by force account in accordance with Section 1-09.6.

To provide a common Proposal for all Bidders, the Contracting Agency has entered an amount in the Proposal to become a part of the Contractor’s total Bid.

8-01.5(3) Reinstating Unit Items with Lump Sum Erosion Control and Water Pollution Prevention

The Contract may establish the project as lump sum, in accordance with Section 8-01.4(1) and also reinstate the measurement of one or more of the items described in Section 8-01.4(2), except for Erosion/Water Pollution Control, by force account. When that occurs, the corresponding payment provision in Section 8-01.5(2) is not deleted and the Work under that item will be paid as specified.

8-01.5(4) Items not included with Lump Sum Erosion Control and Water Pollution Prevention

Payment will be made for the following Bid item when it is included in the Proposal:

“High Visibility Fence”, per linear foot.

8-02.AP8

Section 8-02, Roadside Restoration

April 1, 2019

This section, including all subsections, is revised to read:

8-02.1 Description

This Work consists of preserving, maintaining, establishing and augmenting vegetation on the roadsides and within mitigation or sundry site areas. It includes vegetation preservation, weed and pest control, furnishing and placing topsoil, compost, and soil amendments, and furnishing and planting seed, sod and plants of all forms and container types. It includes performing plant establishment activities and soil bioengineering. Work shall be performed in accordance with these Specifications and as shown in the Plans or as designated by the Engineer.

Trees, whips, shrubs, ground covers, cuttings, live stakes, live poles, live branches, rhizomes, tubers, rootstock, and seedlings will hereinafter be referred to collectively as “plants” or “plant material”. Grass, wildflowers, and other plant materials installed in seed form will hereinafter be referred to collectively as “seed”.

8-02.2 Materials

Materials shall meet the requirements of the following sections:

Erosion Control and Roadside Planting  9-14
Water  9-25.2
Botanical identification and nomenclature of plant materials shall be based on descriptions by Hitchcock and Cronquist in “Flora of the Pacific Northwest”. Botanical identification and nomenclature of plant material not found in “Flora” shall be based on Bailey in “Hortus Third” or superseding editions and amendments or as referenced in the Plans.

8-02.3 Construction Requirements

8-02.3(1) Responsibility During Construction

The Contractor shall prepare, install, and ensure adequate and proper care of all roadside seeded, planted, and lawn areas on the project until all plant establishment periods required by the Contract are complete or until Physical Completion of the project, whichever is last.

Adequate and proper care shall include, but is not limited to, keeping all plant material in a healthy, growing condition by watering, pruning, and other actions deemed necessary for plant health. This Work shall include keeping the project area free from insect infestation, weeds or unwanted vegetation, litter, and other debris along with retaining the finished grades and mulch in a neat uniform condition.

Existing desirable vegetation shall be saved and protected unless removal is required by the Contract or allowed by the Engineer.

The Contractor shall have sole responsibility for the maintenance and appearance of the roadside restoration.

8-02.3(2) Work Plans

Three Work Plan submittals exist under this Section:

1. Roadside Work Plan: This plan is required when Work will disturb the roadside beyond 20 feet from the pavement or where trees or native vegetation will be removed, the Contractor shall submit a Type 2 Working Drawing.

2. Weed and Pest Control Plan: This plan is required when the proposal contains the item “Weed and Pest Control,” and prior to application of any chemicals or weed control activities, the Contractor shall submit a Type 2 Working Drawing.

3. Plant Establishment Plan: This plan is required when the proposal contains the item “PSIPE__”, and prior to completion of Initial Planting, the Contractor shall submit a Type 2 Working Drawing.

8-02.3(2)A Roadside Work Plan

The Roadside Work Plan shall define the expected impacts to the roadside and restoration resulting from Work necessary to meet all Contract requirements. The Contractor shall define how the roadside restoration Work included in the Contract will be phased and coordinated with project Work such as earthwork, staging, access, erosion and water pollution control, irrigation, etc. The Roadside Work Plan shall include the following:
1. **Limiting impacts to roadsides:**
   a. Limits of Work including locations of staging or parking.
   b. Means and methods for vegetation protection (in accordance with Section 1-07.16(2)).
   c. Locations outside of clearing limits where vegetation shall be removed to provide access routes or other needs to accomplish the Work.
   d. Plans for removal, preservation and stockpile of topsoil or other native materials, if outside of clearing and grubbing limits and within the project limits.

2. **Roadside Restoration:**
   a. Plan for propagation and procurement of plants, ground preparation for planting, and installation of plants.
   b. Means and methods to limit soil compaction where seeding and planting are to occur, such as steel plates, hog fuel access roads, wood mats for sensitive areas (including removal) and decompaction for unavoidable impacts.
   c. Plan and timing to incorporate or remove erosion control items.

3. **Lawn Installation:**
   a. Schedule for lawn installation work.
   b. Establishment and maintenance of lawns.

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**8-02.3(2)B Weed and Pest Control Plan**

The Weed and Pest Control Plan shall describe all weed and pest control needs for the project.

The plan shall be prepared and signed by a licensed Commercial Pest Control Operator or Consultant. The plan for control of weeds and pests on the Contract in accordance with Section 8-02.3(3) shall include the following:

1. Names of plan preparer and pesticide operators, including contact information. The Contractor shall furnish the Engineer evidence that all operators are licensed with appropriate endorsements, and that the pesticide used is registered for use by the Washington State Department of Agriculture.

2. Means and methods of weed control, including mechanical and/or chemical.

3. Schedule for weed control including re-entry times for pesticide application by pesticide type.
4. Proposed pesticide use in accordance with Section 8-02.3(3)A: name, application rate, and Safety Data Sheets of all proposed pesticides. Include a copy of the current product label for each pesticide to be used.

5. Plan to ensure worker safety until pesticide re-entry periods are met.

8-02.3(2)C Plant Establishment Plan
The Plant Establishment Plan shall describe activities necessary to ensure continued health and vigor of planted and seeded areas in accordance with the requirements of Sections 8-02.3(12) and 8-02.3(13). Should the plan become unworkable at any time during the first-year plant establishment, the Contractor shall submit a revised plan prior to proceeding with further Work. The Plant Establishment Plan shall include:

1. Proposed scheduling of joint inspection meetings, activities, materials, equipment to be utilized for the first-year plant establishment.

2. Proposed adaptive management activities to ensure successful establishment of seeded, sodded, and planted areas.

3. A contact person.

4. Management of the irrigation system, when applicable.

8-02.3(3) Weed and Pest Control
The Contractor shall control weed and pest species within the project limits using integrated pest management principles consisting of mechanical, biological, and chemical controls that are outlined in the Weed and Pest Control Plan or as designated by the Engineer. Controlling weeds consists of killing and removing weeds by chemical, mechanical, and hand methods.

8-02.3(3)A Chemical Pesticides
Chemical pesticides include, but are not restricted to, any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest, including but not limited to, insecticides, herbicides, fungicides, adjuvants, and additives, including plant regulators, defoliants and desiccants. The Contractor shall apply chemical pesticides in accordance with the label recommendations, the Washington State Department of Ecology, local sensitive area ordinances, and Washington State Department of Agriculture laws and regulations. Only those pesticides listed in the table Herbicides Approved for Use on WSDOT Rights of Way and accepted as part of the Weed and Pest Control Plan or by written authorization from the Engineer may be used (www.wsdot.wa.gov/maintenance/roadside/herbicide_use.htm).

The applicator shall be licensed by the State of Washington as a Commercial Applicator or Commercial Operator, with additional endorsements as required by the Special Provisions or the proposed weed control plan. All chemical pesticides shall be delivered to the job site in the original containers, or if pre-mixed off-site, a certification of the components and formulation from the
The licensed applicator or operator shall complete WSDOT Form 540-509, Commercial Pesticide Application Record, each day the pesticide is applied and furnish a copy to the Engineer by the following business day.

The Contractor shall ensure confinement of the chemicals within the designated areas. The use of spray chemical pesticides shall require the use of anti-drift and activating agents and a spray pattern indicator unless otherwise allowed by the Engineer.

The Contractor shall assume all responsibility for rendering any area unsatisfactory for planting by reason of chemical application. Damage to adjacent areas, either on or off the Highway Right of Way, shall be repaired to the satisfaction of the Engineer or the property owner at no additional cost to the Contracting Agency.

8-02.3(3)B Planting and Lawn Area Weed Control
Planting and lawn area weed control consists of controlling weeds and pests in planted and lawn areas shown in the Plans. This Work is included in the bid items for planting and lawn installation.

All planting and lawn areas shall be prepared so that they are weed and debris free at the time of planting and until completion of the project. The planting areas shall include the entire ground surface, regardless of cover, areas around plants, and those areas shown in the Plans.

Within planting or lawn areas, all species that are not shown in the Plans are unwanted and shall be controlled unless specifically allowed by the Engineer to remain.

Grass growing within the mulch ring of a plant, including grass applied in accordance with Sections 8-01.3(2)A1, 8-02.3(9) or 8-02.3(10), shall be considered a weed and shall be controlled on the project in accordance with the weed and pest control plan.

All applications of post-emergent herbicides shall be made while green and growing tissue is present. Residual herbicides shall not be used where rhizomatous species or perennial species are indicated.

Should unwanted vegetation reach the flowering and seed stage in violation of these Specifications, the Contractor shall physically remove and bag the seed heads prior to seed dispersion. All physically removed vegetation and seed heads shall be disposed of off-site at no cost to the Contracting Agency.

8-02.3(3)C Project Area Weed and Pest Control
The Contractor shall control weeds not otherwise covered in accordance with Section 8-02.3(3)B, in all areas within the project limits, including erosion control seeding areas and vegetation preservation areas, as designated by the Engineer.

When the Bid Item “Project Area Weed and Pest Control” is included in the Contract, the Contractor shall also control all weeds specified as noxious by
the Washington State Department of Agriculture, the local Weed District, or the County Noxious Weed Control Board outside of planting areas within the project limits.

8-02.3(4) Topsoil

Topsoil shall not be worked or placed when the ground or topsoil is frozen, or excessively wet.

The Contractor shall protect topsoil stockpiled for project use to prevent erosion and weed growth. Weed growth on topsoil stockpile sites shall be immediately eliminated in accordance with the accepted Weed and Pest Control Plan and Section 8-02.3(3)C.

The subsoil where topsoil is to be placed shall be tilled to a depth of 1 foot or as specified in the Special Provisions or the Plans. Topsoil of the type specified shall be evenly spread over the specified areas to the depth shown in the Plans or as otherwise ordered by the Engineer. Topsoil depths greater than 6 inches shall be placed in lifts no more than 6 inches in depth. The first lift of topsoil shall be incorporated with sub-soil to a depth of 8 inches and subsequent lifts placed and lightly tamped between lifts. After the topsoil has been spread, all large clods, hard lumps, and rocks 2 inches in diameter and larger, and litter shall be raked up, removed, and disposed.

8-02.3(4)A Topsoil Type A

Topsoil Type A shall be as specified in the Special Provisions. The Contractor shall submit a certification by the supplier that the contents of the Topsoil meet the requirements in the Special Provisions.

8-02.3(4)B Topsoil Type B

Topsoil Type B shall be naturally occurring topsoil taken from within the project limits and shall meet the requirements of Section 9-14.1(2). Topsoil Type B shall be taken from areas shown in the Plans to the designated depth and stockpiled at locations that will not interfere with the construction of the project, and outside of sensitive areas, as allowed by the Engineer. A minimum of two weeks prior to excavation of Topsoil Type B, the Contractor shall pre-treat the vegetation on the designated Topsoil Type B areas according to the Weed and Pest Control Plan. Areas beyond the slope stakes shall be disturbed as little as possible in the above operations and under no circumstances shall Topsoil Type B be stockpiled within 10 feet of any existing tree or vegetation area designated to be saved and protected. The Contractor shall protect topsoil stockpile from weed infestation.

The Contractor shall set aside sufficient material to satisfy the needs of the project.

Upon completion of topsoil placement, the Contractor shall dispose of remaining stockpiled Topsoil Type B not required for use on the project at no additional expense to the Contracting Agency in accordance with Section 2-03.3(7)C.
Should a shortage of Topsoil Type B occur, and the Contractor has wasted or otherwise disposed of topsoil material, the Contractor shall furnish Topsoil Type A or C at no additional expense to the Contracting Agency.

8-02.3(4)C Topsoil Type C
Topsoil Type C shall be naturally occurring topsoil obtained from a source provided by the Contractor outside of the Contracting Agency-owned Right of Way. Topsoil Type C shall meet the requirements of Sections 8-02.3(4)B and 9-14.1(3). The Contractor shall not begin removal of Topsoil Type C from the proposed source until the material has been allowed for use by the Engineer.

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation
This Work includes preparing worked areas for the installation of all types of permanent erosion control planting. Work shall be conducted so the flow lines in drainage channels are maintained. Material displaced by the Contractor’s operations that interferes with drainage shall be removed from the channel and disposed of as allowed by the Engineer.

8-02.3(5)A Seeding Area Preparation
The Contractor shall prepare roadside seeding areas as follows:

1. Remove all excess material, debris, stumps, and rocks greater than 3 inches in diameter from areas to be seeded. Dispose of removed materials offsite.

2. Prepare roadside seeding area to a weed free and bare condition.

3. Bring area to uniform grade and install topsoil, soil amendments, or compost as specified. Any slopes 3(H) to 1(V) or steeper shall not be tilled unless otherwise specified.

4. Compact to provide a reasonably firm but friable seedbed; tractor walk to uniformly cover the surface with longitudinal depressions at least 2 inches deep formed perpendicular to the natural flow of water on the slope. Condition the soil with sufficient water so the longitudinal depressions remain in the soil surface until completion of the seeding.

5. Seed and mulch within 2 days of preparation.

8-02.3(5)B Lawn Area Preparation
The Contractor shall prepare lawn areas as follows:

1. Prepare lawn area to a weed free and bare condition in accordance with Section 8-02.3(3)B.

2. Remove excess material, stumps, wood or rocks over 3 inches in diameter and remove from site.

3. Bring area to uniform grade and install topsoil or soil amendments in accordance with Section 8-02.3(4) and 8-02.3(6).
4. Till to an 8-inch depth, rake to a smooth even grade without low areas that trap water, and compact with a 50-pound roller. The finished grade of the soil shall be 1 inch below the top of all curbs, junction and valve boxes, walks, driveways, and other Structures.

5. Seed or sod the area within two days of preparation.

8-02.3(5)C Planting Area Preparation
The Contractor shall prepare planting areas as follows:

1. Prepare planting area to a weed free and bare condition in accordance with Section 8-02.3(3)B.

2. Decompact soil to a depth of 18 inches where construction activities have taken place or where native soils are compacted.

3. Return soil to uniform grade even with surrounding areas, leaving no holes or mounds over 3 inches in depth or height.

4. Remove excess material, stumps, wood or rocks over 3 inches in diameter and remove from site.

5. Apply compost or other amendments as indicated in the plans and in accordance with Section 8-02.3(6).

6. Cultivate amendments to a depth of 12 inches to provide a reasonably firm but friable planting area. Do not till any slopes 3(H) to 1(V) or steeper.

7. Return soil to a uniform finished grade, 1 inch, or the specified depth of mulch plus 1 inch, below walks, curbs, junction and valve boxes, catch basins, and driveways, unless otherwise specified.

8. Begin planting and mulching the area within two days of final preparation.

8-02.3(6) Soil Amendments
The Contractor shall place soil amendments of the type, quality, and quantities specified where shown in the Plans or as specified in the Special Provisions. Areas receiving soil amendments shall be bare soil or vegetation free prior to application. All soil amendments shall be installed as shown in the Plans within 30 calendar days after delivery to the project site.

8-02.3(6)A Compost
Compost used for soil amendments shall be Fine Compost unless otherwise designated in the Plans. When compost blanket is used for temporary erosion control, the compost blanket may be incorporated into the soil immediately prior to planting when used as compost soil amendment. The area shall be prepared in accordance with Section 8-02.3(5) prior to placing compost.
8-02.3(6)B  Fertilizers
The Contractor shall apply fertilizer in the form, mixture, and rate specified in
the Special Provisions or as directed by the Engineer. Application procedures
shall be in accordance with the manufacturer’s recommendations unless
otherwise specified in the Special Provisions.

The Contractor shall submit a guaranteed fertilizer analysis label for the
selected product a minimum of one week prior to application for acceptance.
Following the Engineer’s acceptance, fertilizing of the accepted ground or
vegetated surfaces shall begin immediately.

In seeding and lawn areas to be fertilized, the fertilizer shall be applied
concurrently with the seed. When fertilizer is hydraulically applied, the fertilizer
shall be suitable for application with seeding as specified in Section 8-
02.3(9)C. If hydroseeding, the fertilizer shall be placed in the hydroseeder tank
no more than 1 hour prior to application.

Fertilizers for planting areas shall be applied concurrently with compost and
applied prior to incorporation, unless tablet form fertilizer is specified. Where
tablet form fertilizer is specified, fertilizer shall be applied concurrently with
plant installation.

Fertilizer sprayed on signs or sign structures shall be removed the same day.

Areas not accessible by fertilizing equipment shall be fertilized by allowed
hand methods.

Second Application: A second application of fertilizer shall be applied as
specified in the Special Provisions at the locations designated in the Plans.
The fertilizer shall be applied during the months of March, April, or May of the
following year after the initial seeding, planting, or lawn installation. The
fertilizer shall be dry granular pellets or pearls and applied in accordance with
the manufacturer’s recommendations or as specified in the Special Provisions.

8-02.3(7)  Layout of Planting, Lawn and Seeding Areas
The Contractor shall lay out and prepare planting and lawn areas and receive the
Engineer’s acceptance of layout and preparation prior to any installation activities.
The Contractor shall stake the location of all trees larger than 1-inch caliper and the
perimeter of all planting areas for acceptance by the Engineer prior to any
installation activities.

The Contractor shall locate all trees to be planted in mowable grass areas a
minimum of 10 feet from the edge of planting areas, other trees, fence lines, and
bottom of ditches unless otherwise specified.

Tree locations shown in the Plans shall be considered approximate unless shown
with stationing and offset distance. In irrigated areas, trees shall be located so their
trunk is a minimum of ⅓ of the spray radius away from the nearest sprinkler head.

Unless otherwise shown, planting areas located adjacent to Roadways shall begin
6 feet from the edge of shoulder on roadway fills and begin 5 feet up on the back
slope from the bottom on roadway cut sections. Plants within planting areas shall
be located such that mature branching pattern will not block sight distance, signs, 
or other traffic-related devices. No trees shall be placed where the mature canopy 
will grow to within 10 feet of existing power lines. Where roadside ditches are 
present, planting areas shall begin 5 feet from the centerline of the ditch unless 
shown otherwise in the Plans.

8-02.3(8) Planting

8-02.3(8)A Dates and Conditions for Planting
No plant material shall be planted until it has been inspected and accepted for 
planting by the Engineer. Rejected material shall be removed from the project 
site immediately. All plants for the project or a sufficient quantity to plant 1-acre 
of the site, whichever is less, shall be received on site prior to the Engineer 
beginning inspection of the plants.

Under no circumstances will planting be permitted during unsuitable soil or 
weather conditions as determined by the Engineer. Unsuitable conditions may 
include frozen soil, freezing weather, saturated soil, standing water, high 
winds, heavy rains, and high water levels. The ground shall be moist at the 
time of planting. All planting shall be accomplished during the following 
periods:

1. Non-Irrigated Plant Material
   Western Washington (West of the Cascade Mountain Crest) –
   October 1 to March 1.
   Eastern Washington (East of the Cascade Mountain Crest) – October 
   1 to November 15.

2. Irrigated Plant Material
   In irrigated areas, plant material shall not be installed until the irrigation 
system is fully operational and accepted by the Engineer. Trees and 
shrubs may be planted in irrigated areas during the non-irrigated planting 
window before the irrigation system is functional with the written 
concurrence of the Engineer only if the irrigation system is guaranteed to 
be operational prior to the end of the non-irrigated planting window.

8-02.3(8)B Plant Installation
The Contractor shall handle plant material in the following manner:

1. Root systems shall be kept covered and damp at all times. Plant 
   material shall be kept in containers until the time of planting.

2. Roots shall not be bunched, curled, twisted, or unreasonably bent 
   when placed in the planting hole. Bare root plant material shall be 
dormant at the time of harvesting and planting. The root systems of 
all bare root plant material shall be dipped in a slurry immediately 
   prior to planting.

3. Plant material supplied in wrapped balls shall not be removed from 
   the wrapping until the time of planting at the planting location. The 
   root system of balled plant material shall be moist at the time of 
   planting. Root balls shall be loosened prior to planting. All burlap,
baskets, string, wire and other such materials shall be removed from
the hole when planting balled plants.

4. Plant cutting material shall be dormant at the time of cutting and
planting. All cuttings shall be installed immediately if buds begin to
swell.

5. Plants shall be placed with the crown at the finished grade. In their
final position, plants shall have their top true root (not adventitious
root) no more than 1 inch below the soil surface, no matter where that
root was located in the original root ball or container. The backfill
material, including container and root ball soil, shall be thoroughly
watered on the same day that planting occurs regardless of season.

When installing plants, the Contractor shall dig planting holes three times the
diameter of the container or root ball size. Any glazed surface of the planting
hole shall be roughened prior to planting.

8-02.3(8)C Pruning, Staking, Guying, and Wrapping
Plants shall be pruned at the time of planting, only to remove minor broken or
damaged twigs, branches or roots. Pruning shall be performed with a sharp
tool and shall be done in such a manner as to retain or to encourage natural
growth characteristics of the plants. All other pruning shall be performed only
after the plants have been in the ground at least 1 year and when plants are
dormant.

Trees shall only be staked when so noted in the Plans. Each tree shall be
staked or guyed before completion of the backfilling in accordance with the
details shown in the Plans.

8-02.3(9) Seeding, Fertilizing, and Mulching
For all seed, the Contractor shall furnish the following documentation to the
Engineer:

1. The state or provincial seed dealer license and endorsements.

2. Copies of Washington State Department of Agriculture (WSDA) test
results on each lot of seed. Test results shall be within six months prior to
the date of application.

8-02.3(9)A Dates for Application of Seed
Unless otherwise allowed by the Engineer, the Contractor shall apply seed for
permanent erosion control during the following periods:

<table>
<thead>
<tr>
<th>Western Washington¹ (West of the Cascade Mountain Crest)</th>
<th>Eastern Washington (East of the Cascade Mountain Crest)</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 1 through May 15</td>
<td>October 1 through November 15</td>
</tr>
<tr>
<td>September 1 through October 1</td>
<td></td>
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</tbody>
</table>
Seeding may be allowed outside these dates when allowed by the Engineer.

All roadway excavation and embankment ground surfaces that are completed to final grades shall be prepared and seeded during the first available seeding window. When environmental conditions are not conducive to satisfactory results, the Engineer may suspend the seeding Work until such time that the desired results are likely to be obtained. If seeding is suspended, temporary erosion control methods according to Section 8-01 shall be used to protect the bare soil until seeding conditions improve.

8-02.3(9)B Seeding and Fertilizing
The Contractor shall prepare the seeding area in accordance with Section 8-02.3(5)A and apply seed at the rate and mix specified in the Special Provisions. The Contractor shall notify the Engineer within 5 days in advance of any seeding operation and shall not begin the Work until areas prepared or designated for seeding have been accepted. Following the Engineer’s acceptance, seeding of the accepted ground surfaces shall begin immediately.

Seeding shall not be done during windy weather or when the ground is frozen, or excessively wet.

When seeding by hand, the seed shall be incorporated into the top ¼ inch of soil by hand raking or other method that is allowed by the Engineer.

Seed applied as a separate operation using a hydroteeder shall have a tracer added to visibly aid uniform application. The tracer shall be HECP Short-Term Mulch applied at a rate of 200 to 250 pounds per acre and the tracer shall carry the measured specified seeding rate.

8-02.3(9)C Seeding with Fertilizers and Mulches
When the Proposal includes any variation of seeding, fertilizing, and without mulching, the seed and fertilizer shall be applied in one application followed by mulching. West of the Cascade Mountains, seed, fertilizer, and mulch may be completely applied in one application. East of the Cascades, seeding, fertilizing, and mulching shall not be applied as a single application unless allowed by the Engineer in writing prior to application. The fertilizing and mulching shall meet the requirements of Sections 8-02.3(6) and 8-02.3(11).

8-02.3(9)D Inspection
Seeded areas will be inspected upon completion of seeding, fertilizing, and mulching. The Work in any area will not be measured for payment until a uniform distribution of the materials is accomplished at the specified rate. Areas that have not received a uniform application of seed, fertilizer, and mulch at the specified rate, as determined by the Engineer, shall be re-seeded, re-fertilized, or re-mulched prior to payment for seeding within a designated area.

8-02.3(9)E Protection and Care of Seeded Areas
The Contractor shall install and establish a stable and weed free stand of grass as specified within all designated permanent seeding areas. A stable stand of grass shall meet the following requirements:
1. A dense and uniform canopy cover, 70% for Western Washington and 50% for Eastern Washington, of specified species covers all seeded areas after 3 months of active growth following germination during the growing season. Canopy cover is defined as the cover of living and vigorous grass blades, leaves, and shoots of specified species. Volunteer species, weeds, woody plants, or other undesirable vegetation shall not factor into the canopy cover. Growth and establishment may require supplemental irrigation to meet cover requirements.

2. Stand health is evident by vigorously growing planted species having a uniform rich-green appearance and with no dead patches or major gaps of growth. A stand of grass that displays rusting, wilting, stunted growth, disease, yellowing or browning of leaves, or bare patches does not meet the stand health requirement.

3. The Contractor shall establish a stable stand of grass free of all weeds, non-specified grasses, and other undesirable vegetation. Weed control shall be in accordance with the Weed and Pest Control Plan and occur on a monthly basis during the establishment period and through the life of the Contract.

4. Remove all trash, rocks, construction debris, and other obstructions that may be detrimental to the continued establishment of future seeding.

In addition to the requirements of Section 1-07.13(1), restoration of eroded areas including clean up, removal, and proper disposal of eroded material, filling and raking of eroded areas with Topsoil Type A or fine compost, and re-application of the specified seed, fertilizer, and mulch shall occur at no additional cost to the Contracting Agency.

8-02.3(10) Lawn Installation
8-02.3(10)A Dates and Conditions for Lawn Installation
In irrigated areas, lawn installation shall not begin until the irrigation system is fully operational.

Unless otherwise allowed by the Engineer, seeded lawn installation shall be performed during the following time periods at the location shown:

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<thead>
<tr>
<th>Western Washington (West of the Cascade Mountain Crest)</th>
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<tr>
<td>March 1 through May 15</td>
<td>October 1 through November 15</td>
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<tr>
<td>September 1 through October 1</td>
<td></td>
</tr>
<tr>
<td>When irrigation system is operational</td>
<td>When irrigation system is operational</td>
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<tr>
<td>March 1 through October 1</td>
<td>March 1 through November 1</td>
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</tbody>
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8-02.3(10)B Lawn Seeding and Sodding
The Contractor shall prepare the lawn area in accordance with Section 8-02.3(5) and apply seed at the mix and rate of application as specified in the Special Provisions.

The Contractor shall have the option of sodding in lieu of seeding for lawn installation at no additional expense to the Contracting Agency. Seeding in lieu of sodding will not be allowed.

Seed placed by hand shall be raked into the soil. Following raking, the seeded soil shall be rolled with a smooth 50-pound roller. Sod strips shall be placed within 48 hours of being cut. Placement shall be without voids and have the end joints staggered. Following placement, the sod shall be rolled with a smooth roller to establish contact with the soil.

Barriers shall be erected, with warning signs where necessary, to preclude pedestrian traffic access to the newly placed lawn during the establishment period.

8-02.3(10)C Lawn Establishment
Lawn establishment shall consist of caring for all new lawn areas within the limits of the project.

The lawn establishment period shall begin immediately after the lawn seeding or sodding has been accepted by the Engineer and shall extend to the end of four mowings or 20 working days whichever is longer. The mowings shall be done in accordance with Section 8-02.3(10)D.

During the lawn establishment period, the Contractor shall ensure the continuing healthy growth of the turf. This care shall include keeping the project in a presentable condition including, but not limited to, removal of litter, mowing, trimming, removal of grass clippings, edging, fertilization, insecticide and fungicide applications, weed control, watering, repairing the irrigation system, and repair and reseeding all damaged areas.

Temporary barriers shall be removed only when directed by the Engineer.

All Work performed under lawn establishment shall comply with established turf management practices.

Acceptance of lawn planting as specified will be based on a uniform stand of grass and a uniform grade at the time of final inspection. The Contractor shall recultivate, re-grade, reseed, and refertilize areas that are bare or have a poor stand of grass or not having a uniform grade through any cause before final inspection at no additional cost to the Contracting Agency.

8-02.3(10)D Lawn Mowing
Lawn mowing shall begin immediately after the lawn establishment period has been accepted by the Engineer and shall extend to the end of the Contract or the first-year plant establishment, whichever is last.

The Contractor shall accomplish the following minimum requirements:
1. Mow, trim, and edge as often as conditions dictate, at a minimum, once per week between April and September. Maximum height of lawn shall not exceed 3 inches. The cutting height shall be 2 inches. Cuttings, trimmings, and edgings shall be disposed of off the project site. When the Engineer allows the use of a mulching mower, trimmings may be left in place.

2. Water as often as conditions dictate depending on weather and soil conditions.

3. Provide fertilizer, weed control, water, and other measures as necessary to establish and maintain a healthy stand of grass.

8-02.3(11) Mulch
Mulches associated with seeding and planting shall be of the type specified in the Special Provisions or as indicated in the Plans. The Contractor shall evenly apply mulch at the rates indicated in the Plans. Mulches shall not be placed below the anticipated water level of ditch slopes, pond bank slopes, and stream banks, or in areas of standing or flowing water.

8-02.3(11)A Mulch for Seeding Areas
The Contractor shall furnish and evenly apply Hydraulically Applied Erosion Control Product (HECP) Long Term Mulch at the rates indicated and in accordance with the Manufacturer’s specifications unless otherwise specified.

HECP Long Term Mulch shall be hydraulically applied at the rate of 3500 pounds per acre with no more than 2000 pounds applied in any single lift. HECP mulch shall not be used within the Ordinary High Water Mark.

Mulch sprayed on signs or sign Structures shall be removed the same day.

Areas not accessible by mulching equipment shall be mulched by accepted hand methods.

HECP Long Term Mulch may be applied with seed and fertilizer west of the summit of the Cascade Range. East of the summit of the Cascade Range, seed and fertilizer shall be applied in a single application followed by the application of mulch.

8-02.3(11)B Bark or Woodchip Mulch
The Contractor shall apply bark or wood chip mulch of the type and depth specified where shown in the Plans or as specified in the Special Provisions.

The Contractor shall complete final grading and placement/incorporation of soil amendments within the planting area prior to placement of mulch. Areas receiving bark mulch shall be bare soil or vegetation free before application, except where trees and other plants are specifically identified in the Plans or designated by the Engineer to be saved and protected.

Bark or wood chip mulch shall be placed to a uniform non-compacted depth of 3 inches over all planting areas unless otherwise specified. Mulch shall be
feathered to the base of the plant and 1 inch below the top of junction and valve boxes, curbs, and pavement edges.

Any contamination of the mulch due to the Contractor’s operations shall be corrected to its former condition at no additional cost to the Contracting Agency. Mulch placed to a thickness greater than specified shall be at no additional cost to the Contracting Agency.

The Contractor shall keep plant material crowns, runners, and branches free of mulch at all times.

8-02.3(11)C Bark or Woodchip Mulch Rings
The Contractor shall apply mulch rings around plants installed within existing vegetation areas or within seeded areas as shown in the Plans. Bark or wood chip mulch rings shall be applied to the surface of vegetation free amended soil in the isolated plant locations where shown in the Plans or as specified in the Special Provisions. Bark or wood chip mulch shall be placed to a uniform non-compacted depth of 3 inches to a radius of 2 feet around all plants within interplanted plant locations.

8-02.3(12) Completion of Initial Planting
Upon completion of the initial planting within a designated area, the Engineer will make an inspection of all planting areas. The Engineer will notify the Contractor, in writing, of any replacements or corrective action necessary to meet the plant installation requirements. The Contractor shall replace all plants and associated materials rejected or missing and correct unsatisfactory conditions.

Completion of the initial planting within a designated area includes the following conditions:

1. 100 percent of each of the plant material categories are installed as shown in the Plans.
2. Planting Area is cleaned up.
3. Repairs are completed, including but not limited to, full operation of the irrigation system.
4. Mulch coverage is complete.
5. All weeds are controlled.

8-02.3(13) Plant Establishment
Plant establishment consists of caring for all plants and planting areas within the project limits. The provisions of Sections 1-07.13(2) and 1-07.13(3) do not apply to this Section.

When the Proposal includes the bid item PSIPE____ (Plant Selection Including Plant Establishment), that bid item includes one year of plant establishment Work. The first year of plant establishment shall begin immediately upon written notification from the Engineer of the completion of initial planting for the project. The first-year plant establishment period shall be a minimum of one calendar year.
The one calendar year shall be extended an amount equal to any periods where
the Contractor does not comply with the plant establishment requirements and
plan.

During the first-year plant establishment period, the Contractor shall perform all
Work necessary to ensure the resumption and continued growth of the transplanted
material. This Work shall include, but is not limited to, applying water, removing
foreign, dead, or rejected plant material, maintaining all planting areas in a weed-
free condition, and replacing all unsatisfactory plant material planted under the
Contract. If plants are stolen or damaged by the acts of others, the Contracting
Agency will pay invoice cost only for the replacement plants with no mark-up and
the Contractor will be responsible for the labor to install the replacement plants.
Other weed control within the project limits but outside of planting, lawn, or seeding
areas shall be as specified in Section 8-02.3(3)C.

During the first year of plant establishment, the Contractor shall meet monthly or at
an agreed upon schedule with the Engineer for the purpose of joint inspection of
the planting material. The Contractor shall correct all unsatisfactory conditions
identified by the Engineer within a 10-day period immediately following the
inspection. If plant replacement is required, the Contractor shall, within the 10-day
period, submit a plan and schedule for the plant procurement and replacement to
occur during the planting period as designated in Section 8-02.3(8). At the end of
the plant establishment period, plants that do not show normal growth shall be
replaced and all staking and guying that remain on the project shall be removed
unless otherwise allowed by the Engineer.

All automatic irrigation systems shall be operated fully automatic during the plant
establishment period and until final acceptance of the Contract. Payment for water
used to water in plants, or hand watering of plant material or lawn areas unless
otherwise specified, is the responsibility of the Contractor during the first-year plant
establishment period.

Subsequent year plant establishment periods shall begin immediately at the
completion of the preceding year’s plant establishment period. Each subsequent
plant establishment period shall be one full calendar year in duration.

During the plant establishment period(s) after the first year plant establishment, the
Work necessary for the continued healthy and vigorous growth of all plants material
shall be performed as directed by the Engineer.

Payment for water used to water plants during the subsequent year(s) of plant
establishment will be paid under the plant establishment item.

8-02.3(14) Plant Replacement
The Contractor shall be responsible for growing or arrange to provide sufficient
plants for replacement of all plant material rejected through first-year plant
establishment. All replacement plant material shall be inspected and accepted by
the Engineer prior to installation. All rejected plant material shall be replaced with
acceptable plants meeting the specifications and installed according to the
requirements of this Section at dates allowed by the Engineer.
All replacement plants shall be of the same species as the plants they replace and meet the requirements of Section 9-14.8 unless otherwise allowed by the Engineer. Plants may vary in size reflecting one season of growth should the Contractor elect to hold plant material under nursery conditions for an additional year to serve as replacement plants. Replacement plant material larger than specified in the Plans shall meet the applicable section requirements of the ASNS for container class, ball size, spread, and branching characteristics.

8-02.3(15) Bioengineering
Bioengineering consists of using plant materials for the purpose of streambank or earthen slope construction and surface stabilization. This Work may include installing woody plant cuttings in various forms as well as part of streambank or earthen slope construction.

8-02.3(15)A Fascines
Live fascines shall be constructed of live and dead cuttings bundled together with a diameter of 8 to 18 inches. Live cuttings shall be the species shown in the Plans. Dead branches may be cuttings from any woody, non-invasive plant native to the project area. Dead branches may be placed within the live fascine and on the side exposed to the air. Live branches shall be placed in contact with the soil along their entire length. Each live fascine must contain a minimum of eight live branches. Dead branches shall constitute no more than 40 percent of the total fascine content.

The total length of each live fascine shall be a minimum of 5 feet. Branches shall be bundled into log-like forms and bound with biodegradable twine spaced at 1-foot intervals along the entire length of the live fascine. Live fascines shall be installed horizontally in a trench whose depth shall be ½ the diameter of the live fascine. Secure the live fascine with live stakes 3 feet in length and ¾ inch in diameter placed at 18-inch intervals. A minimum of three live stakes shall be used per fascine. The live stakes shall be driven through the live fascine vertically into the slope. The ends of live fascines shall be woven together so that no gap remains between the two sections of the live fascine.

Prior to being covered with soil, the fascine shall be thoroughly watered. Once the fascine is covered with 6 inches of soil, the soil covering the fascine shall be thoroughly watered.

When used to remedy erosion areas, live fascines shall extend a minimum of two feet beyond the visible area of erosion and soil disturbance. The locations for live fascines and live stake rows shall be identified in the field for review and acceptance by the Engineer. The Engineer may require adjustment of fascine locations prior to installation in order to best accomplish the intended functions.

Plant replacement during plant establishment for “PSIPE Live Fascine” will be required for any section void of live shoots for a length of 3 feet or more. Replacement shall consist of installing live stakes, spaced 1 foot apart above the fascine within the area void of live shoots. Live stakes shall be of the same species as the live fascine and shall have a minimum length of 3 feet and a
minimum diameter of ¾ inch. The requirements of Section 8-02.3(8) apply to PSIPE Live Fascine.

8-02.3(15)B Brush Mattress
Live brush mattress shall be constructed of live branch cuttings, live poles, jute rope and topsoil. The live cuttings and live poles shall be from the plant species designated in the Plans. Live branch cuttings shall be placed with the cut ends oriented down slope as shown in the Plans. Cuttings shall overlap from side to side and from top to bottom as each layer is constructed. The live branches in each succeeding upper layer shall overlap the adjacent lower layer by a minimum of 6 inches. A maximum of 20 percent of the branches may be dead branches, but the live branches shall be distributed evenly to provide even rooting and growth over the entire area of the brush mattress.

The Contractor shall anchor the live brush mattress to the slope using stakes and jute rope as shown in the Plans. Initially, the stakes shall be installed to protrude above the live brush mattress. The Contractor shall attach the jute rope to the stakes and tighten the rope by tamping the stakes further into the bank, pulling the live brush mattress tight against the soil surface. The Contractor shall cover the live brush mattress with sufficient stockpiled topsoil to ensure good soil contact with the live plant material.

Plant replacement during plant establishment for “PSIPE Live Brush Mattress” will be required for any section void of live shoots for an area of 25 square feet or more. Replacement shall consist of installing live stakes, spaced 3 feet apart in a triangular pattern within the area void of live shoots. Live stakes shall be of the same species as the live brush mattress and shall have a minimum length of 3 feet and a minimum diameter of ¾ inch. The requirements of Section 8-02.3(8) apply to PSIPE Brush Mattress.

8-02.3(15)C Brush Layer
Brush layers shall be constructed of live branch cuttings, randomly mixed, from the plant species listed under the brush layer heading in the Plans. The number of branches required will vary depending on the average branch diameter and layer thickness.

Brush layers shall be placed in a trench dug at a 45 degree incline into the slope or stream bank. Two-thirds to three-fourths of the length of the live branches shall be buried. Soil shall be firmly tamped in place. Succeeding layers shall be spaced as detailed in the Plans. Brush layer placed in stream banks shall be angled downstream.

Brush layers may include plant establishment when designated as PSIPE Brush Layer. Plant replacement for PSIPE Brush Layer will be required for each section void of live shoots for a continuous distance of 3 feet or more. The requirements of Section 8-02.3(8) apply to PSIPE Brush Layer.

8-02.3(16) Roadside Maintenance Under Construction
When the Contract includes the item, Roadside Maintenance Under Construction, this Work includes roadside mowing and ditch maintenance, and noxious weed control outside of planting areas according to Section 8-02.3(3)C.
8-02.3(16)A Roadside Mowing
The Contractor shall mow designated roadside grass areas to the limits designated by the Engineer. Roadside mowing is limited to slopes not steeper than 3(H) to 1(V).

The Contractor shall mow according to the following requirements:

1. Trim around traffic equipment, structures, planting areas, or other features extending above ground preceding or simultaneously with each mowing.

2. Maintain grass between 4 and 12 inches in height.

3. Operate mowing equipment with suitable guards to prevent throwing rocks or debris onto the traveled way or off of the Contracting Agency property. Power driven equipment shall not cause ruts, deformation, and compaction of the vegetated soil.

4. Removing clippings is required on the traveled way, shoulders, walkways, or Structures.

5. Restore soil rutting to a smooth and even grade at the direction of the Engineer.

8-02.3(16)B Ditch Maintenance
The Contractor shall maintain drainage for the duration of the Contract according to the following requirements:

1. Maintain flow lines in drainage channels and roadside ditches.

2. Cutting or trimming vegetation within drainage channels to maintain positive flow.

3. Remove dirt and debris from inside of culverts or any drainage area where runoff has allowed accumulations and re-seed for erosion control.

4. Restore channels to previous operational condition.

8-02.4 Measurement
Topsoil, bark or woodchip mulch and soil amendments will be measured by the acre or the square yard along the grade and slope of the area covered immediately after placement. Weed control pre-treatment of topsoil areas, excavation, and stockpiling are included in the bid item “Topsoil Type ____.

Bark or woodchip mulch rings will be measured per each.

Compost will be measured by the acre or the square yard along the grade and slope of the area covered immediately after application.

Seeding, fertilizing, and mulching will be measured by the acre or the square yard by ground slope measurement or through the use of design data.
Seeding and fertilizing by hand will be measured by the square yard. No adjustment in area size will be made for the vegetation free zone around each plant.

Seeded lawn, sod installation, and lawn mowing will be measured along the ground slope and computed in square yards of actual lawn completed, established, and accepted.

Plant selection will be measured per each.

PSIPE __ (Plant Selection Including Plant Establishment) will be measured per each.

Live Pole will be measured per each.

Live Stake Row will be measured by the linear foot along the ground slope line.

The pay quantities for plant materials will be determined by count of the number of satisfactory plants in each category accepted by the Engineer.

Fascine and PSIPE live fascine will be measured by the linear foot along the ground slope line.

Brush mattress and PSIPE live brush mattress will be measured by the surface square yard along the ground slope line.

Brush layer and PSIPE brush layer will be measured by the linear foot along the ground slope line.

Water will be measured in accordance with Section 2-07.4. Measurement will be made of only that water hauled in tank trucks or similar equipment.

8-02.5 Payment
Payment will be made for each of the following listed Bid items that are included in the Proposal:

"Project Area Weed and Pest Control" will be paid in accordance with Section 1-09.6.
For the purpose of providing a common Proposal for all Bidders, the Contracting Agency entered an amount for “Project Area Weed and Pest Control” in the Proposal to become a part of the total Bid by the Contractor. Payment under this item will be made only when the Work is not already covered by other items.

“Topsoil Type ____”, per acre. The unit Contract price per acre for “Topsoil Type ____” shall be full payment for all costs for the specified Work.

“Fine Compost”, per acre or per square yard.
“Medium Compost”, per acre or per square yard.
“Coarse Compost”, per acre or per square yard.
The unit Contract price per acre for “Fine Compost”, “Medium Compost” or “Coarse Compost” shall be full pay for furnishing and spreading the compost onto the existing soil.
“Soil Amendment”, per acre.
The unit Contract price per acre for “Soil Amendment” shall be full pay for furnishing and incorporating the soil amendment into the existing soil.

“Plant Selection ___”, per each.
The unit Contract price for “Plant Selection ___”, per each shall be full pay for all Work to perform the work as specified within the planting area prior to planting for weed control, planting area preparation and installation of plants with initial watering.

As the plants that do not include plant establishment are obtained, propagated, and grown, partial payments will be made as follows:

Payment of 15 percent of the unit Contract price per each when the plant materials have been contracted, propagated, and are growing under nursery conditions. The Contractor shall provide the Engineer with certification that the plant material has been procured or contracted for delivery to the project for planting within the time limits of the project. The certification shall state the location, quantity, and size of all material.

Payment will be increased to 100 percent of the unit Contract price per each for contracted plant material at the completion of the initial planting.

All partial payments shall be limited to the actual number of healthy vigorous plants that meet the stage requirements, limited to plan quantity. Previous partial payments made for materials rejected or missing will be deducted from future payments due the Contractor.

“PSIPE ___”, per each.
The unit Contract price for “PSIPE ___”, per each, shall be full pay for all Work necessary to perform as specified within the planting area for weed control and planting area preparation, planting, cleanup, and water necessary to complete planting operations as specified to the end of first year plant establishment.

As the plants that include plant establishment are obtained, propagated, and grown, partial payments will be made as follows after inspection by the Engineer:

Payment of 5 percent of the unit Contract price, per each, when the plant materials have been contracted, propagated, and are growing under nursery conditions. The Contractor shall provide the Engineer with certification that the plant material has been procured or contracted for delivery to the project for planting within the time limits of the project. The certification shall state the location, quantity, and size of all material.

Payment will be increased to 15 percent of the unit Contract price, per each, upon completion of the initial weed control and planting area preparation Work.

Payment will be increased to 60 percent of the unit Contract price per each for the contracted plant material in a designated unit area when planted.
Payment will be increased to 70 percent of the unit Contract price per each for contracted plant material at the completion of the initial planting.

Payment will be increased to the appropriate percentage upon reaching the following plant establishment milestones:

- June 30th: 80 percent
- September 30th: 90 percent

Completion of first-year plant establishment or after all replacement plants have been installed, whichever is later.

Plant establishment milestones are achieved when planting areas meet conditions described in Section 8-02.3(13).

- “Seeding, Fertilizing and Mulching”, per acre.
- “Seeding and Fertilizing”, per acre or per square yard.
- “Seeding and Fertilizing by Hand”, per square yard.
- “Second Application of Fertilizer”, per acre.
- “Seeding and Mulching”, per acre.
- “Seeded Lawn Installation”, per square yard.
- “Sod Installation”, per square yard.
- “Lawn Mowing”, per square yard.

The unit Contract price per square yard for “Seeded Lawn Installation” or “Sod Installation” shall be full pay for all costs necessary to prepare the area, plant or sod the lawn, erect barriers, control weeds, and establish lawn areas and for furnishing all labor, tools, equipment, and materials necessary to complete the work as specified and shall be paid in the following sequence for healthy, vigorous lawn:

- Completion of Lawn Planting: 60 percent of individual areas
- Mid Lawn Establishment (after two mowings): 85 percent of individual areas
- Completion of Lawn Establishment (after four mowings): 100 percent of individual areas

“Plant Establishment Year ____” will be paid in accordance with Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting Agency entered an amount for “Plant Establishment - ____ Year” in the Proposal to become a part of the total Bid by the Contractor.

- “Live Pole”, per each.
- “Live Stake Row”, per linear foot.
"Bark or Wood Chip Mulch", per acre.

"Bark or Wood Chip Mulch Rings", per each.
The unit Contract price per acre for "Bark or Wood Chip Mulch" shall be full pay for furnishing and spreading the mulch onto the existing soil.

“Fascine” and “PSIPE Live Fascine”, per linear foot.
“Brush Mattress” and “PSIPE Live Brush Mattress”, per square yard.
“Brush Layer” and “PSIPE Brush Layer”, per linear foot.
When PSIPE is included with Fascine, Brush Mattress, or Brush Layer, the payment schedule for PSIPE _____ will apply.

“Roadside Maintenance under Construction” will be paid in accordance with Section 1-09.6.
For the purpose of providing a common Proposal for all Bidders, the Contracting Agency has entered an amount for “Roadside Maintenance Under Construction” in the Proposal to become a part of the total Bid by the Contractor.

“Water”, per M Gal.

8-04.AP8
Section 8-04, Curbs, Gutters, and Spillways
April 2, 2018

8-04.2 Materials
In the first paragraph, the reference to “Portland Cement” is revised to read:
Cement 9-01

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways
The first paragraph is supplemented with the following:
Roundabout truck apron cement concrete curb and gutter shall be constructed with air entrained concrete Class 4000 conforming to the requirements of Section 6-02.

8-06.AP8
Section 8-06, Cement Concrete Driveway Entrances
April 2, 2018

8-06.2 Materials
In the first paragraph, the reference to “Portland Cement” is revised to read:
Cement 9-01

8-06.3 Construction Requirements
The first paragraph is revised to read:
Cement concrete driveway approaches shall be constructed with air entrained concrete Class 4000 conforming to the requirements of Section 6-02 or Portland Cement or
8-07.AP8

Section 8-07, Precast Traffic Curb
April 2, 2018

8-07.3(1) Installing Curbs
The first sentence of the first paragraph is revised to read:

The curb shall be firmly bedded for its entire length and breadth on a mortar bed
conforming to Section 9-20.4(3) composed of one part Portland cement or blended
hydraulic cement and two parts sand.

The fourth paragraph is revised to read:

All joints between adjacent pieces of curb except joints for expansion and/or drainage
as designated by the Engineer shall be filled with mortar composed of one part Portland
cement or blended hydraulic cement and two parts sand.

8-09.AP8

Section 8-09, Raised Pavement Markers
April 1, 2019

8-09.5 Payment
The last paragraph is revised to read:

The unit Contract price per hundred for “Raised Pavement Marker Type 1”, “Raised
Pavement Marker Type 2”, “Raised Pavement Marker Type 3_____ In.”, and
“Recessed Pavement Marker” shall be full pay for furnishing and installing the markers
in accordance with these Specifications.

8-11.AP8

Section 8-11, Guardrail
April 1, 2019

8-11.3(1)A Erection of Posts
The first sentence of the first paragraph is revised to read:

Posts shall be set to the true line and grade of the Highway after the grade is in place
and compaction is completed.

8-11.3(1)C Terminal and Anchor Installation
The first paragraph is revised to read:

All excavation and backfilling required for installation of anchors shall be performed in
accordance with Section 2-09, except that the costs thereof shall be included in the unit
Contract price for the anchor installed.

The first sentence of the second to last paragraph is revised to read:
Assembly and installation of Beam Guardrail Non-flared Terminals for Type 31 guardrail shall be supervised at all times by a manufacturer’s representative, or an installer who has been trained and certified by the manufacturer.

The last paragraph is revised to read:

Beam Guardrail Non-flared Terminals for Type 31 guardrail shall meet the crash test and evaluation criteria in the Manual for Assessing Safety Hardware (MASH).

8-11.4 Measurement
The third paragraph is revised to read:

Measurement of beam guardrail _____ terminal will be per each for the completed terminal.

The fourth paragraph is revised to read:

Measurement of beam guardrail Type 31 buried terminal Type 2 will be per linear foot for the completed terminal.

The sixth paragraph is revised to read:

Measurement of beam guardrail anchor Type 10 will be per each for the completed anchor, including the attachment of the anchor to the guardrail.

8-11.5 Payment
The Bid item “Beam Guardrail Anchor Type ____”, per each is revised to read “Beam Guardrail Anchor Type 10”, per each.

The Bid item “Beam Guardrail Buried Terminal Type 1”, per each is deleted from this section.

The Bid item “Beam Guardrail Buried Terminal Type 2”, per linear foot and the following paragraph are revised to read:

“Beam Guardrail Type 31 Buried Terminal Type 2”, per linear foot.

The unit Contract price per linear foot for “Beam Guardrail Type 31 Buried Terminal Type 2” shall be full payment for all costs to obtain and provide materials and perform the Work as described in Section 8-11.3(1)C.

8-14.AP8
Section 8-14, Cement Concrete Sidewalks
April 2, 2018

8-14.2 Materials
In the first paragraph, the reference to “Portland Cement” is revised to read:

Cement 9-01

In the second paragraph, each reference to “Federal Standard 595” is revised to read “SAE AMS Standard 595”. 
8-16.AP8

Section 8-16, Concrete Slope Protection
April 2, 2018

8-16.2 Materials

In the first paragraph, the last two material references are revised to read:

Poured Portland Cement or Blended Hydraulic Cement 9-13.5(2)
Pneumatically Placed Portland Cement or Blended 9-13.5(3)

8-17.AP8

Section 8-17, Impact Attenuator Systems
January 7, 2019

8-17.3 Construction Requirements

This section is supplemented with the following:

Permanent impact attenuators shall meet the crash test and evaluation criteria of the Manual for Assessing Safety Hardware (MASH), except as otherwise noted in the Plans or Special Provisions.

8-20.AP8

Section 8-20, Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and Electrical
August 6, 2018

8-20.1(1) Regulations and Code

The last paragraph is revised to read:

Persons performing electrical Work shall be certified in accordance with and supervised as required by RCW 19.28.161. Proof of certification shall be worn at all times in accordance with WAC 296-46B-942. Persons failing to meet these certification requirements may not perform any electrical work, and shall stop any active electrical work, until their certification is provided and worn in accordance with this Section.

8-20.2(2) Equipment List and Drawings

This section is renumbered:

8-20.2(1) Equipment List and Drawings

8-20.3(4) Foundations

The second sentence of the first paragraph is revised to read:

Concrete for Type II, III, IV, V, and CCTV signal standards and light standard foundations shall be Class 4000P and does not require air entrainment.

8-20.3(5)A General

The last two sentences of the last paragraph is deleted.
This section is supplemented with the following:

All conduits shall include a pull tape with the equipment grounding conductor. The pull tape shall be attached to the conduit near the end bell or grounded end bushing, or to duct plugs or caps if present, at both ends of the conduit.

8-20.3(8) Wiring
The seventeenth paragraph is supplemented with the following:

Pulling tape shall meet the requirements of Section 9-29.1(10). Pull string may not be used.

8-20.3(14)C Induction Loop Vehicle Detectors

Item number 2 is deleted.

Item numbers 3 through 12 are renumbered to 2 through 11, respectively.

8-21.AP8
Section 8-21, Permanent Signing
January 7 2019

8-21.3(5) Sign Relocation
The second sentence of the first paragraph is revised to read:

Where the existing sign structure is mounted on concrete pedestals, the Contractor shall remove the pedestal to a minimum of 2 feet below finished grade and backfill the remaining hole with material similar to that surrounding the hole.

8-21.3(9)F Foundations
Item number 3 of the twelfth paragraph is supplemented with the following new sentence:

Class 4000P concrete for roadside sign structures does not require air entrainment.

8-22.AP8
Section 8-22, Pavement Marking
January 7, 2019

8-22.3(2) Preparation of Roadway Surfaces
The second paragraph is revised to read:

Remove all other contaminants from pavement surfaces that may adversely affect the installation of new pavement marking.

8-22.3(3)F Application Thickness
The second to last sentence of the last paragraph is revised to read:

After grinding, clean the groove.
Section 9-00, Definitions and Tests

January 7, 2019

9-00.4  Sieves for Testing Purposes

This section is revised to read:

Test sieves shall be made of either: (1) woven wire cloth conforming to ASTM E11, or
(2) square-hole, perforated plates conforming to ASTM E323.

9-00.7  Galvanized Hardware, AASHTO M 232

The first sentence is revised to read:

An acceptable alternate to hot-dip galvanizing in accordance with AASHTO M 232 will
be zinc coatings mechanically deposited in accordance with ASTM B695, providing the
minimum thickness of zinc coating is not less than that specified in AASHTO M 232,
and the process will not produce hydrogen embrittlement in the base metal.

Section 9-02, Bituminous Materials

January 7, 2019

9-02.1  Asphalt Material, General

The second paragraph is revised to read:

The Asphalt Supplier of Performance Graded (PG) asphalt binder and emulsified
asphalt shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 2
"Standard Practice for Asphalt Suppliers That Certify Performance Graded and
Emulsified Asphalts". The Asphalt Supplier’s QCP shall be submitted and receive the
acceptance of the WSDOT State Materials Laboratory. Once accepted, any change to
the QCP will require a new QCP to be submitted for acceptance. The Asphalt Supplier
of PG asphalt binder and emulsified asphalt shall certify through the Bill of Lading that
the PG asphalt binder or emulsified asphalt meets the Specification requirements of the
Contract.

9-02.1(4)  Performance Graded Asphalt Binder (PGAB)

This section’s title is revised to read:

Performance Graded (PG) Asphalt Binder

The first paragraph is revised to read:

PG asphalt binder meeting the requirements of AASHTO M 332 Table 1 of the grades
specified in the Contract shall be used in the production of HMA. For HMA with greater
than 20 percent RAP by total weight of HMA, or any amount of RAS, the new asphalt
binder, recycling agent and recovered asphalt (RAP and/or RAS) when blended in the
proportions of the mix design shall meet the PG asphalt binder requirements of
AASHTO M 332 Table 1 for the grade of asphalt binder specified by the Contract.

The second paragraph, including the table, is revised to read:
In addition to AASHTO M 332 Table 1 specification requirements, PG asphalt binders shall meet the following requirements:

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>PG58S-22</th>
<th>PG58H-22</th>
<th>PG58V-22</th>
<th>PG64S-28</th>
<th>PG64H-28</th>
<th>PG64V-28</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTFO</td>
<td>AASHTO T 350</td>
<td>30% Min.</td>
<td>20% Min.</td>
<td>25% Min.</td>
<td>30% Min.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residue:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recovery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ 3.2 kPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Specimen conditioned in accordance with AASHTO T 240 – RTFO.

The third paragraph is revised to read:

The RTFO $J_{\text{ndiff}}$ and the PAV direct tension specifications of AASHTO M 332 are not required.

**9-02.1(6) Cationic Emulsified Asphalt**

This section is revised to read:

Cationic Emulsified Asphalt meeting the requirements of AASHTO M 208 Table 1 of the grades specified in the Contract shall be used.

**9-02.5 Warm Mix Asphalt (WMA) Additive**

This section, including title, is revised to read:

Additives for HMA shall be accepted by the Engineer.

9-03.AP9

**Section 9-03, Aggregates**

**January 7, 2019**

**9-03.1 Aggregates for Portland Cement Concrete**

This section’s title is revised to read:

Aggregates for Concrete

**9-03.1(1) General Requirements**

The first two sentences of the first paragraph are revised to read:

Concrete aggregates shall be manufactured from ledge rock, talus, or sand and gravel in accordance with the provisions of Section 3-01. Reclaimed aggregate may be used if it complies with the specifications for concrete.

The second paragraph (up until the colon) is revised to read:
Aggregates for concrete shall meet the following test requirements:

The second sentence of the second to last paragraph is revised to read:

The Contractor shall submit test results according to ASTM C1567 through the Engineer to the State Materials Laboratory that demonstrate that the proposed fly ash when used with the proposed aggregates and cement will control the potential expansion to 0.20 percent or less before the fly ash and aggregate sources may be used in concrete.

9-03.1(2) Fine Aggregate for Portland Cement Concrete
This section’s title is revised to read:

Fine Aggregate for Concrete

9-03.1(4) Coarse Aggregate for Portland Cement Concrete
This section’s title is revised to read:

Coarse Aggregate for Concrete

9-03.1(4)C Grading
The first paragraph (up until the colon) is revised to read:

Coarse aggregate for concrete when separated by means of laboratory sieves shall conform to one or more of the following gradings as called for elsewhere in these Specifications, Special Provisions, or in the Plans:

9-03.1(5) Combined Aggregate Gradation for Portland Cement Concrete
This section’s title is revised to read:

Combined Aggregate Gradation for Concrete

9-03.1(5)B Grading
In the last paragraph, “WSDOT FOP for WAQTC/AASHTO T 27/T 11” is revised to read “FOP for WAQTC/AASHTO T 27/T 11”.

9-03.2 Aggregate for Job-Mixed Portland Cement Mortar
This section’s title is revised to read:

Aggregate for Job-Mixed Portland Cement or Blended Hydraulic Cement Mortar

The first sentence of the first paragraph is revised to read:

Fine aggregate for portland cement or blended hydraulic cement mortar shall consist of sand or other inert materials, or combinations thereof, accepted by the Engineer, having hard, strong, durable particles free from adherent coating.

9-03.4(1) General Requirements
The first paragraph (up until the colon) is revised to read:
Aggregate for bituminous surface treatment shall be manufactured from ledge rock, talus, or gravel, in accordance with Section 3-01. Aggregates for Bituminous Surface Treatment shall meet the following test requirements:

9-03.8(1) General Requirements
The first paragraph (up until the colon) is revised to read:
Aggregates for Hot Mix Asphalt shall meet the following test requirements:

9-03.8(2) HMA Test Requirements
The two tables in the second paragraph are replaced with the following three tables:

<table>
<thead>
<tr>
<th>Mix Criteria</th>
<th>3/8 inch</th>
<th>3/4 inch</th>
<th>7/8 inch</th>
<th>1 inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voids in Mineral Aggregate (VMA), %</td>
<td>15.0</td>
<td>14.0</td>
<td>13.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Voids Filled With Asphalt (VFA), %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESAL's (millions)</td>
<td>VFA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 0.3</td>
<td>70</td>
<td>80</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>0.3 to &lt; 3</td>
<td>65</td>
<td>78</td>
<td>65</td>
<td>78</td>
</tr>
<tr>
<td>≥ 3</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Dust/Asphalt Ratio</td>
<td>0.6</td>
<td>1.6</td>
<td>0.6</td>
<td>1.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test Method</th>
<th>ESAL's (millions)</th>
<th>Number of Passes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamburg Wheel-Track Testing, FOP for AASHTO T 324 Minimum Number of Passes with no Stripping Inflection Point and Maximum Rut Depth of 10mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
<td>10,000</td>
</tr>
<tr>
<td>0.3 to &lt; 3</td>
<td>0.3 to &lt; 3</td>
<td>12,500</td>
</tr>
<tr>
<td>≥ 3</td>
<td>≥ 3</td>
<td>15,000</td>
</tr>
<tr>
<td>Indirect Tensile (IDT) Strength (psi) of Bituminous Materials FOP for ASTM D6931</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>175 Maximum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Gmm</th>
<th>ESAL's (millions)</th>
<th>N initial</th>
<th>N design</th>
<th>N maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.3</td>
<td>6</td>
<td>≤ 91.5</td>
<td>96.0</td>
<td>≤ 98.0</td>
</tr>
<tr>
<td>0.3 to &lt; 3</td>
<td>7</td>
<td>≤ 90.5</td>
<td>96.0</td>
<td>≤ 98.0</td>
</tr>
<tr>
<td>≥ 3</td>
<td>8</td>
<td>≤ 89.0</td>
<td>96.0</td>
<td>≤ 98.0</td>
</tr>
</tbody>
</table>

9-03.8(7) HMA Tolerances and Adjustments
In the table in item number 1, the fifth row is revised to read:

| Asphalt binder | -0.4% to 0.5% | ±0.7% |

In the table in item number 1, the following new row is inserted before the last row:

| Voids in Mineral Aggregate, VMA | -1.0% | |
9-03.9(1) Ballast

The second paragraph (up until the colon) is revised to read:

Aggregates for ballast shall meet the following test requirements:

9-03.14(4) Gravel Borrow for Structural Earth Wall

The second sentence of the first paragraph is revised to read:

The material shall be substantially free of shale or other soft, poor durability particles, and shall not contain recycled materials, such as glass, shredded tires, concrete rubble, or asphaltic concrete rubble.

9-03.21(1)B Recycled Concrete Aggregate Approval and Acceptance

The first sentence of the second paragraph is revised to read:

Recycled concrete aggregate may be used as coarse aggregate or blended with coarse aggregate for Commercial Concrete, Class 3000 concrete, or Cement Concrete Pavement.

Item number 4 of the second paragraph is revised to read:

4. For Cement Concrete Pavement mix designs using recycled concrete aggregates, the Contractor shall submit evidence that ASR mitigating measures control expansion in accordance with Section 9-03.1(1).

This section is supplemented with the following new subsection:

9-03.21(1)B1 Recycled Concrete Aggregate Approval and Acceptance

Recycled concrete aggregate may be approved through a three tiered system that consists of the following:

<table>
<thead>
<tr>
<th>Tier 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval Requirements</td>
</tr>
<tr>
<td>Approval of the Reclamation Facility is not required.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Approved to provide the following Aggregate Materials:

- 9-03.10 Aggregate for Gravel Base
- 9-03.12(1)B Gravel Backfill for Foundations Class B
- 9-03.12(2) Gravel Backfill for Walls
- 9-03.12(3) Gravel Backfill for Pipe Zone Bedding
- 9-03.14(1) Gravel Borrow
- 9-03.14(2) Select Borrow
- 9-03.14(2) Select Borrow (greater than 3 feet below subgrade and side slope)
- 9-03.14(3) Common Borrow
- 9-03.14(3) Common Borrow (greater than 3 feet below subgrade and side slope)
- 9-03.17 Foundation Material Class A and Class B
- 9-03.18 Foundation Material Class C
- 9-03.19 Bank Run Gravel for Trench Backfill
Approval Requirements

The Reclamation Facility shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 9 “Standard Practice for Approval of Reclamation Facilities of WSDOT Recycled Concrete and Returned Concrete”. The Reclamation Facility’s QCP shall be submitted and approved by the WSDOT State Materials Laboratory. Once accepted, any changes to the QCP will require a new QCP to be submitted for acceptance. Evaluation of aggregate source properties (LA Wear and Degradation) for the recycled concrete aggregate is not required.

Acceptance Requirements

Certification of toxicity characteristics in accordance with Section 9-03.21(1), required if requested. Field acceptance testing in accordance with Section 3-04 is required. Provide certification in accordance with WSDOT QC 9 for every lot. A lot shall be no larger than 10,000 tons.

<table>
<thead>
<tr>
<th>Tier 1 aggregate materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-03.1 Coarse Aggregate for Commercial Concrete or Concrete class 3000</td>
</tr>
<tr>
<td>9-03.9(1) Ballast</td>
</tr>
<tr>
<td>9-03.9(2) Permeable Ballast</td>
</tr>
<tr>
<td>9-03.9(3) Crushed Surfacing</td>
</tr>
<tr>
<td>9-03.12(1)A Gravel Backfill for Foundations Class A</td>
</tr>
</tbody>
</table>

Approved to provide the following Aggregate Materials:

Tier 3

Approval Requirements

The Reclamation Facility shall have a Quality Control Plan (QCP) in accordance with WSDOT QC 10 “Standard Practice for Approval of Reclamation Facilities of Recycled Concrete Aggregates from Stockpiles of Unknown Sources”. The Reclamation Facility’s QCP shall be submitted and approved by the WSDOT State Materials Laboratory. Once accepted, any changes to the QCP will require a new QCP to be submitted for acceptance. Evaluation of aggregate source properties (LA Wear and Degradation) for the recycled concrete aggregate is required.

Acceptance Requirements

Certification of toxicity characteristics in accordance with Section 9-03.21(1) is required. Field acceptance testing in accordance with Section 3-04 is required. Provide certification in accordance with WSDOT QC 10 for every lot. A lot shall be no larger than 10,000 tons.

<table>
<thead>
<tr>
<th>Tier 1 aggregate materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-03.1 Coarse Aggregate for Commercial Concrete or Concrete class 3000</td>
</tr>
<tr>
<td>9-03.9(1) Ballast</td>
</tr>
<tr>
<td>9-03.9(2) Permeable Ballast</td>
</tr>
<tr>
<td>9-03.9(3) Crushed Surfacing</td>
</tr>
<tr>
<td>9-03.12(1)A Gravel Backfill for Foundations Class A</td>
</tr>
</tbody>
</table>
For Reclamation Facilities that do not participate in Tier 2 and Tier 3, approval of recycled concrete aggregate will be in accordance with Section 9-03.21(1), and acceptance will be in accordance with Section 3-04.

9-03.21(1)E Table on Maximum Allowable percent (By Weight) of Recycled Material

“Portland Cement” is deleted from the first two rows in the table.

The following new row is inserted after the second row:

| Coarse Aggregate for Concrete Pavement | 9-03.1(4) | 0 | 100 | 0 | 0 |

The first column of the fourth row (after the preceding Amendment is applied) is revised to read:

Coarse Aggregate for Commercial Concrete and Class 3000 Concrete

9-04.AP9

Section 9-04, Joint and Crack Sealing Materials
January 7, 2019

This section’s title is revised to read:

Joint Sealing Materials

9-04.1(2) Premolded Joint Filler for Expansion Joints
In this section, each reference to “AASHTO T 42” is revised to read “ASTM D 545”.

9-04.2(1)A1 Hot Poured Sealant for Cement Concrete Pavement
This section is supplemented with the following:

Hot poured sealant for cement concrete pavement is acceptable for installations in joints where cement concrete pavement abuts a bituminous pavement.

9-04.2(1)A2 Hot Poured Sealant for Bituminous Pavement
This section is supplemented with the following:

Hot poured sealant for bituminous pavement is acceptable for installations in joints where cement concrete pavement abuts a bituminous pavement.

9-04.2(1)B Sand Slurry for Bituminous Pavement
Item number 2 of the first paragraph is revised to read:

2. Two percent portland cement or blended hydraulic cement, and

9-04.3 Joint Mortar
The first paragraph is revised to read:

Mortar for hand mortared joints shall conform to Section 9-20.4(3) and consist of one part portland cement or blended hydraulic cement, three parts fine sand, and sufficient water to allow proper workability.
9-04.5 Flexible Plastic Gaskets

In the table, the Test Method value for **Specific Gravity at 77°F** is revised to read “ASTM D71”.

In the table, the Test Method value for **Flash Point COC, F** is revised to read “ASTM D93 REV A”.

In the table, the Test Method value for **Volatile Matter** is revised to read “ASTM D6”.

9-05.AP9

Section 9-05, Drainage Structures and Culverts
January 7, 2019

9-05.3(1)A End Design and Joints

The second sentence of the first paragraph is revised to read:

**The joints and gasket material shall meet the requirements of ASTM C990.**

9-05.3(1)C Age at Shipment

The last sentence of the first paragraph is revised to read:

**Unless it is tested and accepted at an earlier age, it shall not be considered ready for shipment sooner than 28 days after manufacture when made with Type II portland cement or blended hydraulic cement, nor sooner than 7 days when made with Type III portland cement.**

9-05.7(3) Concrete Storm Sewer Pipe Joints

The second sentence is revised to read:

**The joints and gasket material shall meet the requirements of ASTM C990.**

9-05.7(4)A Hydrostatic Pressure on Pipes in Straight Alignment

The first sentence is revised to read:

**Hydrostatic pressure tests on pipes in straight alignment shall be made in accordance with the procedure outlined in Section 10 of ASTM C990, except that they shall be performed on an assembly consisting of not less than three nor more than five pipe sections selected from stock by the Engineer and assembled in accordance with standard installation instructions issued by the manufacturer.**

9-05.24(1) Polypropylene Culvert Pipe and Storm Sewer Pipe

This section is revised to read:

**Polypropylene culvert and storm sewer pipe shall conform to the following requirements:**

1. For dual wall pipe sizes up to 60 inches: ASTM F2881 or AASHTO M 330, Type S or Type D.
2. For double or triple wall pipe sizes up to 60 inches: ASTM F2764.
3. Fittings shall be factory welded, injection molded, or PVC.

9-05.24(2) Polypropylene Sanitary Sewer Pipe

This section is revised to read:

Polypropylene sanitary sewer pipe shall conform to the following requirements:

1. For pipe sizes up to 60 inches: ASTM F2764.

2. Fittings shall be factory welded, injection molded, or PVC.

9-06.AP9

Section 9-06, Structural Steel and Related Materials
January 7, 2019

9-06.5 Bolts

This section’s title is revised to read:

Bolts and Rods

9-06.5(4) Anchor Bolts and Anchor Rods

Anchor bolts and anchor rods shall meet the requirements of ASTM F1554 and, unless otherwise specified, shall be Grade 105 and shall conform to Supplemental Requirements S2, S3, and S4.

Nuts for ASTM F1554 Grade 105 black anchor bolts and anchor rods shall conform to ASTM A563, Grade D or DH. Nuts for ASTM F1554 Grade 105 galvanized anchor bolts and anchor rods shall conform to either ASTM A563, Grade DH, or AASHTO M292, Grade 2H, and shall conform to the overtapping, lubrication, and rotational testing requirements in Section 9-06.5(3). Nuts for ASTM F1554 Grade 36 or 55 black or galvanized anchor bolts and anchor rods shall conform to ASTM A563, Grade A or DH. Washers shall conform to ASTM F436.

The bolts and rods shall be tested by the manufacturer in accordance with the requirements of the pertinent Specification and as specified in these Specifications. Anchor bolts, anchor rods, nuts, and washers shall be inspected prior to shipping to the project site. The Contractor shall submit to the Engineer for acceptance a Manufacturer’s Certificate of Compliance for the anchor bolts, anchor rods, nuts, and washers, as defined in Section 1-06.3. If the Engineer deems it appropriate, the Contractor shall provide a sample of the anchor bolt, anchor rod, nut, and washer for testing.

All bolts, rods, nuts, and washers shall be marked and identified as required in the pertinent Specification.

9-06.15 Welded Shear Connectors

The third paragraph is revised to read:

Mechanical properties shall be determined in accordance with AASHTO T 244.
9-06.17 Vacant
This section, including title, is revised to read:

9-06.17 Noise Barrier Wall Access Door
Access door frames shall be formed of 14-gauge steel to the size and dimensions shown in the Plans. The access door frame head and jamb members shall be mitered, securely welded, and ground smooth. Each head shall have two anchors and each jamb shall have three anchors. The hinges shall be reinforced with ¼-inch by 12-inch plate, width equal to the full inside width of the frame.

Access doors shall be full flush 1-¾-inch thick seamless doors with a polystyrene core. Door faces shall be constructed with smooth seamless 14-gauge roller-levered, cold-rolled steel sheet conforming to ASTM A 792 Type SS, Grade 33 minimum, Coating Designation AZ55 minimum. The vertical edges shall be neat interlocked hemmed edge seam. The top and bottom of the door shall be enclosed with 14-gauge channels. Mortise and reinforcement for locks and hinges shall be 10-gauge steel. Welded top cap shall be ground and filled for exterior applications. The bottom channel shall have weep holes.

Each access door shall have three hinges. Access door hinges shall be ASTM A 276 Type 316 stainless steel, 4-½-inches square, with stainless steel ball bearing and non-removable pins.

Each access door shall have two pull plates. The pull plates shall be ASTM A 240 Type 316 stainless steel, with a grip handle of one-inch diameter and 8 to 10-inches in length.

The door assembly shall be fabricated and assembled as a complete unit including all hardware specified prior to shipment.

9-06.18 Metal Bridge Railing
The second sentence of the first paragraph is revised to read:

Steel used for metal railings, when galvanized after fabrication in accordance with AASHTO M111, shall have a controlled silicon content of either 0.00 to 0.06 percent or 0.15 to 0.25 percent.

9-07.AP9
Section 9-07, Reinforcing Steel
January 7, 2019

9-07.5(1) Epoxy-Coated Dowel Bars (for Cement Concrete Rehabilitation)
This section (including title) is revised to read:

9-07.5(1) Dowel Bars for Cement Concrete Pavement Rehabilitation
Dowel bars for Cement Concrete Pavement Rehabilitation shall be 1½ inch outside diameter plain round steel bars or tubular bars 18 inches in length and meet the requirements of one of the following dowel bar types:

1. Epoxy-coated dowel bars shall be round plain steel bars of the dimensions shown in the Standard Plans. They shall conform to AASHTO M31, Grade 60 or ASTM A615, Grade 60 and shall be coated in accordance with ASTM
A1078 Type 2 coating, except that the bars may be cut to length after being coated. Cut ends shall be coated in accordance with ASTM A1078 with a patching material that is compatible with the coating, inert in concrete and recommended by the coating manufacturer. The thickness of the epoxy coating shall be 10 mils plus or minus 2 mils. The Contractor shall furnish a written certification that properly identifies the coating material, the number of each batch of coating material used, quantity represented, date of manufacture, name and address of manufacturer, and a statement that the supplied coating material meets the requirements of ASTM A1078 Type 2 coating. Patching material, compatible with the coating material and inert in concrete and recommended by the manufacturer shall be supplied with each shipment for field repairs by the Contractor.

2. ASTM A513 steel tubes made from Grade 60 Carbon Steel Tube with a 1.625 inch outside diameter and a 0.120 inch wall thickness. Both the inside and outside of the tube shall be zinc coated with G40 galvanizing in accordance with ASTM A653. Following zinc coating the tubes shall be coated in accordance with Section 9-07.5(1) item 1. The ends of the tube shall be capped to prevent intrusion of concrete or other materials.

9-07.5(2) Corrosion Resistant Dowel Bars (for Cement Concrete Pavement and Cement Concrete Pavement Rehabilitation)

The first paragraph (up until the colon) is revised to read:

Corrosion resistant dowel bars shall be 1½ inch outside diameter plain round steel bars or tubular bars 18 inches in length and meet the requirements of one of the following:

Item number 4 and 5 of the first paragraph are revised to read:

4. Corrosion-resistant, low-carbon, chromium plain steel bars for concrete reinforcement meeting all the requirements of ASTM A 1035 Alloy Type CS Grade 100 or Alloy Type CS Grade 120.

5. Zinc Clad dowel bars shall be 1½ inch solid bars or 1.625 inch outside diameter by 0.120 inch wall tubular bars meeting the chemical and physical properties of AASHTO M 31, Grade 60, or AASHTO M 255, Grade 60. The bars shall have a minimum of 0.035 inches A710 Zinc alloy clad to the plain steel inner bar or tube. A710 Zinc shall be composed of: zinc: 99.5 percent, by weight, minimum; copper: 0.1-0.25 percent, by weight; and iron: 0.0020 percent, by weight, maximum. Each end of tubular bars shall be plugged using a snug-fitting insert to prohibit any intrusion of concrete or other materials.

The numbered list in the first paragraph is supplemented with the following:

6. Multicoated fusion bonded epoxy bars shall consist of an ASTM A615 bar with alternating layers of ASTM A934 coating and an abrasion resistant overcoat (ARO). The ASTM A934 coating shall form the base and there shall be two layers of each coating material. The minimum thickness of the combined layers of the ASTM A934 coating and ARO coating shall be 20 mils. The ARO shall meet the following requirements:

<table>
<thead>
<tr>
<th>Test</th>
<th>Method</th>
<th>Specification</th>
</tr>
</thead>
</table>
7. ASTM A513 steel tubes made from Grade 60 Carbon Steel Tube with a 1.625 inch outside diameter and a 0.120 inch wall thickness. Both the inside and outside of the tube shall be zinc coated with G90 galvanizing in accordance with ASTM A653. Following zinc coating the tubes shall be coated in accordance with Section 9-07.5(1) item 1. The ends of the tube shall be capped to prevent intrusion of concrete or other materials.

The last paragraph is revised to read:

Stainless Steel Clad and Stainless Steel Tube Dowel bar ends shall be sealed with a patching material (primer and finish coat) used for patching epoxy-coated reinforcing steel as required in Section 9-07.3, item 6.

9-07.7 Wire Mesh

This section is supplemented with the following:

Welded wire manufacturers shall participate in the NTPEP Audit Program for Reinforcing Steel (rebar) Manufacturers and shall be listed on the NTPEP audit program website displaying that they are NTPEP compliant.

9-08.AP9

**Section 9-08, Paints and Related Materials**

**January 7, 2019**

9-08.1(1) Description

The first sentence is revised to read:

Paint used for highway and bridge structure applications shall be made from materials meeting the requirements of the applicable Federal and State Paint Specifications, Department of Defense (DOD), American Society of Testing of Materials (ASTM), and The Society for Protective Coatings (SSPC) specifications in effect at time of manufacture.

9-08.1(2) Paint Types

This section is supplemented with the following new subsections:

9-08.1(2)M NEPCOAT Qualified Products List A

Qualified products used shall be part of a NEPCOAT system supplied by the same manufacturer.

9-08.1(2)N NEPCOAT Qualified Products List B

Qualified products used shall be part of a NEPCOAT system supplied by the same manufacturer.

9-08.1(2)D Organic Zinc-Rich Primer

This section, including title, is revised to read:

Vacant
**9-08.1(2)E  Epoxy Polyamide**

This section is revised to read:

Epoxy polyamide shall be a two-component system conforming to MIL-DTL-24441 or SSPC Coating Standard No. 42.

**9-08.1(2)H  Top Coat, Single-Component, Moisture-Cured Polyurethane**

This section is revised to read:

Vehicle Type: Moisture-cured aliphatic polyurethane.

Color and Gloss: Meet the SAE AMS Standard 595 Color as specified in the table below.

The Top Coat shall meet the following requirements:

The resin shall be an aliphatic urethane.

Minimum-volume solids 50 percent.

The top coat shall be semi-gloss.

<table>
<thead>
<tr>
<th>Color</th>
<th>Semi-Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington Gray</td>
<td>26357</td>
</tr>
<tr>
<td>Mt. Baker Gray</td>
<td>26134</td>
</tr>
<tr>
<td>Mt. St. Helens Gray</td>
<td>26306</td>
</tr>
<tr>
<td>Cascade Green</td>
<td>24158</td>
</tr>
</tbody>
</table>

**9-08.1(2)I  Rust-Penetrating Sealer**

This section is revised to read:

Rust-penetrating sealer shall be a two-component, chemically-cured, 100 percent solids epoxy.

**9-08.1(2)J  Black Enamel**

This section is revised to read:

The enamel shall conform to Federal Specification MIL PRF 24635E Type II Class 2.

The first paragraph is revised to read:

The enamel shall be an alkyd gloss enamel conforming to Federal Specification MIL-PRF-24635E Type II Class 1. The color, when dry, shall match that of SAE AMS Standard 595, color number 12246.

**9-08.1(2)L  Exterior Acrylic Latex Paint-White**

The first paragraph is revised to read:

This paint shall conform to Federal Specification MIL-PRF-24635E Type II Class 1, 2 or 3.
9-08.1(7) Acceptance

This section is revised to read:

For projects with moisture-cured polyurethane quantities less than 20 gallons, acceptance will be by the Manufacturer’s Certificate of Compliance.

For projects with moisture-cured polyurethane quantities greater than 20 gallons, the product shall be listed in the current WSDOT Qualified Products List (QPL). If the lot number is listed on the QPL, it may be accepted without additional testing. If the lot number is not listed on the QPL, a 1 quart sample shall be submitted to the State Materials Laboratory for testing and acceptance.

For all other paint types, acceptance will be based on visual inspection.

9-08.1(8) Standard Colors

The first paragraph is revised to read:

In the first paragraph, the reference to “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

The second paragraph is revised to read:

Unles otherwise specified, all top or finish coats shall be semi-gloss, with the paint falling within the range of 35 to 70 on the 60-degree gloss meter.

9-08.2 Powder Coating Materials for Coating Galvanized Surfaces

The last paragraph is revised to read:

The last paragraph is revised to read:

Repair materials shall be as recommended by the powder coating manufacturer and as specified in the Contractor’s powder coating plan as accepted by the Engineer.

9-08.3 Pigmented Sealer Materials for Coating of Concrete Surfaces

This section, including title, is revised to read:

9-08.3 Concrete Surface Treatments

9-08.3(1) Pigmented Sealer Materials

The pigmented sealer shall be a semi-opaque, colored toner containing only methyl methacrylate-ethyl acrylate copolymer resins, toning pigments suspended in solution at all times by a chemical suspension agent, and solvent. Toning pigments shall be laminar silicates, titanium dioxide, and inorganic oxides only. There shall be no settling or color variation. Tinting shall occur at the factory at the time of manufacture and placement in containers, prior to initial shipment. Use of vegetable or marine oils, paraffin materials, stearates, or organic pigments in any part of coating formulation will not be permitted. The color of pigmented sealer shall be as specified by the Contracting Agency. The Contractor shall submit a 1-quart wet sample, a drawdown color sample, and spectrophotometer or colorimeter readings taken in accordance with ASTM D2244, for each batch and corresponding standard color card. The calculated Delta E shall not exceed 1.5 from the Commission Internationale de l’Eclairage (CIELAB) when measured at 10 degrees Standard Observer and Illuminant D 65.

The 1-quart wet sample shall be submitted in the manufacturer’s labeled container with product number, batch number, and size of batch. The companion drawdown
color sample shall be labeled with the product number, batch number, and size of
batch. The Contractor shall submit the specified samples and readings to the
Engineer at least 14 calendar days prior to the scheduled application of the sealer.
The Contractor shall not begin applying pigmented sealer until receiving the
Engineer’s written approval of the pigmented sealer color samples.

9-08.3(2) Exposed Aggregate Concrete Coatings and Sealers

9-08.3(2)A Retardant Coating
Retardant coating shall exhibit the following properties:

1. Retards the set of the surface mortar of the concrete without
   preventing the concrete to reach the specified 28 day compressive
   strength.

2. Leaves the aggregate with its original color and luster, and firmly
   embedded in the concrete matrix.

3. Allows the removal of the surface mortar in accordance with the
   methods specified in Section 6-02.3(14)E without the use of acidic
   washing compounds.

4. Allows for uniform removal of the surface mortar.

If the Contractor proposes use of a retardant coating that is not listed in the
current WSDOT QPL, the Contractor shall submit a Type 2 Working Drawing
consisting of a one quart product sample from a current lot along with
supporting product information, Safety Data Sheet, and a Manufacturer’s
Certificate of Compliance stating that the product conforms to the above
performance requirements.

9-08.3(2)B Clear Sealer
The sealer for concrete surfaces with exposed aggregate finish shall be a
clear, non-gloss, penetrating sealer of either a silane, siloxane, or silicone
based formulation.

9-08.3(3) Permeon Treatment
Permeon treatment shall be a product of known consistent performance in
producing the SAE AMS Standard 595 Color No. 30219 target color hue
established by WSDOT, either selected from the WSDOT Qualified Products List
(QPL), or an equivalent product accepted by the Engineer. For acceptance of
products not listed in the current WSDOT QPL, the Contractor shall submit Type 3
Working Drawings consisting of a one quart product sample from a current lot,
supporting product information and a Safety Data Sheet.

9-13.AP9
Section 9-13, Riprap, Quarry Spalls, Slope Protection, and Rock for Erosion
and Scour Protection and Rock Walls
April 2, 2018

9-13.1(1) General
The last paragraph is revised to read:
Riprap and quarry spalls shall be free from segregation, seams, cracks, and other
defects tending to destroy its resistance to weather and shall meet the following test
requirements:

9-13.5 Concrete Slope Protection

This section is revised to read:

Concrete slope protection shall consist of reinforced portland cement or blended
hydraulic cement concrete poured or pneumatically placed upon the slope with a
rustication joint pattern or semi-open concrete masonry units placed upon the slope
closely adjoining each other.

9-13.5(2) Poured Portland Cement Concrete Slope Protection

This section’s title is revised to read:

Poured Portland Cement or Blended Hydraulic Cement Concrete Slope Protection

9-13.5(3) Pneumatically Placed Portland Cement Concrete Slope Protection

This section’s title is revised to read:

Pneumatically Placed Portland Cement or Blended Hydraulic Cement Concrete Slope Protection

The first paragraph is revised to read:

Concrete slope protection shall consist of reinforced portland cement or blended
hydraulic cement concrete poured or pneumatically placed upon the slope with a
rustication joint pattern or semi-open concrete masonry units placed upon the slope
closely adjoining each other.

9-13.7(1) Rock for Rock Walls and Chinking Material

The first paragraph (up until the colon) is revised to read:

Rock for rock walls and chinking material shall be hard, sound and durable material,
free from seams, cracks, and other defects tending to destroy its resistance to weather,
and shall meet the following test requirements:

| Water Holding Capacity | ASTM D 7367 | 800 percent minimum |

9-14.4(2)A Long-Term Mulch

The first paragraph is supplemented with the following:

Products containing cellulose fiber produced from paper or paper components will not
be accepted.

Table 2 is supplemented with the following new rows:
<table>
<thead>
<tr>
<th>Organic Matter Content</th>
<th>AASHTO T 267</th>
<th>90 percent minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed Germination</td>
<td>ASTM D 7322</td>
<td>Long Term</td>
</tr>
<tr>
<td>Enhancement</td>
<td></td>
<td>420 percent minimum</td>
</tr>
</tbody>
</table>

**9-14.4(2)B** Moderate-Term Mulch

This section is revised to read:

Within 48 hours of application, the Moderate-Term Mulch shall bond with the soil surface to create a continuous, absorbent, flexible, erosion-resistant blanket. Moderate-Term Mulch shall effectively perform the intended erosion control function in accordance with Section 8-01.3(1) for a minimum of 3 months, or until temporary vegetation has been established, whichever comes first.

Moderate-Term Mulch shall not be used in conjunction with permanent seeding.

**9-14.4(2)C** Short-Term Mulch

This section is revised to read:

Short-Term Mulch shall effectively perform the intended erosion control function in accordance with Section 8-01.3(1) for a minimum of 2 months, or until temporary vegetation has been established, whichever comes first. Short-Term Mulch shall not be used in conjunction with permanent seeding.

**9-16.AP9**

Section 9-16, Fence and Guardrail

**August 6, 2018**

**9-16.3(1) Rail Element**

The last sentence of the first paragraph is revised to read:

All rail elements shall be formed from 12-gage steel except for thrie beam reducer sections, reduced length thrie beam rail elements, thrie beams used for bridge rail retrofits, and Design F end sections, which shall be formed from 10-gage steel.

**9-16.3(5) Anchors**

The last paragraph is revised to read:

Cement grout shall conform to Section 9-20.3(4) and consist of one part portland cement or blended hydraulic cement and two parts sand.

**9-18.AP9**

Section 9-18, Precast Traffic Curb

**April 2, 2018**

**9-18.1(1) Aggregates and Proportioning**

Item number 1 of the first paragraph is revised to read:

1. Portland cement or blended hydraulic cement shall conform to the requirements of Section 9-01 except that it may be Type I portland cement conforming to AASHTO M 85.
9-20.1 Patching Material

This section, including title, is revised to read:

9-20.1 Patching Material for Cement Concrete Pavement

Concrete patching material shall be prepackaged mortar extended with aggregate. The amount of aggregate for extension shall conform to the manufacturer’s recommendation.

Patching mortar and patching mortar extended with aggregate shall contain cementitious material and conform to Sections 9-20.1(1) and 9-20.1(2). The Manufacturer shall use the services of a laboratory that has an equipment calibration verification system and a technician training and evaluation process in accordance with AASHTO R 18 to perform all tests specified in Section 9-20.1.

9-20.1(1) Patching Mortar

Patching mortar shall conform to the following requirements:

<table>
<thead>
<tr>
<th>Compressive Strength</th>
<th>ASTM Test Method</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 3 hours</td>
<td>C 39</td>
<td>Minimum 3,000 psi</td>
</tr>
<tr>
<td>at 24 hours</td>
<td>C 39</td>
<td>Minimum 5,000 psi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Length Change</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at 28 days</td>
<td>C 157</td>
<td>0.15 percent maximum</td>
</tr>
<tr>
<td>Total Chloride Ion Content</td>
<td>C 1218</td>
<td>1 lb/yd² maximum</td>
</tr>
</tbody>
</table>

**Bond Strength**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>at 24 hours</td>
<td>C 882 (As modified by C 928, Section 9.5)</td>
<td>Minimum 1,000 psi</td>
</tr>
<tr>
<td>Scaling Resistance (at 25 cycles of freezing and thawing)</td>
<td>C 672 (As modified by C 928, Section 9.4)</td>
<td>1 lb/ft² maximum</td>
</tr>
</tbody>
</table>

9-20.1(2) Patching Mortar Extended with Aggregate

Patching mortar extended with aggregate shall meet the following requirements:

<table>
<thead>
<tr>
<th>Compressive Strength</th>
<th>ASTM Test Method</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 3 hours</td>
<td>C 39</td>
<td>Minimum 3,000 psi</td>
</tr>
<tr>
<td>at 24 hours</td>
<td>C 39</td>
<td>Minimum 5,000 psi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Length Change</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at 28 days</td>
<td>C 157</td>
<td>0.15 percent maximum</td>
</tr>
</tbody>
</table>

**Bond Strength**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>at 24 hours</td>
<td>C 882 (As modified by ASTM C928, Section 9.5)</td>
<td>Minimum 1,000 psi</td>
</tr>
<tr>
<td>Scaling Resistance (at 25 cycles of freezing and thawing)</td>
<td>C 672</td>
<td>2 Maximum Visual Rating</td>
</tr>
<tr>
<td>Freeze thaw</td>
<td>C 666</td>
<td>Maximum expansion 0.10% Minimum durability 90.0%</td>
</tr>
</tbody>
</table>
9-20.1(3) Aggregate
Aggregate used to extend the patching mortar shall conform to Section 9-03.1(4) and be AASHTO Grading No. 8. A Manufacturer’s Certificate of Compliance shall be submitted showing the aggregate source and the gradation. Mitigation for Alkali Silica Reaction (ASR) will not be required for the extender aggregate used for concrete patching material.

9-20.1(4) Water
Water shall meet the requirements of Section 9-25.1. The quantity of water shall be within the limits recommended by the repair material manufacturer.

9-20.2 Specifications
This section, including title, is revised to read:

9-20.2 Patching Material for Concrete Structure Repair
Concrete patching material shall be a prepackaged mixture of portland or blended hydraulic cement, aggregate, and admixtures. Fly ash, ground granulated blast furnace slag and microsilica fume may be used. The concrete patching material may be shrinkage compensated. The concrete patching material shall also meet the following requirements:

• Compressive strength of 6000 psi or higher at 28 days in accordance with AASHTO T 22 (ASTM C 39), unless noted otherwise

• Bond strength of 250 psi or higher at 28 days or less in accordance with ASTM C 1583 or ICRI 210.3R

• Shrinkage shall be 0.05 percent (500 microstrain) or lower at 28 days in accordance with AASHTO T 160 (ASTM C 157) as modified by ICRI 320.3R

• Permeability shall be 2,000 coulombs or lower at 28 days in accordance with AASHTO T 277 (ASTM C 1202)

• Freeze-thaw resistance shall have a durability factor of 90 percent or higher after a minimum of 300 cycles in accordance with AASHTO T 161 Procedure A (ASTM C 666)

• Soluble chloride ion limits in Section 6-02.3(2) shall be satisfied

9-20.2(1) Patching Mortar
This section, including title, is deleted in its entirety.

9-20.2(2) Patching Mortar Extended with Aggregate
This section, including title, is deleted in its entirety.

9-20.3(3) Grout Type 3 for Unconfined Bearing Pad Applications
This section’s title is revised to read:

Grout Type 3 for Unconfined Applications

This section is revised to read:
Grout Type 3 shall be a prepackaged material that does not include expansive admixtures meeting the following requirements:

- Compressive strength shall be 4000 psi or higher at 28 days in accordance with AASHTO T 22 (ASTM C 39) for grout extended with coarse aggregate or AASHTO T 106 (ASTM C109) otherwise.

- Bond strength shall meet one of the following:
  - 250 psi or higher at 28 days or less in accordance with ASTM C1583.
  - 2000 psi or higher at 28 days or less in accordance with ASTM C882. The following modification to ASTM C882 is acceptable: use Type 3 Grout in lieu of epoxy resin base bonding system and freshly mixed portland-cement mortar in the procedure for testing Type II and V systems.

- Drying shrinkage shall be 0.08 percent (800 microstrain) or lower at 28 days in accordance with AASHTO T 160 (ASTM C157). The following modification to AASHTO T 160 is acceptable: use a standard specimen size of 3 x 3 x 11-¼ inches.

9-20.5 Bridge Deck Repair Material

Item number 3 of the first paragraph is revised to read:

3. Permeability of less than 2,000 coulombs at 28-days or more in accordance with AASHTO T 277.

9-21.2 Raised Pavement Markers Type 2

This section’s content is deleted.

9-21.2(1) Physical Properties

This section, including title, is revised to read:

9-21.2(1) Standard Raised Pavement Markers Type 2

The marker housing shall contain reflective faces as shown in the Plans to reflect incident light from either a single or opposite directions and meet the requirements of ASTM D 4280 including Flexural strength requirements.

9-21.2(2) Optical Requirements

This section, including title, is revised to read:

9-21.2(2) Abrasion Resistant Raised Markers Type 2

Abrasion Resistant Raised Markers Type 2 shall comply with Section 9-21.2(1) and meet the requirements of ASTM D 4280 with the following additional requirement: The coefficient of luminous intensity of the markers shall be measured after subjecting the entire lens surface to the test described in ASTM D 4280 Section 9.5 using a sand drop
apparatus. After the exposure described above, retroreflected values shall not be less
than 0.5 times a nominal unblemished sample.

9-21.2(3) Strength Requirements
This section is deleted in its entirety.

9-23.AP9
Section 9-23, Concrete Curing Materials and Admixtures
April 1, 2019

9-23.12 Natural Pozzolan
This section is revised to read:

Natural Pozzolans shall be ground Pumice and shall conform to the requirements of
AASHTO M295 Class N, including supplementary optional chemical requirements as
set forth in Table 2.

9-23.13 Blended Supplementary Cementitious Material
The second sentence is revised to read:

Blended SCMs shall be limited to binary or ternary blends of fly ash, ground granulated
blast furnace slag and microsilica fume.

The second to last sentence is deleted.

9-26.AP9
Section 9-26, Epoxy Resins
January 7, 2019

9-26.1(1) General
The following new sentence is inserted after the first sentence of the first paragraph:

For pre-packaged cartridge kits, the epoxy bonding agent shall meet the requirements
of ASTM C881 when mixed according to manufacturer instructions, utilizing the
manufacturer’s mixing nozzle.

9-26.1(2) Packaging and Marking
The first sentence of the first paragraph is revised to read:

The components of the epoxy system furnished under these Specifications shall be
supplied in separate containers or pre-packaged cartridge kits that are non-reactive with
the materials contained.

The second paragraph is revised to read:

Separate containers shall be marked by permanent marking that identify the formulator,
“Component A” (contains the Epoxy Resin) and “Component B” (Contains the Curing
Agent), type, grade, class, lot or batch number, mixing instructions and the quantity
contained in pounds or gallons as defined by these Specifications.

The following new paragraph is inserted after the second paragraph:
Pre-packaged cartridge kits shall be marked by permanent marking that identify the formulator, type, grade, class, lot or batch number, mixing instructions and the quantity contained in ounces or milliliters as defined by these Specifications.

9-28.AP9
Section 9-28, Signing Materials and Fabrication
April 1, 2019

9-28.2 Manufacturer’s Identification and Date
The second sentence is revised to read:

In addition, the width and height dimension, in inches, the Contract number, and the number of the sign as it appears in the Plans shall be placed using 3-inch series C black letters on the back of destination, distance, and large special signs.

9-28.10 Vacant
This section, including title, is revised to read:

9-28.10 Digital Printing
Transparent and opaque durable inks used in digital printed sign messages shall be as recommended by the manufacturer. When properly applied, digital printed colors shall have a warranty life of the base retroreflective sign sheeting. Digital applied colors shall present a smooth surface, free from foreign material, and all messages and borders shall be clear and sharp. Digital printed signs shall conform to 70% of the retroreflective minimum values established for its type and color. Digitally printed signs shall meet the daytime color and luminance, and nighttime color requirements of ASTM D 4956. No variations in color or overlapping of colors will be permitted. Digital printed permanent traffic signs shall have an integrated engineered match component clear protective overlay recommended by the sheeting manufacturer applied to the entire face of the sign. On Temporary construction/maintenance signs printed with black ink only, the protective overlay film is optional, as long as the finished sign has a warranty of a minimum of three years from sign sheeting manufacturer.

All digital printed traffic control signs shall be an integrated engineered match component system. The integrated engineered match component system shall consist of retroreflective sheeting, durable ink(s), and clear overlay film all from the same manufacturer applied to aluminum substrate conforming to Section 9-28.8.

The sign fabricator shall use an approved integrated engineered match component system as listed on the Qualified Products List (QPL). Each approved digital printer shall only use the compatible retroreflective sign sheeting manufacturer’s engineered match component system products.

Each retroreflective sign sheeting manufacturer/integrated engineered match component system listed on the QPL shall certify a department approved sign fabricator is approved to operate their compatible digital printer. The sign fabricator shall re-certify annually with the retroreflective sign manufacturer to ensure their digital printer is still meeting manufacturer’s specifications for traffic control signs. Documentation of each re-certification shall be submitted to the QPL Engineer annually.
9-28.11 Hardware

The last paragraph is revised to read:

All steel parts shall be galvanized in accordance with AASHTO M111. Steel bolts and related connecting hardware shall be galvanized in accordance with ASTM F 2329.

9-28.14(2) Steel Structures and Posts

The first sentence of the third paragraph is revised to read:

Anchor rods for sign bridge and cantilever sign structure foundations shall conform to Section 9-06.5(4), including Supplemental Requirement S4 tested at -20°F.

In the second sentence of the fourth paragraph, “AASHTO M232” is revised to read “ASTM F 2329”.

The first sentence of the fifth paragraph is revised to read:

Except as otherwise noted, steel used for sign structures and posts shall have a controlled silicon content of either 0.00 to 0.06 percent or 0.15 to 0.25 percent.

The last sentence of the last paragraph is revised to read:

If such modifications are contemplated, the Contractor shall submit a Type 2 Working Drawing of the proposed modifications.

9-29.AP9

Section 9-29, Illumination, Signal, Electrical

April 1, 2019

9-29.1 Conduit, Innerduct, and Outerduct

This section is supplemented with the following new subsections:

9-29.1(10) Pull Tape
Pull tape shall be pre-lubricated polyester pulling tape. The pull tape shall have a minimum width of ½-inch and a minimum tensile strength of 500 pounds. Pull tape may have measurement marks.

9-29.1(11) Foam Conduit Sealant
Foam conduit sealant shall be self-expanding waterproof foam designed to prevent both water and pest intrusion. The foam shall be designed for use in and around electrical equipment, including both insulated and bare conductors.

9-29.2(1) Junction Boxes

The first paragraph is revised to read:

For the purposes of this Specification concrete is defined as portland cement or blended hydraulic cement concrete and non-concrete is all others.

9-29.2(1)A2 Non-Concrete Junction Boxes

The first paragraph is revised to read:
Material for the non-concrete junction boxes shall be of a quality that will provide for a similar life expectancy as portland cement or blended hydraulic cement concrete in a direct burial application.

9-29.2(2)A Standard Duty Cable Vaults and Pull Boxes

In the table in the last paragraph, the fourth, fifth and sixth rows are revised to read:

<table>
<thead>
<tr>
<th>Material</th>
<th>Steel Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slip Resistant Lid</td>
<td>ASTM A36 steel</td>
</tr>
<tr>
<td>Frame</td>
<td>ASTM A36 steel</td>
</tr>
<tr>
<td>Slip Resistant Frame</td>
<td>ASTM A36 steel</td>
</tr>
</tbody>
</table>

9-29.3(2)A1 Single Conductor Current Carrying

This second sentence is revised to read:

Insulation shall be XLP (cross-linked polyethylene) or EPR (Ethylene Propylene Rubber), Type USE (Underground Service Entrance) or USE-2, and rated for 600-volts or higher.

9-29.6 Light and Signal Standards

In the first sentence of the third paragraph, “AASHTO M232” is revised to read “ASTM F 2329”.

Item number 2 of the last paragraph is revised to read:

2. The steel light and signal standard fabricator’s shop drawing submittal, including supporting design calculations, submitted as a Type 2E Working Drawing in accordance with Section 8-20.2(1) and the Special Provisions.

9-29.6(1) Steel Light and Signal Standards

In the second paragraph, “AASHTO M232” is revised to read “ASTM F 2329”.

The first sentence of the last paragraph is revised to read:

Steel used for light and signal standards shall have a controlled silicon content of either 0.00 to 0.06 percent or 0.15 to 0.25 percent.

9-29.6(5) Foundation Hardware

In the last paragraph, “AASHTO M232” is revised to read “ASTM F 2329”.

9-29.10(1) Conventional Roadway Luminaires

This section is revised to read:

All conventional roadway luminaires shall meet 3G vibration requirements as described in ANSI C136.31.

All luminaires shall have housings fabricated from aluminum. The housing shall be painted flat gray, SAE AMS Standard 595 color chip No. 26280, unless otherwise specified in the Contract. Painted housings shall withstand a 1,000 hour salt spray test as specified in ASTM B117.
Each housing shall include a four bolt slip-fitter mount capable of accepting a nominal 2”
tenon and adjustable within +/- 5 degrees of the axis of the tenon. The clamping
bracket(s) and the cap screws shall not bottom out on the housing bosses when
adjusted within the +/- 5 degree range. No part of the slipfitter mounting brackets on the
luminaires shall develop a permanent set in excess of 0.2 inch when the cap screws
used for mounting are tightened to a torque of 32 foot-pounds. Each luminaire shall
include leveling reference points for both transverse and longitudinal adjustment.

All luminaires shall include shorting caps when shipped. The caps shall be removed and
provided to the Contracting Agency when an alternate control device is required to be
installed in the photocell socket. House side shields shall be included when required by
the Contract. Order codes shall be modified to the minimum extent necessary to include
the option for house side shields.

This section is supplemented with the following new subsections:

9-29.10(1)A  High Pressure Sodium (HPS) Conventional Roadway Luminaires
HPS conventional roadway luminaires shall meet the following requirements:

1. General shape shall be “cobrahead” style, with flat glass lens and full cutoff
   optics.

2. Light pattern distribution shall be IES Type III.

3. The reflector of all luminaires shall be of a snap-in design or secured with
   screws. The reflector shall be polished aluminum or prismatic borosilicate
   glass.

4. Flat lenses shall be formed from heat resistant, high-impact, molded
   borosilicate or tempered glass.

5. The lens shall be mounted in a doorframe assembly, which shall be hinged to
   the luminaire and secured in the closed position to the luminaire by means of
   an automatic latch. The lens and doorframe assembly, when closed, shall
   exert pressure against a gasket seat. The lens shall not allow any light output
   above 90 degrees nadir. Gaskets shall be composed of material capable of
   withstanding the temperatures involved and shall be securely held in place.

6. The ballast shall be mounted on a separate exterior door, which shall be
   hinged to the luminaire and secured in the closed position to the luminaire
   housing by means of an automatic type of latch (a combination hex/slot
   stainless steel screw fastener may supplement the automatic-type latch).

7. Each luminaire shall be capable of accepting a 150, 200, 250, 310, or 400 watt
   lamp complete and associated ballast. Lamps shall mount horizontally.

9-29.10(1)B  Light Emitting Diode (LED) Conventional Roadway Luminaires
LED Conventional Roadway Luminaires are divided into classes based on their
equivalent High Pressure Sodium (HPS) luminaires. Current classes are 200W, 250W,
310W, and 400W. LED luminaires are required to be pre-approved in order to verify
their photometric output. To be considered for pre-approval, LED luminaires must meet
the requirements of this section.
LED luminaires shall include a removable access door, with tool-less entry, for access
to electronic components and the terminal block. The access door shall be removable,
but include positive retention such that it can hang freely without disconnecting from the
luminaire housing. LED drivers may be mounted either to the interior of the luminaire
housing or to the removable door itself.

LED drivers shall be removable for user replacement. All internal modular components
shall be connected by means of mechanical plug and socket type quick disconnects.
Wire nuts may not be used for any purpose. All external electrical connections to the
luminaire shall be made through the terminal block.

LED luminaires shall include a 7-pin NEMA photocell receptacle. The LED driver(s)
shall be dimmable from ten volts to zero volts. LED output shall have a Correlated Color
Temperature (CCT) of 4000K nominal (4000-4300K) and a Color Rendering Index (CRI)
of 70 or greater. LED output shall be a minimum of 85% at 75,000 hours at 25 degrees
Celsius.

LED luminaires shall be available for 120V, 240V, and 480V supply voltages. Voltages
refer to the supply voltages to the luminaires present in the field. LED power usage shall
not exceed the following maximum values for the applicable wattage class:

<table>
<thead>
<tr>
<th>Class</th>
<th>Max. Wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>200W</td>
<td>110W</td>
</tr>
<tr>
<td>250W</td>
<td>165W</td>
</tr>
<tr>
<td>310W</td>
<td>210W</td>
</tr>
<tr>
<td>400W</td>
<td>275W</td>
</tr>
</tbody>
</table>

Only one brand of LED conventional roadway luminaire may be used on a Contract.
They do not necessarily have to be the same brand as any high-mast, underdeck, or
wall-mount luminaires when those types of luminaires are specified in the Contract.
LED luminaires shall include a standard 10 year manufacturer warranty.

The list of pre-approved LED Conventional Roadway Luminaires is available at

9-29.10(2) Decorative Luminaires
This section, including title, is revised to read:

9-29.10(2) Vacant

9-29.12 Electrical Splice Materials
This section is supplemented with the following new subsections:

9-29.12(3) Splice Enclosures
   9-29.12(3)A Heat Shrink Splice Enclosure
   Heat shrink splice enclosures shall be medium or heavy wall cross-linked
   polyolefin, meeting the requirements of AMS-DTL-23053/15, with thermoplastic
   adhesive sealant. Heat shrink splices used for “wye” connections require rubber
electrical mastic tape.
9-29.12(3)B Molded Splice Enclosure
Molded splice enclosures shall use epoxy resin in a clear rigid plastic mold. The material used shall be compatible with the insulation material of the insulated conductor or cable. The component materials of the resin insulation shall be packaged ready for convenient mixing without removing from the package.

9-29.12(4) Re-Enterable Splice Enclosure
Re-enterable splice enclosures shall use either dielectric grease or a flexible resin contained in a two-piece plastic mold. The mold shall either snap together or use stainless steel hose clamps.

9-29.12(5) Vinyl Electrical Tape for Splices
Vinyl electrical tape in splicing applications shall meet the requirements of MIL-I-24391C.

9-29.12(1) Illumination Circuit Splices
This section is revised to read:

Underground illumination circuit splices shall be solderless crimped connections capable of securely joining the wires, both mechanically and electrically, as defined in Section 8-20.3(8). Aerial illumination splices shall be solderless crimp connectors or split bolt vice-type connectors.

9-29.12(1)A Heat Shrink Splice Enclosure
This section is deleted in its entirety.

9-29.12(1)B Molded Splice Enclosure
This section is deleted in its entirety.

9-29.12(2) Traffic Signal Splice Material
This section is revised to read:

Induction loop splices and magnetometer splices shall use an uninsulated barrel-type crimped connector capable of being soldered.

9-29.13(10)D Cabinets for Type 170E and 2070 Controllers
The first sentence of item number 4 is revised to read:

A disposable paper filter element with dimensions of 12” × 16” × 1” shall be provided in lieu of a metal filter.

Item number 6 is revised to read:

6. LED light strips shall be provided for cabinet lighting, powered from the Equipment breaker on the Power Distribution Assembly. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. There shall be three light strips for each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted lighting is not permitted. Light strips shall be installed in the locations shown in the Standard Plans. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting fixtures above a rack shall energize
automatically when either door to that respective rack is opened. Each door switch shall be labeled “Light”.

Item number 7 is revised to read:

7. Rack mounted equipment shall be as shown in the Standard Plans. The cabinet shall use PDA #2LX and Output File #1LX. Where an Auxiliary Output File is required, Output File #2LX shall also be included.

This section is supplemented with the following new item:

9. The PCB connectors for Field Terminal Blocks FT1 through FT6 on Output Files #1LX and #2LX shall be capable of accepting minimum 14 AWG field wiring, have a pitch of 5.08 mm, and use screw flange type locking to secure the plug and socket connection. The sockets on the Field Terminal Panel shall be secured to the panel such that unplugging a connector will not result in the socket moving or separating from the panel.

9-29.13(11) Traffic Data Accumulator and Ramp Meters

Item number 2 is revised to read:

2. Rack mounted equipment shall be as shown in the Standard Plans.

Item number 3 is revised to read:

3. PDA #3LX shall be furnished with three Model 200 Load Switches installed. PDA #3LX shall be modified to include a second Model 430 transfer relay, mounted on the rear of the PDA and wired as shown in the Standard Plans.

9-29.13(12) ITS Cabinet

This section’s title is revised to read:

Type 331L ITS Cabinet

The first paragraph (excluding the numbered list) is revised to read:

Basic ITS cabinets shall be Model 331L Cabinets, unless otherwise specified in the Contract. Type 331L Cabinets shall be constructed in accordance with the TEES, with the following modifications:

Item number 6 of the first paragraph is revised to read:

6. LED light strips shall be provided for cabinet lighting, powered from the Equipment breaker on the Power Distribution Assembly. Each LED light strip shall be approximately 12 inches long, have a minimum output of 320 lumens, and have a color temperature of 4100K (cool white) or higher. There shall be three light strips for each rack within the cabinet. Lighting shall be ceiling mounted – rack mounted lighting is not permitted. Light strips shall be installed in the locations shown in the Standard Plans. Lighting shall not interfere with the proper operation of any other ceiling mounted equipment. All lighting fixtures above a rack shall energize automatically when either door to that respective rack is opened. Each door switch shall be labeled “Light”.
9-29.16(2)E Painting Signal Heads
In the first sentence, “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

9-29.17 Signal Head Mounting Brackets and Fittings
In the first paragraph, item number 2 under Stainless Steel is revised to read:

2. Bands or cables for Type N mount.

9-29.20 Pedestrian Signals
In item 2C of the second paragraph, “Federal Standard 595” is revised to read “SAE AMS Standard 595”.

9-29.24 Service Cabinets
The third sentence of item number 6 is revised to read:

The dead front cover shall have cutouts for the entire breaker array, with blank covers where no circuit breakers are installed.

Item number 8 is revised to read:

8. Lighting contactors shall meet the requirements of Section 9-29.24(2).

The last sentence of item number 10 is revised to read:

Dead front panels shall prevent access to any exposed, live components, and shall cover all equipment except for circuit breakers (including blank covers), the photocell test/bypass switch, and the GFCI receptacle.

9-29.24(2) Electrical Circuit Breakers and Contactors
This section is revised to read:

All circuit breakers shall be bolt-on type, with the RMS-symmetrical interrupting capacity described in this Section. Circuit breakers for 120/240/277 volt circuits shall be rated at 240 or 277 volts, as applicable, with an interrupting capacity of not less than 10,000 amperes. Circuit breakers for 480 volt circuits shall be rated at 480 volts, and shall have an interrupting capacity of not less than 14,000 amperes.

Lighting contactors shall be rated for tungsten or ballasted (such as sodium vapor, mercury vapor, metal halide, and fluorescent) lamp loads. Contactors for 120/240/277 volt circuits shall be rated at 240 volts maximum line to line voltage, or 277 volts maximum line to neutral voltage, as applicable. Contactors for 480 volt circuits shall be rated at 480 volt maximum line to line voltage.

9-33.AP9
Section 9-33, Construction Geosynthetic
August 6, 2018

9-33.4(1) Geosynthetic Material Approval
The second sentence of the first paragraph is revised to read:
If the geosynthetics material is not listed in the current WSDOT QPL, a Manufacturer’s Certificate of Compliance including Certified Test Reports of each proposed geosynthetic shall be submitted to the State Materials Laboratory in Tumwater for evaluation.

The last paragraph is revised to read:

Geosynthetics used as reinforcement in permanent geosynthetic retaining walls, reinforced slopes, reinforced embankments, and other geosynthetic reinforcement applications require proof of compliance with the National Transportation Product Evaluation Program (NTPEP) in accordance with AASHTO Standard Practice R 69, Standard Practice for Determination of Long-Term Strength for Geosynthetic Reinforcement.

9-34.AP9

Section 9-34, Pavement Marking Material

January 7, 2019

9-34.2(2) Color

The first sentence is revised to read:

The last four rows are replaced with the following:

<table>
<thead>
<tr>
<th>Vehicle Composition</th>
<th>ASTM D 2621</th>
<th>100% acrylic emulsion</th>
<th>100% cross-linking acrylic</th>
<th>100% acrylic emulsion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeze-Thaw Stability, KU</td>
<td>ASTM D 2243 and D 562</td>
<td>@ 5 cycles show no coagulation or change</td>
<td>@ 5 cycles show no coagulation or change</td>
<td>@ 3 cycles show no coagulation or change</td>
</tr>
</tbody>
</table>
After the preceding Amendments are applied, the following new column is inserted after the “Standard Waterborne Paint Type 1 and 2” column:

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Yellow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Max.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat Stability</td>
<td>ASTM D 562</td>
<td>± 10 KU from the initial viscosity</td>
</tr>
<tr>
<td>Low Temperature Film Formation</td>
<td>ASTM D 2805</td>
<td>No Cracks*</td>
</tr>
<tr>
<td>Cold Flexibility</td>
<td>ASTM D522</td>
<td>Pass at 0.5 in mandrel*</td>
</tr>
<tr>
<td>Test Deck Durability</td>
<td>ASTM D913</td>
<td>≥70% paint retention in wheel track*</td>
</tr>
<tr>
<td>Mud Cracking</td>
<td>(See note 7)</td>
<td>No Cracks</td>
</tr>
</tbody>
</table>

Note 7: Cross-linking acrylic shall meet the requirements of federal specification TT-P-1952F Section 3.1.1.

Cold Flexibility: The paint shall be applied to an aluminum panel at a wet film thickness of 15 mils and allowed to dry under ambient conditions (50±10% RH and 72±5 °F) for 24 hours. A cylindrical mandrel apparatus (in accordance with ASTM D522 method B) shall be put in a 40°F refrigerator when the paint is drawn down. After 24 hours, the aluminum panel with dry paint shall be put in the 40°F refrigerator with the mandrel apparatus for 2 hours. After 2 hours, the panel and test apparatus shall be removed and immediately tested to according to ASTM D522 to evaluate cold flexibility. Paint must...
show no evidence of cracking, chipping or flaking when bent 180 degrees over a
mandrel bar of specified diameter.

6NTPEP test deck, or a test deck conforming to ASTM D713, shall be conducted for a
minimum of six months with the following additional requirements: it shall be applied at
15 wet mils to a test deck that is located at 40N latitude or higher with at least 10,000
ADT and which was applied during the months of September through November.

7Paint is applied to an approximately 4"x12" aluminum panel using a drawdown bar with
a 50 mil gap. The coated panel is allowed to dry under ambient conditions (50±10% RH
and 72±5 °F) for 24 hours. Visual evaluation of the dry film shall reveal no cracks.

9-34.3 Plastic
In the first sentence of the last paragraph, “Federal Standard 595” is revised to read “SAE
AMS Standard 595”.

9-34.3(2) Type B – Pre-Formed Fused Thermoplastic
In the last two paragraphs, each reference to “Federal Standard 595” is revised to read “SAE
AMS Standard 595”.

9-34.3(4) Type D – Liquid Cold Applied Methyl Methacrylate
The Test Method value for Adhesion to PCC or HMA, psi is revised to read “ASTM
D4541”.

9-34.4 Glass Beads for Pavement Marking Materials
In the Test Method column of the table titled Metal Concentration Limits, “EPA 3052 SW-846
6010C” is revised to read “EPA 3052 SW-846 6010D”.

9-34.5(1) Temporary Pavement Marking Tape – Short Duration
This section, including title, is revised to read:

9-34.5(1) Temporary Pavement Marking Tape – Short Duration (Removable)
Temporary pavement marking tape for short duration (usage is for up to two months)
shall conform to ASTM D4592 Type I except that black tape, black mask tape and the
black portion of the contrast removable tape, shall be non-reflective.

9-34.5(2) Temporary Pavement Marking Tape – Long Duration
This section’s title is revised to read:

Temporary Pavement Marking Tape – Long Duration (Non-Removable)
The first sentence is revised to read:

Temporary pavement marking tape for long duration (usage is for greater than two
months and less than one year) shall conform to ASTM D4592 Type II.

ASTM E2176 is deleted from the second sentence.

9-34.7(1) Requirements
The first paragraph is revised to read:
Field performance evaluation is required for low VOC solvent-based paint per Section 9-34.2(4), Type A – liquid hot applied thermoplastic per Section 9-34.3(1), Type B – preformed fused thermoplastic per Section 9-34.3(2), Type C – cold applied preformed tape per Section 9-34.3(3), and Type D – liquid applied methyl methacrylate per Section 9-34.3(4).

The last paragraph is deleted.

**9-34.7(1)C  Auto No-Track Time**

The first paragraph is revised to read:

Auto No-Track Time will only be required for low VOC solvent-based paint in accordance with Section 9-34.2(4).

The second and third sentences of the second paragraph are deleted.
SPECIAL PROVISIONS
# City of Kirkland
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City of Kirkland Special Provisions

INTRODUCTION

The work on this project shall be accomplished in accordance with the Standard Specifications for Road, Bridge and Municipal Construction, 2018 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter “Standard Specifications”). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.


The accompanying Plans and these Specifications and any Addenda thereto, show and describe the location and type of work to be performed under the 108th Avenue Water and Sewer Replacement.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The titles of headings of the Sections and subsections herein are intended for convenience or reference and shall not be considered as having any bearing on their interpretation.

Several types of Special Provisions are included in this contract and are differentiated as follows:

General Special Provisions (GSPs) are similar to Standard Specifications in that they typically apply to many projects and are used by agencies throughout the state. Denoted as: (date)

Local Agency Approved GSPs are modifications to the standard specifications prepared by the APWA Division 1 subcommittee, which is comprised of representatives of local agencies throughout the state. APWA GSPs replace what was formerly referred to as "Division 1-99 APWA Supplement" in previous editions of the Standard Specifications for Road, Bridge and Municipal Construction. Denoted as: (date APWA GSP)

City of Kirkland GSPs are commonly applicable to City of Kirkland projects. Denoted as: (date COK GSP)

Project Specific Special Provisions normally appear only in the contract for which they were developed. Denoted as: (******)

Also incorporated into the Contract Documents by reference are:

- Manual on Uniform Traffic Control Devices for Streets and Highways, currently adopted edition, with Washington State modifications, if any
- Standard Plans for Road, Bridge and Municipal Construction, WSDOT/APWA, current edition
- City of Kirkland Public Works Department Pre-Approved Plans and Policies.

Contractor shall obtain copies of these publications, at Contractor’s own expense.
DIVISION 1 - GENERAL REQUIREMENTS

DESCRIPTION OF WORK

The work performed under this contract is delineated under three separate bid schedules. Schedules A, B and C constitute the Base Bid. Each schedule is described below:

Schedule A - Sanitary Sewer Main Replacement – 108th Ave NE from NE 68th St to NE 53rd St includes provide all labor, equipment, and materials for the installation of approximately 2,847 linear feet of new 12-inch sanitary sewer main; 1,255 lineal feet of 8-inch side sewer main; 6-inch side sewer replacement; installation of 19 sanitary sewer manholes; temporary sewer bypass system and operations; and all temporary and permanent asphalt patching and concrete sidewalk and curb and gutter replacement associated with the sewer main and side sewer replacement work.

Schedule B - Water Main Replacement – NE 68th St to NE 60th St includes all labor, equipment, and materials for the installation of approximately 37 lineal feet of 18-inch water main, 2,152 lineal feet of 12-inch water main and 220 lineal feet of 8-inch water main. Schedule B includes replacement water services; 12-inch and 8-inch valves; seven fire hydrant assemblies, and all temporary and permanent asphalt patching and concrete sidewalk and curb and gutter replacement associated with the water main and water service replacement work.

Schedule C - Road Overlay and ADA Ramp Replacement includes all labor, equipment, and material to remove and replace 5 concrete pedestrian ramps and associated concrete sidewalk and curb and gutter; full depth asphalt replacement; and 3-inch planing and overlay of 108th Ave from NE 68th St to NE 60th St, with two lane overlay continuing to the intersection of 108th Ave NE and NE 53rd St.

All work shall be in accordance with the Contract Plans, these Contract Provisions, and the Standard Specifications.

1-01 DEFINITIONS AND TERMS

(January 4, 2016 APWA GSP)

1-01.3 Definitions

Delete the heading Completion Dates and the three paragraphs that follow it, and replace them with the following:

**Dates**

*Bid Opening Date*
The date on which the Contracting Agency publicly opens and reads the Bids.

*Award Date*
The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

*Contract Execution Date*
The date the Contracting Agency officially binds the Agency to the Contract.

*Notice to Proceed Date*
The date stated in the Notice to Proceed on which the Contract time begins.
Special Provisions

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date
The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date
The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

Final Acceptance Date
The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications, Amendments, or WSDOT General Special Provisions, to the terms “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency”.

All references to the terms “State” or “state” shall be revised to read “Contracting Agency” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

All references to “final contract voucher certification” shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive
A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate
One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

Business Day
A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

Contract Bond
The definition in the Standard Specifications for “Contract Bond” applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

Contract Documents
See definition for “Contract”.

Special Provisions -2
**Contract Time**
The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

**Notice of Award**
The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency’s acceptance of the Bid Proposal.

**Notice to Proceed**
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

**Traffic**
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

**1-02  BID PROCEDURES AND CONDITIONS**

*(January 24, 2011 APWA GSP)*

**1-02.1 Prequalification of Bidders**

Delete this Section and replace it with the following:

**1-02.1 Qualifications of Bidder**

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

*(1/1/2016 COK GSP)*

**1-02.1(1) Supplemental Qualifications Criteria**

Add the following new section:

Bidders shall complete and sign the Statement of Bidder’s Qualification contained in the Proposal. Said form must be submitted with the bid proposal.

After bids are opened, Contracting Agency may request that a bidder or all bidders provide supplemental information concerning responsibility in accordance with RCW 39.04.350(2). Such supplemental information shall be provided to Contracting Agency in writing within two (2) business days of the request. Whether bidder supplies this supplemental information within the time and manner specified or not, in addition to consideration of this additional information, Contracting Agency may also base its determination of responsibility on any available information related to the supplemental criteria.

If Contracting Agency determines that a bidder is not responsible, Contracting Agency will provide, in writing, the reasons for such determination at which point the contractor will be deemed disqualified in accordance with WSDOT Standard Specification 1-02.14(10) and the proposal rejected. The bidder may appeal the determination within two (2) business days after receipt of the determination by presenting additional information to Contracting Agency. Contracting Agency will consider the additional information before issuing its final decision. If Contracting Agency’s final decision affirms that the bidder is not responsible, Contracting Agency will not execute a contract with any other bidder until two (2) business days after the bidder determined to be not responsible has received Contracting Agency’s final determination. The failure or omission of a bidder to receive or examine any form, instrument, addendum or other document shall in no way relieve any bidder from obligations with respect to the bid or to the contract.
Any bidder may, within five (5) business days before the bid submittal deadline, request that Contracting Agency modify the supplemental criteria. Contracting Agency will evaluate the information submitted by the bidder and respond before the submittal deadline. If the evaluation results in a change of the criteria, the Contracting Agency will issue an Addendum to the bidding documents identifying the new criteria.

Supplemental Criteria. Contracting Agency acknowledges that Change Orders (changes, extra work, requests for equitable adjustment and claims (defined as including demands for money or time in excess of the contract amount or contract time)) are ubiquitous on public works construction projects. The expeditious resolution of Change Orders is critical to the on budget and on time successful completion of a public works project. Thus, the City has established the following relevant supplemental bidder responsibility criteria applicable for the project:

1. **Criterion.** The bidder must demonstrate a record of successful and timely resolution of Change Orders including compliance with public contract Change Order resolution procedures (e.g. timely notice of event giving rise to the Change Order, timely submission of a statement of the cost and/or impact of the Change Order unless the bidder is able to show extenuating circumstances that explain bidder’s failure to timely provide such information to the satisfaction of Contracting Agency.

2. **Similar Projects:** Bidder shall have completed, within the last seven (7) years, a minimum of two (2) public works sewer projects which included replacing a minimum of 1,000 lineal feet of 8” sewer main or larger and two (2) watermain replacement projects which included replacing a minimum of 1,000 lineal feet of 8” water main or larger. A qualifying project does not need to have both a water and sewer element.

3. **Documentation.** As evidence that the bidder meets the supplemental responsibility criteria, after bids are opened and within two (2) business days of the public notice of Contracting Agency’s tabulation of bids, the lowest responsive bidder must submit the following documentation of public works projects completed within the previous three (3) years and include for each project the following:
   a. The Owner and contact information for the Owner;
   b. A listing of Change Orders and a signed statement from the bidder that the project timelines concerning resolution of Change Orders was complied with, and if not, provide a written explanation of what the bidder believes to be the extenuating circumstances excusing compliance with the Contract Change Order notice and claim provisions.

   Contracting Agency may contact owners listed by the bidders to validate the information provided by a bidder.

*June 27, 2011 APWA GSP*

1-02.2 Plans and Specifications

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed can be found in the Call for Bids (*Advertisement* *Invitation* for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

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<th>To Prime Contractor</th>
<th>No. of Sets</th>
<th>Basis of Distribution</th>
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<td>Contract Provisions</td>
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<td>Furnished automatically upon award.</td>
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<tr>
<td>Large plans (e.g., 22” x 34”)</td>
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<td>Furnished only upon request.</td>
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Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor’s own expense.

**(August 15, 2016 APWA GSP Option B)**

1-02.4(1) General

The first sentence of the last paragraph is revised to read:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business five business days preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

**(March 8, 2013 APWA GSP)**

1-02.4(2) Subsurface Information

The second sentence in the first paragraph is revised to read:

The Summary of Geotechnical Conditions and the boring logs, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract.

**(July 31, 2017 APWA GSP)**

1-02.5 Proposal Forms

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder’s name, address, telephone number, and signature; the bidder’s UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor’s Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

**(June 20, 2017 APWA GSP)**

1-02.6 Preparation of Proposal

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.

5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.
Delete the fourth paragraph and replace it with the following:

The Bidder shall submit with the Bid a completed Underutilized Disadvantaged Business Enterprise (UDBE) Utilization Certification, when required by the Special Provisions. For each and every UDBE firm listed on the Bidder’s completed Underutilized Disadvantaged Business Enterprise Utilization Certification, the Bidder shall submit written confirmation from that UDBE firm that the UDBE is in agreement with the UDBE participation commitment that the Bidder has made in the Bidder’s completed Underutilized Disadvantaged Business Enterprise Utilization Certification. WSDOT Form 422-031U (Underutilized Disadvantaged Business Enterprise Written Confirmation Document) is to be used for this purpose. Bidder must submit good faith effort documentation with the Underutilized Disadvantaged Business Enterprise Utilization Certification only in the event the bidder’s efforts to solicit sufficient UDBE participation have been unsuccessful. Directions for delivery of the Underutilized Disadvantaged Business Enterprise Written Confirmation Documents and Underutilized Disadvantaged Business Enterprise Good Faith Effort documentation are included in Sections 1-02.9.

Delete the last paragraph, and replace it with the following:

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any UDBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any UDBE requirements are to be satisfied through such an agreement.

(March 8, 2013 APWA GSP)

1-02.7 Bid Deposit

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder’s officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety’s officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.
**Conflict of Interest**

The bidder affirms that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services hereunder. The Contractor further covenants that in the performance of this contract, no person having any conflicting interest shall be employed. Any interest on the part of the Contractor or its employees must be disclosed forthwith to the City of Kirkland. If this contract is within the scope of a Federal Housing and Community Development Block Grant program, the Contractor further covenants that no person who presently exercises any functions or responsibilities in connection with the block grant program has any personal financial interest, direct or indirect, in this contract.

**Delivery of Proposal**

Delete this section and replace it with the following:

Each Proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Invitation for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

If the project has FHWA funding and requires UDBE Written Confirmation Document(s) or Good Faith Effort (GFE) Documentation, then to be considered responsive, the Bidder shall submit Written Confirmation Documentation from each UDBE firm listed on the Bidder’s completed UDBE Utilization Certification, form 272-056U, as required by Section 1-02.6. The UDBE Written Confirmation Document(s) and/or GFE (if any) shall be received either with the Bid Proposal or as a Supplement to the Bid. The document(s) shall be received no later than 24 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid Proposal.

The Bidder shall submit to the Contracting Agency a signed “Certification of Compliance with Wage Payment Statutes” document where the Bidder under penalty of perjury verifies that the Bidder is in compliance with responsible bidder criteria in RCW 39.04.350 subsection (1) (g), as required per Section 1-02.14. The “Certification of Compliance with Wage Payment Statutes” document shall be received either with the Bid Proposal or no later than 24 hours (not including Saturdays, Sundays and Holidays) after the time for delivery of the Bid Proposal.

If submitted after the Bid Proposal is due, the document(s) must be submitted in a sealed envelope labeled the same as for the Proposal, with “Supplemental Information” added. All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Invitation for Bids.

The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Invitation for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Invitation for Bids. The Contracting Agency will not open or consider any “Supplemental Information” (UDBE confirmations, GFE documentation, or Certification of Compliance with Wage Payment Statutes) that is received after the time specified above, or received in a location other than that specified in the Invitation for Bids.
Special Provisions 108th S & W

(July 23, 2015 APWA GSP)

1-02.10 Withdrawing, Revising, or Supplementing Proposal

Delete this section, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder’s request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

(June 20, 2017 APWA GSP)

1-02.13 Irregular Proposals

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
   c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;
   g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable, as required in Section 1-02.6;
   h. The Bidder fails to submit or properly complete an Underutilized Disadvantaged Business Enterprise Certification, if applicable, as required in Section 1-02.6;
   i. The Bidder fails to submit written confirmation from each UDBE firm listed on the Bidder’s completed UDBE Utilization Certification that they are in agreement with the bidder’s UDBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
   j. The Bidder fails to submit UDBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
k. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or

l. More than one Proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be rejected if:
   a. The Proposal does not include a unit price for every Bid item;
   b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
   c. Receipt of Addenda is not acknowledged;
   d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
   e. If Proposal form entries are not made in ink.

(July 31, 2017 APWA GSP)
1-02.14 Disqualification of Bidders

Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Contracting Agency reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder’s compliance with the mandatory bidder responsibility criteria.

The Bidder shall submit to the Contracting Agency a signed “Certification of Compliance with Wage Payment Statutes”, document where the Bidder under penalty of perjury verifies that the Bidder is in compliance with responsible bidder criteria in RCW 39.04.350 subsection (1)(g). A form, appropriate for “Certification of Compliance with Wage Payment Statutes,” will be provided by the Contracting Agency in the Bid Documents. The form provided in the Bid Documents shall be submitted with the Bid as stated in Section 1-02.9.

If the Contracting Agency determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency’s determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency’s final determination.

(August 14, 2013 APWA GSP)
1-02.15 Pre Award Information

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 AWARD AND EXECUTION OF CONTRACT

(January 23, 2006 APWA GSP)
1-03.1 Consideration of Bids

Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder’s unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

(October 1, 2005 APWA GSP)
1-03.3 Execution of Contract

Revise this section to read:

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within ten (10) calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency, nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within 10 calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.
The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. Separate payment and performance bonds are required and each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
3. Is registered with the Washington State Insurance Commissioner, and
4. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner, and
5. Have an A.M. best rating of A:VII or better.
6. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
7. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
8. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
9. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
10. Be accompanied by a power of attorney for the Surety’s officer empowered to sign the bond; and
11. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

Any decision made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.05 shall control venue and jurisdiction.

Section 1-04.1 is supplemented with the following:
All materials, tools, labor, and guarantees thereof of required to complete the work shall be furnished and supplied in accordance with the Plans, these Special Provisions, the Standard Specifications, and City of Kirkland Pre-Approved (Standard) Plans and Policies. The Contractor shall include all costs of doing this work within the contract bid item prices.

(March 13, 2012 APWA GSP)
1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda,
2. Proposal Form,
3. Special Provisions,
4. Contract Plans,
5. Amendments to the Standard Specifications,
6. Standard Specifications,
7. Contracting Agency’s Standard Plans, or Details (if any),
8. Contracting Agency’s Standard Policies, and
9. WSDOT Standard Plans for Road, Bridge, and Municipal Construction.

(July 23, 2015 APWA GSP)
1-04.6 Variation in Estimated Quantities

Revise the first paragraph to read:

Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original Proposal quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of any Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original Proposal quantity, and if the total extended bid price for that item at time of award is equal to or greater than 10 percent of the total contract price at time of award. In that case, payment for contract work may be adjusted as described herein:

Supplement this Section with the following:

The quantities for “Gravel Borrow”, “Other Traffic Control Labor – Off Duty Police”, “Crushed Surfacing Base Course” and “Crushed Surfacing Top Course” have been entered into the Proposal only to provide a common proposal for bidders. Actual quantities will be determined in the field as the work progresses, and will be paid at the original bid price, regardless of final quantity. These bid items shall not be subject to the provisions of 1-04.6 of the Standard Specifications.

(1/1/2016 COK GSP)
1-04.11 Final Cleanup

Section 1-04.11 is deleted in its entirety and replaced with the following:

From time to time or as may be ordered by the Engineer, the Contractor shall cleanup and remove debris, refuse, and discarded materials of any kind resulting from the Work. Failure to do so may result...
in cleanup done by the Owner and the cost thereof charged to the Contractor and deducted from the Contractor’s progress estimate.

The Contractor shall perform final cleanup as provided in this Section. The Engineer will not establish the Physical Completion Date until this is done. All public and private property the Contractor occupied to do the Work, including but not limited to the Street Right of Way, material sites, borrow and waste sites, and construction staging area shall be left neat and presentable. Immediately after completion of the Work, the Contractor shall cleanup and remove all refuse and unused materials of any kind resulting from the Work. Failure to do the final cleanup may result in the final cleanup being done by the Owner and the cost thereof charged to the Contractor and deducted from the Contractor’s final progress estimate.

The Contractor shall:

1. Remove all rubbish, surplus materials, discarded materials, falsework, piling, camp buildings, temporary structures, equipment, and debris;

2. Remove from the Project, all unneeded, oversized rock left from grading, surfaced, or paving unless the Contract specifies otherwise or the Engineer approves otherwise;

3. On all concrete and asphalt pavement work, flush the pavement clean and remove the wash water and debris;

4. Sweep and flush structure decks and remove wash water and debris;

5. Clean out from all open culverts and drains, inlets, catch basins, manholes and water main valve chambers, within the limits of the Project Site, all dirt and debris of any kind that is the result of the Contractor’s operations;

6. Level and fine grade all excavated material not used for backfill where the Contract requires;

7. Fine grade all slopes;

8. Upon completion of grading and cleanup operations at any privately-owned site for which a written agreement between the Contractor and property owner is required, the Contractor shall obtain and furnish to the Engineer a written release from all damages, duly executed by the property owner, stating that the restoration of the property has been satisfactorily accomplished.

All costs associated with cleanup shall be incidental to the Work and shall be included in the various Bid items in the Bid, and shall be at no additional cost to the Owner.

1-05  CONTROL OF WORK

1-05.4  Conformity with and Deviations from Plans and Stakes

Add the following two new sub-sections:

(1/1/2016 COK GSP)
1-05.4(1)  Roadway and Utility Surveys

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of the improvements under this contract. Except for the survey control data furnished by the Owner, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor’s responsibility.

The Owner may spot-check the Contractor’s surveying. These spot-checks will not change the requirements for normal checking by the Contractor.
To facilitate the establishment of lines and elevations, the Owner will provide the Contractor with primary survey control information consisting of descriptions of two primary control points used for the horizontal and vertical control. Primary control points will be described and shown on the right-of-way Plans. The Contractor shall check all control points for horizontal and vertical locations prior to use and report any discrepancy to the Engineer. Errors resulting from using control points which have not been verified, shall be the Contractors responsibility.

At a minimum the Contractor shall provide following survey staking shall be required:

1. Construction centerline or an offset to construction centerline shall be staked at all angle points and 100-foot intervals on tangents.

2. Offset stakes of JUT Centerline at all angle points and at 50-foot intervals on tangents
   a. Cut/fill shall reference the elevations of the lowest conduit.
   b. Offset shall reference the location of the center of trench and list the width of the trench section.

3. Offset stakes of all structure control/location points shown on the undergrounding Plans.
   a. Each vault, handhold, and junction box shall have a sets of off-set points provided each location point shown in the location tables Cut/Fill shall reference elevations of the finish grade of the top lid of the structure.
   b. Each pole riser and stub up, shall have at least one set of off-set hubs provided with cut/fills to finish ground elevations.
   c. Finish grade elevations of all structures shall be determined by the Contractor based on the typical sections and details provide on the Contract Drawings.

4. Offset stakes at face or walls.

5. Offset staking of all drainage structures and drainage pipes at 50-foot intervals.

6. Location of all right-of-way and easements adjacent to the work area as shown on the right-of-way Plans.

7. Offset of all permanent concrete sidewalks, curb ramps, and driveways.

Each stake shall have the following information: Hub elevation, offset distance to items being staked, cut/fill to proposed elevations, design elevation of items being staked.

The above information shall also be shown on a written Cut Sheet and provided to the City inspector 48-hours prior to installation of the items being staked.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

- Stationing +.01 foot
- Alignment +.01 foot (between successive points)
- Superstructure Elevations +.01 foot (from plan elevations)
- Substructure Elevations +.05 foot (from plan elevations)
- Sidewalk and Curb Ramp Elevations +.01 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.
The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

(October 1, 2005 APWA GSP)
1-05.4(2) Bridge and Structure Surveys

For all structural work such as bridges and retaining walls, the Contractor shall retain as a part of Contractor’s organization an experienced team of surveyors.

The Contractor shall provide all surveys required to complete the structure, except the following primary survey control which will be provided by the Engineer:

1. Centerline or offsets to centerline of the structure.
2. Stations of abutments and pier centerlines.
3. A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances.
4. Monuments and control points as shown in the Plans.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

- Stationing: +.01 foot
- Alignment: +.01 foot (between successive points)
- Superstructure Elevations: +.01 foot (from plan elevations)
- Substructure Elevations: +.05 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

(1/1/2016 COK GSP)
1-05.4(3) Measurement

No unit of measurement shall apply to the lump sum price for construction surveying.

1-05.4(4) Payment

Payment will be made in accordance with Section 1-04.1 of these Specifications for the following bid item:

<table>
<thead>
<tr>
<th>Construction Surveying (per schedule)</th>
<th>Lump Sum</th>
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The lump sum Contract price for “Construction Surveying” shall be full pay for all labor, equipment, materials, and supervision utilized to perform the Work specified, including any resurveying, checking, correction of errors, replacement of missing or damaged stakes, and coordination efforts.

25% of the “Construction Surveying” bid item will be paid upon the initial staking for the work associated with that particular bid schedule it is associated. 75% will be based upon the contract duration.
Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remediying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency’s right to pursue any other avenue for additional remedy or damages with respect to the Contractor’s failure to perform the work as required.

The following new paragraph is inserted between the second and third paragraphs:

Use of equipment with metal tracks will not be permitted on concrete or asphalt surfaces unless otherwise authorized by the Engineer.

Guarantees and maintenance bonds shall be in accordance with City of Kirkland, State of Washington, Public Works Performance and Payment Bond forms and requirements. The performance bond shall be in the full amount of contract. The Contractor guarantees all items of material, equipment, and workmanship against mechanical, structural, or other defects for which the Contractor is responsible that may develop or become evident within a period of one year from and after acceptance of the work by the Owner. This guarantee shall be understood to require prompt remedy of defects upon written notification to the Contractor. If the Owner determines the defect requires immediate repair, the Owner may, without further notice to the Contractor, make the necessary corrections, the cost of which shall be borne by the Contractor. To support the above guarantee, the Contractor’s performance bond shall remain in full force and effect for one year following the acceptance of the project by the Owner.
Delete this section and replace it with the following:

**1-05.11 Final Inspections and Operational Testing**

**1-05.11(1) Substantial Completion Date**

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor’s request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefor.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

**1-05.11(2) Final Inspection and Physical Completion Date**

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer’s right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

**1-05.11(3) Operational Testing**

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other
similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer’s guaranties or warranties furnished under the terms of the contract.

(March 8, 2013 APWA GSP)
1-05.12 Final Acceptance

Add the following new section:

1-05.12(1) One-Year Guarantee Period

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Contracting Agency’s written notice of a defect, and shall complete such work within the time stated in the Contracting Agency’s notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Contracting Agency’s own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Contracting Agency.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor’s work comply with the requirements of the Contract or any other legal rights or remedies of the Contracting Agency.

(August 14, 2013 APWA GSP)
1-05.13 Superintendents, Labor and Equipment of Contractor

Delete the sixth and seventh paragraph of this section.

(March 25, 2009 APWA GSP)
1-05.15 Method of Serving Notices

Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Project Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer’s office. Electronic
copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

(October 1, 2005 APWA GSP)
1-05.16 Water and Power

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item.

Add the following new section:

(March 8, 2013 APWA GSP)
1-05.18 Record Drawings

The Contractor shall maintain one set of full size plans for Record Drawings, updated with clear and accurate red-lined field revisions on a daily basis, and within 2 business days after receipt of information that a change in Work has occurred. The Contractor shall not conceal any work until the required information is recorded.

This Record Drawing set shall be used for this purpose alone, shall be kept separate from other Plan sheets, and shall be clearly marked as Record Drawings. These Record Drawings shall be kept on site at the Contractor’s field office and shall be available for review by the Contracting Agency at all times. The Contractor shall bring the Record Drawings to each progress meeting for review.

The preparation and upkeep of the Record Drawings is to be the assigned responsibility of a single, experienced, and qualified individual. The quality of the Record Drawings, in terms of accuracy, clarity, and completeness, is to be adequate to allow the Contracting Agency to modify the computer-aided drafting (CAD) Contract Drawings to produce a complete set of Record Drawings for the Contracting Agency without further investigative effort by the Contracting Agency.

The Record Drawing markups shall document all changes in the Work, both concealed and visible. Items that must be shown on the markups include but are not limited to:

- Actual dimensions, arrangement, and materials used when different than shown in the Plans.
- Changes made by Change Order or Field Order.
- Changes made by the Contractor.
- Accurate locations of storm sewer, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

The Record Drawing markups shall document the findings of all existing utility pothole activities including but not limited to the depth of cover, diameter or cross-sectional dimensions and location of each existing utility to be crossed in the course of the work of the project. In the event unmarked utilities are encountered, the markups shall include the same information as required for existing utilities investigated by pothole excavation.

If the Contract calls for the Contracting Agency to do all surveying and staking, the Contracting Agency will provide the elevations at the tolerances the Contracting Agency requires for the Record Drawings.

When the Contract calls for the Contractor to do the surveying/staking, the applicable tolerance limits include, but are not limited to the following:
Special Provisions

<table>
<thead>
<tr>
<th></th>
<th>Vertical</th>
<th>Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td>As-built sanitary &amp; storm invert and grate elevations</td>
<td>± 0.01 foot</td>
<td>± 0.01 foot</td>
</tr>
<tr>
<td>As-built monumentation</td>
<td>± 0.001 foot</td>
<td>± 0.001 foot</td>
</tr>
<tr>
<td>As-built waterlines, inverts, valves, hydrants</td>
<td>± 0.10 foot</td>
<td>± 0.10 foot</td>
</tr>
<tr>
<td>As-built ponds/swales/water features</td>
<td>± 0.10 foot</td>
<td>± 0.10 foot</td>
</tr>
<tr>
<td>As-built buildings (fin. Floor elev.)</td>
<td>± 0.01 foot</td>
<td>± 0.10 foot</td>
</tr>
<tr>
<td>As-built gas lines, power, TV, Tel, Com</td>
<td>± 0.10 foot</td>
<td>± 0.10 foot</td>
</tr>
<tr>
<td>As-built signs, signals, etc.</td>
<td>N/A</td>
<td>± 0.10 foot</td>
</tr>
</tbody>
</table>

Making Entries on the Record Drawings:

- Use erasable colored pencil (not ink) for all markings on the Record Drawings, conforming to the following color code:
  - Additions - Red
  - Deletions - Green
  - Comments - Blue
  - Dimensions - Graphite
- Provide the applicable reference for all entries, such as the change order number, the request for information (RFI) number, or the approved shop drawing number.
- Date all entries.
- Clearly identify all items in the entry with notes similar to those in the Contract Drawings (such as pipe symbols, centerline elevations, materials, pipe joint abbreviations, etc.).

The Contractor shall certify on the Record Drawings that said drawings are an accurate depiction of built conditions, and in conformance with the requirements detailed above. The Contractor shall submit final Record Drawings to the Contracting Agency. Contracting Agency acceptance of the Record Drawings is one of the requirements for achieving Physical Completion.

Payment will be made for the following bid item:

<table>
<thead>
<tr>
<th>Record Drawings – All Schedules (Minimum Bid $5,000)</th>
<th>Lump Sum</th>
</tr>
</thead>
</table>

Payment for this item will be made on a prorated monthly basis for work completed in accordance with this section up to 75% of the lump sum bid. The final 25% of the lump sum item will be paid upon submittal and approval of the completed Record Drawings set prepared in conformance with these Special Provisions.

A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor must bid at least that amount.
**1-05.18 Record Drawings**

Add the following two sentences to the end of the payment paragraph, as added above:

The Engineer will review and approve the progress payment of the record drawings at each weekly meeting. If the Contractor fails to produce updated record drawings, the payment will be delayed or reduced accordingly.

**1-05.19 Daily Construction Report**

Add the following new Section:

The Contractor and Subcontractors shall maintain, daily, a Daily Construction Report of the Work. The Diary must be kept and maintained by Contractor's designated project superintendent(s). Entries must be made on a daily basis and must accurately represent all of the project activities on each day. Contractor shall provide signed copies of diary sheets from the previous week to Engineer at each Weekly Coordination Meeting. Per Item 13. below, more frequent reporting of select information is also required.

Every single diary sheet/page must have:

- Project name & number;
- Consecutive numbering of pages, and
- Typed or printed name, signature, and date of the person making the entry.

At a minimum the diary shall, for each day, have a separate entry detailing each of the following:

1. Day and date.
2. Weather conditions, including changes throughout the day.
3. Complete description of work accomplished during the day, with adequate references to the Plans and Contract Provisions so the reader can easily and accurately identify said work on the Plans. Identify location/description of photographs or videos taken that day.
4. Each and every changed condition, dispute or potential dispute, incident, accident, or occurrence of any nature whatsoever which might affect Contractor, Contracting Agency, or any third party in any manner. This shall be provided on a separate page for other information.
5. Any Change Orders generated that day.
6. List all materials received and stored on- or off-site by Contractor that day for future installation, including the manner of storage and protection of the same.
7. List materials installed that day.
8. List all Subcontractors working on-site that day.
9. List the number of Contractor's employees working during each day, by category of employment.
10. List all Officials and Visitors onsite during each day.
11. List Contractor's equipment on the site that day; showing which were in use, and which idle.
12. Notations to explain inspections, testing, stake-out, and all other services furnished by Contracting Agency or other party during the day.
13. Documentation of advance investigation of existing utilities by pothole excavation a minimum of two working days or 100 feet, whichever is greater, in advance of crossing such utilities by excavation for the work of the project, including notation of depth of cover, diameter or width and depth of utilities including any encasement, casings or similar hardened protections, and horizontal location. Such work is required and shall be completed independently for the work of Schedule A and Schedule B per Sections 7-08.3(1)A, 7-09.3(6) and 7-09.3(7), unless prior investigation at a specific location is agreed by the City to be sufficient to rely upon for the remaining work. Where the grade or alignment of replacement pipe system is determined to conflict or likely conflict with an existing utility, the Contractor shall notify the City in writing within 24 hours. Documentation shall include description of changes, if any, of the planned work at the crossing of existing utilities. Existing utilities shall include, but not be limited to: water mains, hydrant laterals or services; sewer mains, laterals or services; storm drains, laterals or services, telephone or communications cables, conduits and/or duct banks; gas mains, laterals or services; electrical power cables, conduits and/or duct banks; street lighting cables, conduits and/or duct banks, traffic and/or pedestrian signal control cables, conduits and/or duct banks; manholes, catch basins, and structures or vaults associated with any existing utility.

14. Verify the daily (including non-work days) inspection and maintenance of traffic control devices and condition of the traveled roadway surfaces.

15. Any other information that serves to give an accurate and complete record of the nature, quantity, and quality of Contractor’s progress on each day.

It is expressly agreed between Contractor and Contracting Agency that the Daily Diary maintained by Contractor shall be the “Contractor's Book of Original Entry” for the documentation of any potential claims or disputes that might arise during this Contract. Failure of Contractor to maintain this Diary in the manner described above will constitute a waiver of any such claims or disputes by Contractor.

Engineer or his representative on the job site will also complete a Daily Construction Report.

1-06 CONTROL OF MATERIAL

(1/1/2016 COK GSP)
1-06.1 Approval of Materials Prior to Use

Section 1-06.1 is supplemented as follows:

Approval of a Material source shall not mean acceptance of the Material. The Material shall meet the requirements of the Contract.

(January 4, 2016 APWA GSP)
1-06.6 Recycled Materials

Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Table 9-03.21(1)E in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.
1-07.1 Laws to Be Observed

Section 1-07.1 is supplemented with the following:

The Contractor shall at all times eliminate noise to the maximum practicable extent. Air compressing plants shall be equipped with silencers, and the exhaust of all gasoline motors or other power equipment shall be provided with mufflers. Special care shall be used to avoid noise or other nuisances, and the Contractor shall strictly observe all federal, state, and local regulations concerning noise.

The Contractor shall make an effort to reduce carbon emissions by turning off engines on construction equipment not in active use, and on trucks that are idling while waiting to load or unload material for five minutes or more.

Compliance with Laws

The Contractor shall comply with the requirements of all other City ordinances, state statutes, laws, and regulations, whether or not stated herein, which are specifically applicable to the public improvements and work to be performed.

(October 1, 2005 APWA GSP)
Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor’s care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor’s care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor’s plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor’s performance does not, and shall not, be intended to include review and adequacy of the Contractor’s safety measures in, on, or near the project site.

(1/1/2016 COK GSP)
Contractor’s Safety Responsibilities

These construction documents and the joint and several phases of construction hereby contemplated are to be governed at all times by applicable provisions of the federal law(s), including but not limited to the latest amendments of the following:

Williams-Steiger Occupational Safety and Health Act of 1980, Public Law 91-596.
Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations.

This project, the Contractor and its subcontractors, shall, at all times, be governed by Chapter XIII of Title 29, Code of Federal Regulations, Part 1518 - Safety and Health Regulations for Construction (35 CFR 75), as amended to date.

To implement the program, and to provide safe and healthful working conditions for all persons, the construction superintendent or his/her designated safety officer shall conduct general project safety meetings at the site at least once each month during the course of construction.

The prime contractor and all subcontractors shall immediately report all accidents, injuries, and health hazards to the Manager, in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970. This program shall become a part of the contract documents and the contract between the Owner and the Contractor, and all subcontractors, as though fully written therein.

Where the location of the work is in proximity to overhead wires and power lines, the Contractor shall coordinate all work with the utility and shall provide for such measures as may be necessary for the protection of the workers.

(June 27, 2011 APWA GSP)

1-07.2 State Taxes
Delete this section, including its sub-sections, in its entirety and replace it with the following:

1-07.2 State Sales Tax

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax — Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.
1-07.2(2) State Sales Tax — Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

(1/1/2016 COK GSP)

1-07.14 Responsibility for Damage

Section 1-07.14 is supplemented with the following:

The Contractor further agrees that it is waiving immunity under Industrial Insurance Law Title 51 RCW for any claims brought against the City by its employees. In the event Contractor fails, after receipt of timely notice from the City, to appear, defend, or pay as required by the first paragraph of this section, then in that event and in that event only, the City may in its sole discretion, deduct from the progress payments to the Contractor and pay any amount sufficient to pay any claim, of which the City may have knowledge and regardless of the informalities of notice of such claim, arising out of the performance of this contract, provided the City has theretofore given notice of receipt of such claim to the Contractor and the Contractor has failed to act thereon.

1-07.15 Temporary Water Pollution/Erosion Control

(1/1/2016 COK GSP)

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

SPCC Plan Element Requirements is supplemented with the following:

2. City of Kirkland spill response hotline (425) 587-3900 shall be listed as the first point of contact.

(******)

1-07.15(1) Spill Prevention, Control, and Countermeasures Plan

Revise the second sentence of the first paragraph of Implementation Requirements to read as follows:

The Contractor shall update the SPCC Plan monthly and maintain a copy of the updated SPCC Plan on the project site.
Payment

Revise the third paragraph to read:

The remaining 50 percent of the lump sum price will be pro-rated over the working days of the executed Contract. The Engineer may review the updated SPCC at least once per month. If the SPCC has not been updated to the satisfaction of the Engineer upon one or more of such reviews each month, and thus rejected, the work for this item shall not be paid for that month and the overall payment shall be reduced by that amount.

Supplement the Implementation Requirements with the following requirements:

The SPCC Plan shall be prepared as part of the work of Bid Schedule A and shall apply to Bid Schedules A, B, and C. The SPCC shall be submitted 5 working days prior to the Issuance of a Notice To Proceed. The Plan shall include the following minimum requirements:

1. All pollutants, including waste materials, demolition debris and wash water, including work of Final Cleanup, that occur onsite shall be handled and disposed of in a manner that does not cause contamination of storm water.

2. Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and non-inert wastes present on the site (see WAC Chapter 173-304 for the definition of inert waste). On-site fueling tanks shall include secondary containment.

3. Hazardous chemicals, such as cleaning agents and solvents, shall be stored in an approved chemical storage facility(ies), located in the equipment staging area. When using chemicals, care shall be taken to guard against spillage. In the event of a chemical release, the appropriate authorities shall be contacted, and the spill is to be cleaned up immediately.

4. All equipment shall be inspected regularly to detect any leaks or spills and to identify any necessary maintenance. Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drain down, solvent and de-greasing cleaning operations, fuel tank drain down and removal, and other activities which may result in discharge or spillage of pollutants to the ground or into storm water runoff must be conducted in a designated area using spill prevention measures, such as drip pans. Contaminated surfaces shall be cleaned immediately following any discharge or spill incident. Emergency repairs may be performed on-site using temporary plastic placed beneath and, if raining, over the vehicle.

5. BM Ps shall be used to prevent or treat contamination of storm water runoff by pH modifying sources. These sources include, but are not limited to, bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters. Storm water discharges shall not cause or contribute to a violation of the water quality standard for pH in the receiving water.

Concrete Handling

1. Concrete work can generate process water and slurry that contain fine particles and high pH, both of which can violate water quality standards in the receiving water. This BMP is intended to minimize and eliminate concrete process water and slurry from entering waters of the state.

2. Concrete truck chutes, pumps, and internals shall be washed out only into formed areas awaiting installation of concrete or asphalt.

3. Unused concrete remaining in the truck and pump shall be returned to the originating batch plant for recycling.

4. Hand tools including, but not limited to, screeds, shovels, rakes, floats, and trowels shall be washed off only into formed areas awaiting installation of concrete or asphalt.
5. Equipment that cannot be easily moved, such as concrete pavers, shall only be washed in areas that do not directly drain to natural or constructed storm water conveyances.

6. Washdown from areas such as concrete aggregate driveways shall not drain directly to natural or constructed storm water conveyances.

7. When no formed areas are available, wash water and leftover product shall be contained in a lined container. Contained concrete shall be disposed of in a manner that does not violate groundwater or surface water quality standards.

8. Containers shall be checked for holes in the liner daily during concrete pours and repaired the same day.

Sawcutting and Surfacing Pollution Prevention

1. Sawcutting and surfacing operations generate slurry and process water that contains fine particles and high pH (concrete cutting), both of which can violate the water quality standards in the receiving water. This BMP is intended to minimize and eliminate process water and slurry from entering waters of the State.

2. Slurry and cuttings shall be vacuumed during cutting and surfacing operations.

3. Slurry and cuttings shall not remain on permanent concrete or asphalt pavement overnight.

4. Slurry and cuttings shall not drain to any natural or constructed drainage conveyance.

5. Collected slurry and cuttings shall be disposed of in a manner that does not violate groundwater or surface water quality standards.

6. Process water that is generated during hydro-demolition, surface roughening or similar operations shall not drain to any natural or constructed drainage conveyance and shall be disposed of in a manner that does not violate groundwater or surface water quality standards.

7. Cleaning waste material and demolition debris shall be handled and disposed of in a manner that does not cause contamination of water. If the area is swept with a pick-up sweeper, the material must be hauled out of the area to an appropriate disposal site.

8. Continually monitor operations to determine whether slurry, cuttings, or process water could enter waters of the state. If inspections show that a violation of water quality standards could occur, stop operations and immediately implement preventive measures such as berms, barriers, secondary containment, and vacuum trucks.

Material Delivery, Storage and Containment

1. Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the storm water system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in a designated area, and installing secondary containment.

2. Temporary storage area should be located away from vehicular traffic, near the construction entrance(s), and away from waterways or storm drains.

3. Material Safety Data Sheets (MSDS) should be supplied for all materials stored. Chemicals should be kept in their original labeled containers.

4. Hazardous material storage on-site should be minimized.

5. Hazardous materials should be handled as infrequently as possible.

6. During the wet weather season (Oct 1 -April 30), consider storing materials in a covered area.

7. Materials should be stored in secondary containments, such as earthen dike, horse trough, or even a children's wading pool for non-reactive materials such as detergents, oil, grease, and paints. Small amounts of material may be secondarily contained in "bus boy" trays or concrete mixing trays.
8. Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and, when possible, in secondary containment.

9. If drums must be kept uncovered, store them at a slight angle to reduce ponding of rainwater on the lids to reduce corrosion. Domed plastic covers are inexpensive and snap to the top of drums, preventing water from collecting.

10. Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall not be overfilled. Containers and drums shall be stored in temporary secondary containment facilities.

11. Temporary secondary containment facilities shall provide for a spill containment volume able to contain precipitation from a 25 year, 24 hour storm event, plus 10% of the total enclosed container volume of all containers, or 110% of the capacity of the largest container within its boundary, whichever is greater.

12. Secondary containment facilities shall be impervious to the materials stored therein for a minimum contact time of 72 hours.

13. Secondary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as hazardous waste unless testing determines them to be non-hazardous.

14. Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.

15. During the wet weather season (Oct 1 - April 30), each secondary containment facility shall be covered during non-working days, prior to and during rain events.

16. Keep material storage areas clean, organized and equipped with an ample supply of appropriate spill clean-up material (spill kit). The spill kit should include, at a minimum: 1-Water Resistant Nylon Bag; 3-0il Absorbent Socks 3”x 4’; 2-0il Absorbent Socks 3”x 1 0’; 12-0il Absorbent Pads 17”x19”; 1-Pair Splash Resistant Goggles’ 3-Pair Nitrile Gloves; 10-Disposable Bags with Ties; Instructions.

Measurement
No unit of measurement shall apply to the lump sum price for SPCC Plan – All Schedules.

Payment
Payment will be made in accordance with Section 1-04.1 of these Specifications for the following bid item:

| SPCC Plan - All Schedules (Minimum Bid $5,000.00) | Lump Sum |

A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor must bid at least that amount.

1-07.16 Protection and Restoration of Property

(1/1/2016 COK GSP)

1-07.16(3) Fences, Mailboxes, Incidentals

Section 1-07.16(3) is supplemented with the following:

U.S. Postal Service Collection Boxes, Mail Receptacles, and other Structures: U.S. Postal Service collection box and other Structures requiring temporary relocation to accommodate construction, the
Contractor shall contact the Kirkland Postmaster at least 5 Working Days in advance for coordination. Only the U.S. Post Office will move Postal Service-owned property.

(1/1/2016 COK GSP)
1-07.17 Utilities and Similar Facilities

Section 1-07.17 is supplemented with the following:

Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification.

The Contractor is alerted to the existence of Chapter 19.122 RCW, a law relating to underground utilities. Any cost to the Contractor incurred as a result of this law shall be at the Contractor's expense.

No excavation shall begin until all known facilities in the vicinity of the excavation area have been located and marked.

The Contractor shall give advance notice to all utility companies involved where work is to take place and in all other respects comply with the provisions of Chapter 19.122 RCW. Notice shall include, but not be limited to, the following utility companies:

1. Water, sewer, storm, streets – minimum two working days in advance
2. Power (Electric and Natural Gas) – minimum 48 hours in advance
3. Telephone – minimum 30 days in advance
4. Natural Gas – minimum 48 hours in advance
5. Cable Television – minimum 48 hours in advance
6. Transit – minimum 21 days in advance
The following is a list of some utilities serving the Kirkland area. This is not intended or represented to be a complete list and is provided for the Contractor’s convenience.

<table>
<thead>
<tr>
<th>Utility</th>
<th>Agency/Company</th>
<th>Address</th>
<th>Contact</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>COK Field Rep.</td>
<td>City of Kirkland</td>
<td></td>
<td>Steve Hoopes</td>
<td>(425) 623-5086</td>
</tr>
<tr>
<td>COK Field Rep.</td>
<td>City of Kirkland</td>
<td></td>
<td>Rik Mayer</td>
<td>(206) 496-4265</td>
</tr>
<tr>
<td>COK Police</td>
<td>City of Kirkland</td>
<td></td>
<td>NORCOM</td>
<td>(425) 587-3400</td>
</tr>
<tr>
<td>COK Fire</td>
<td>City of Kirkland</td>
<td></td>
<td>NORCOM</td>
<td>(425) 587-3400</td>
</tr>
<tr>
<td>Spill Response Hotline</td>
<td>City of Kirkland</td>
<td></td>
<td></td>
<td>(425) 587-3900</td>
</tr>
<tr>
<td>Water</td>
<td>SPU</td>
<td></td>
<td>Richard Cox</td>
<td>(206) 684-8117</td>
</tr>
<tr>
<td>Water / Sewer (North area of Kirkland)</td>
<td>Northshore Utility District</td>
<td>6380 NE 185th St Kenmore, WA 98028</td>
<td>George Matote</td>
<td>(425) 398-4400</td>
</tr>
<tr>
<td>Water (Northeast area of Kirkland)</td>
<td>Woodinville Water District</td>
<td>17238 NE Woodinville Duvall Road, Woodinville, WA 98072</td>
<td>Ken McDowell</td>
<td>(425) 487-4104</td>
</tr>
<tr>
<td>Construction Coordinator</td>
<td>King County WTD</td>
<td></td>
<td></td>
<td>(206) 684-2732</td>
</tr>
<tr>
<td>Sewer</td>
<td>King County WTD</td>
<td></td>
<td></td>
<td>(206) 255-6047</td>
</tr>
<tr>
<td>Natural Gas / Electric</td>
<td>Puget Sound Energy</td>
<td>P.O. Box 97034 EST-11W Bellevue, WA 98009-9734</td>
<td>Jeanne Coleman</td>
<td>(425) 536-6550</td>
</tr>
<tr>
<td>Telephone/ FIOS</td>
<td>Frontier Communications</td>
<td></td>
<td>Jay Schwab</td>
<td>(425) 263-4019</td>
</tr>
<tr>
<td>Cable Television</td>
<td>Comcast</td>
<td>1525 - 75th St SW, Suite 200 Everett, WA 98203</td>
<td>Joe Fordon</td>
<td>(425) 263-5348</td>
</tr>
<tr>
<td>Network</td>
<td>Verizon/MCI</td>
<td>11311 NE 120th St Kirkland, WA 98034</td>
<td>Brad Landis</td>
<td>(425) 201-0901</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Scott Christenson</td>
<td>(425) 471-1079</td>
</tr>
<tr>
<td>School District Transportation</td>
<td>Lake Washington School District</td>
<td>15212 NE 95th St Redmond, WA 98052</td>
<td>Jeff Miles</td>
<td>(425) 936-1120</td>
</tr>
<tr>
<td>Transit</td>
<td>King County METRO</td>
<td>MS SVQ-TR-0100 1270 6th Ave S Seattle, WA 98134</td>
<td>METRO Construction Information Center</td>
<td>(206) 684-2732</td>
</tr>
<tr>
<td>Olympic Pipeline</td>
<td>BP</td>
<td></td>
<td>Kenneth Metcalf</td>
<td>(425) 981-2575</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Joseph Stone</td>
<td>(425) 981-2506</td>
</tr>
<tr>
<td>Cable Television</td>
<td>Wave Broadband</td>
<td></td>
<td>Phillip Fisk</td>
<td>(425) 988-3295</td>
</tr>
<tr>
<td>Cable Television</td>
<td>Zayo</td>
<td></td>
<td>Jason Accuardi</td>
<td>(206) 456-2858</td>
</tr>
</tbody>
</table>

Note that most utility companies may be contacted for locations through the “One Call” system, 1-800-424-5555 or by dialing 811. In the event of a gas emergency, call 911 and then the PSE hotline at 1-888-225-5773 (1-888-CALL-PSE).
The Contractor shall coordinate the work with these utilities and shall notify the Engineer in advance of any conflicts affecting the work schedule. The utility companies shall witness or perform all shutdowns, connections or disconnections.

Wherever in the course of the construction operation it becomes necessary to cause an outage of utilities, it shall be the Contractor's responsibility to notify the affected users not less than twenty-four (24) hours in advance of the creation of such outage. The Contractor shall make reasonable effort to minimize the duration of outages.

The Contractor shall be responsible for any breakage of utilities or services resulting from its operations and shall hold the City and its agents harmless from any claims resulting from disruption of, or damage to, same.

Other Notifications

Service Area Turn Off: All service area turn off notices must be distributed to affected parties two working days in advance of any scheduled shut off. City to provide door hangers and affected service area map. The contractor shall fill in all required information prior to hanging door hanger.

Entry onto Private Property: Each property owner shall be given two working days advance Written Notice prior to entry by the Contractor.

Loop Detection Systems: Where an excavation is to take place through a signal loop detector system, the Contractor shall provide at least five (5) Working Days advance notice to the City Signal Shop at (425) 587-3920 to coordinate temporary signal wire disconnect and installation of temporary signal detection equipment.

Survey Monuments: When proposed pavement removal is close to existing survey monumentation, or proposed pavement removal includes existing survey monumentation, the Contractor shall provide a minimum 4 Working Days advance notice to its licensed professional land surveyor to allow survey crews to tie the monument out and reset the monument after pavement installation.

The Contractor shall be responsible for hiring a licensed professional land surveyor to complete, sign, seal, and then file a permit with the Washington State Department of Natural Resources per Chapter 332-120 of the Washington Administrative Code.

(1/1/2016 COK GSP)
1-07.17(2) Utility Construction, Removal or Relocation by Others

Section 1-07.17(2) is supplemented with the following:

Under no circumstances will discrepancies in location or incompleteness in description of existing utilities or improvements, whether they are visible from the surface, buried, or otherwise obscured, be considered as a basis for additional compensation to the Contractor.

(January 4, 2016 APWA GSP)
1-07.18 Public Liability and Property Damage Insurance

Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.
B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor’s Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on the claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period (“tail”) or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor’s Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency’s insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor’s insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency.

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days’ notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder’s Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers
- CHS Engineers, LLC
- HWA GeoSciences, Inc

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.
1-07.18(3)  Subcontractors

The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors.

The Contractor shall ensure that all Subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amending endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5)   Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.
**1-07.18(5)A Commercial General Liability**

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor’s completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

- **$1,000,000** Each Occurrence
- **$2,000,000** General Aggregate
- **$2,000,000** Products & Completed Operations Aggregate
- **$1,000,000** Personal & Advertising Injury each offence
- **$1,000,000** Stop Gap / Employers’ Liability each accident

**1-07.18(5)B Automobile Liability**

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

- **$1,000,000** Combined single limit each accident

**1-07.18(5)C Workers’ Compensation**

The Contractor shall comply with Workers’ Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

**(January 4, 2016 APWA GSP)**

**1-07.18(5)D Excess or Umbrella Liability**

The Contractor shall provide Excess or Umbrella Liability insurance with limits of not less than $3 million each occurrence and annual aggregate. This excess or umbrella liability coverage shall be excess over and as least as broad in coverage as the Contractor’s Commercial General and Auto Liability insurance.

All entities listed under 1-07.18(2) of these Special Provisions shall be named as additional insureds on the Contractor’s Excess or Umbrella Liability insurance policy.

This requirement may be satisfied instead through the Contractor’s primary Commercial General and Automobile Liability coverages, or any combination thereof that achieves the overall required limits of insurance.
1-07.23 Public Convenience and Safety

Section 1-07.23 is supplemented with the following:

(1/1/2016 COK GSP)
No road or street shall be closed to the public except as permitted in these plans and specifications or with the approval of the Engineer and proper governmental authority. Fire hydrants on or adjacent to the work shall be kept accessible to firefighting equipment at all times. Provision shall be made by the Contractor to ensure the proper functioning of all gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses, and storm sewer facilities throughout the project. Temporary interruption of service will be allowed only with the permission of the Engineer.

The Kirkland Police Department and Kirkland Fire Department shall be notified at least four (4) hours in advance of any actions by the Contractor that may affect the functions of either the Police Department or Fire Department.

The Contractor shall conduct its work and take preventative measures so that dust or other particulate matter in the project area shall not become objectionable to the adjacent property owners or general public. Should the Owner determine the Contractor is not fulfilling its obligation in this regard; the Owner reserves the right to take such action as may be necessary to remedy the objectionable condition and to charge the Contractor with any cost that may be incurred in such remedial action. All work shall be carried on with due regard for the safety of the public. No driveway, whether public, commercial, or private, may be closed without prior approval of the Owner, project supervisor, or Engineer unless written authority has been given by the affected property owner. The Contractor shall be responsible for notifying the affected property owners 24 hours in advance of scheduled interruptions to access.

(1/1/2016 COK GSP)
Pedestrian Control and Protection

When the work area encroaches upon a sidewalk, walkway or crosswalk area, special consideration must be given to pedestrian safety. Maximum effort must be made to separate pedestrians from the work area. Protective barricades, fencing, and bridges, together with warning and guidance devices and signs, shall be utilized so that the passageway for pedestrians is safe and well defined. Whenever pedestrian walkways are provided across excavations, they shall be provided with suitable handrails. Footbridges shall be safe, strong, free of bounce and sway, have a slip resistant coating, and be free of cracks, holes, and irregularities that could cause tripping. Ramps shall be provided at the entrance and exit of all raised footbridges, again to prevent tripping. Adequate illumination and reflectorization shall be provided during hours of darkness. All walkways shall be maintained with at least 4 feet clear width.

Where walks are closed by construction, an alternate walkway shall be provided, preferably within the planting strip.

Where it is necessary to divert pedestrians into the roadway, barricading or channeling devices shall be provided to separate the pedestrian walkway from the adjacent vehicular traffic lane. At no time shall pedestrians be diverted into a portion of a street used concurrently by moving vehicular traffic.

At locations where, adjacent alternate walkways cannot be provided, appropriate signs shall be posted at the limits of construction and in advance of the closure at the nearest crosswalk or intersection to divert pedestrians across the street.

Physical barricades shall be installed to prevent visually impaired people from inadvertently entering a closed area. Pedestrian walkways shall be wheelchair accessible at all times. Pedestrian access shall be maintained to all properties adjacent to the construction site.
Fire Station 22 and Metro Bus Stops

Contractor shall provide a minimum of five working days’ notice of any work in front of the Fire Station entrance driveway or the Fire Station emergency equipment exit. Contractor shall also provide advance notice to the Fire Department a minimum of four hours prior as noted above. Contractor shall plan and implement the work to maintain at least fifty percent of the entrance driveway and the exit driveway accessible and available for emergency and non-emergency use at all times.

Contractor shall coordinate with Metro regarding temporary limited access to each Metro bus stop along the roadway within the project limits, for each Bid Schedule of the project. Such coordination shall be a minimum of ten working days in advance of such limited access, to allow Metro to set up temporary bus stops.

(May 2, 2017 APWA GSP)
1-07.23(1) Construction under Traffic

Revise the third sentence of the second paragraph to read:

Accessibility to existing or temporary pedestrian push buttons shall not be impaired; if approved by the Contracting Agency activating pedestrian recall timing or other accommodation may be allowed during construction.

(July 23, 2015 APWA GSP)
1-07.24 Rights of Way

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor’s construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor’s attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.
The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

(1/1/2016 COK GSP)
The Contractor shall file with the Engineer signed property release forms (in the format as detailed below) for all properties disturbed or damaged by the Contractor’s operations.

<table>
<thead>
<tr>
<th>PROPERTY RELEASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Contractor's name and address)</td>
</tr>
<tr>
<td>DATE: ________________________________</td>
</tr>
<tr>
<td>I, ______________________________________________________________ owner of</td>
</tr>
<tr>
<td>_______________________________ hereby release _____________________________,</td>
</tr>
<tr>
<td>(Contractor's name)</td>
</tr>
<tr>
<td>from any property damage or personal injury resulting from construction on or adjacent to my property located at _______________________________ during construction of the _______________________________. My signature below is my acknowledgment and acceptance that my property, as identified above, was returned to a satisfactory condition.</td>
</tr>
<tr>
<td>Signed: ________________________________</td>
</tr>
<tr>
<td>Name: ________________________________</td>
</tr>
<tr>
<td>Address: ________________________________</td>
</tr>
<tr>
<td>Phone: ________________________________</td>
</tr>
</tbody>
</table>

("****")

1-07.29 Field Office for the Engineer’s Staff

Add the following new section:

The Contractor shall provide a field office on or adjacent to the Project Site for the use of the Engineer’s staff within a minimum of five (5) Working Days prior to the Notice to Proceed Date. The field office, its location, and an alternate date if necessary, shall be subject to the approval of the Engineer and shall be established at the pre-construction meeting. The location of the field office must be obtained and maintained by the Contractor. The City is not obligated to provide a location within or outside of the right of way. The field office shall meet the following requirements:

1. The field office shall be a weather-tight building; either portable or permanent structure a minimum of eight (8) feet wide with not less than 360 square feet of clear floor space, having at least one door, and a window area of not less than 40 square feet. Windows shall open to allow ventilation. Doors and windows shall be provided with bug screens. The interior walls...
shall be covered with material suitable for displaying Contract Plans and progress charts, etc. The field office meeting the above requirements may be located in contractor-leased office space in the immediate vicinity of the project. Such space and location is subject to approval by the City.

2. To deter break-in and theft, window and door glass shall be protected with heavy security screens on metal frames bolted to the walls and doors. At a minimum all doors shall have 1 deadbolt cylinder lock. The Contractor shall provide 6 sets of keys for each lock.

3. The field office shall be level and, if portable, the structure shall be supported on blocks. If more than three (3) steps are required to enter the office, a floor-level landing of at least 12 square feet with railing shall be provided. Steps and landing shall be stable and slip resistant. A 3 sided boot brush shall be provided at each field office entrance.

4. The Contractor shall be responsible for maintaining and cleaning the field office; repairing any damage to the structure, equipment and appurtenances; providing janitorial services including supplying appropriate toilet room paper products; refilling applicable dispensers with drinking water cups, and paper towels; cleaning windows and sweeping floors; and emptying trash receptacles and recyclables, disposing trash, and relining trash receptacles and recyclables.

5. The office shall be furnished with the following furniture, equipment and appurtenances reasonably presentable, in good working order, and acceptable to the Engineer:
   a. Drafting table, 6 foot x 4 foot minimum,
   b. Executive chair, each with seat cushion, adjustable height seat, tilt back, arm rests, and floor wheels (two);
   c. Office desk, 30” x 60” minimum size, with at least 4 drawers which can be locked with key & one of which is set up for file folders, 2 sets of keys each desk (two);
   d. Office table 36” x 72” (two), 1 Conference table 4’ x 10’;
   e. Office chairs with seat & back cushion (eight);
   f. Trash receptacles and recycle bins;
   g. Color Photocopy/Color Printer/Color Scanner/Fax multifunction machine with multiple tray frontload including 3 paper trays (8-1/2 x 11-inch, 8-1/2 x 14-inch, and 11 x 17 inch) with the following:
      - Understorage cabinet, floor wheels to accommodate service technician.
      - Preset reduction to 50% and enlarge to 200% plus zoom in 1% increments.
      - Bypass tray
      - Replacement toner cartridge (1 cartridge for each color)
      - Capability to scan directly to PDF color at 300 dpi
      - Plain paper fax capable
      - Direct phone line connection and programmable capable to directly send scanned documents and faxes by e-mail.
      - 400 sheets of each size 20 lb. bright paper with no more than 30% recycle post-consumer content.
      - Repair and maintenance service contract with 4 hour service response on-site parts and labor;
   h. The Contractor shall provide a commercial grade broadband internet access with a static IP address (Cable or DSL at a minimum speed of 2.0 Mbps upload & 6.0 Mbps download) between the field office and an Internet Service Provider (ISP). The Contractor shall provide for 24 hour technical support and a local or 1-800 phone number to troubleshoot and maintain the broadband connectivity. The Contractor shall provide inside wiring to support a Local Area Network inside the field office and shall include a 4-plex jack to at least 5 workstations (desk or table locations to be addressed at the pre-construction meeting per Section 1-08.1(2)). The Contractor shall provide
necessary equipment to allow internet connectivity and shall be configured to allow
VPN access from individual machines to the City of Kirkland. Color Printer/Color
Copier/Scanner/Fax multifunction machine shall be connected to the office network
and programmed to send scanned documents by e-mail. The Contractor shall contact
City of Kirkland IT Department at least 5 Working Days in advance for access to the
City of Kirkland internal network;

i. White board (3’H x4’W) with eight (8) dry erase markers and 1 white board eraser.

6. Electric power of sufficient capacity to operate an electric heater, air conditioner and other
required equipment.

After obtaining inspection and approval of the field office electrical system and the proposed
temporary power connection hook-up from City, the Contractor shall provide a minimum 15
Working Days in advance notice to the local power utility requesting a temporary power drop and
connection. Generators (gas and diesel) for producing electrical power will not be allowed
unless the Engineer permits such in writing.

7. Contractor shall provide drinking water with disposable cup dispenser filled with cups.

8. The Contractor shall provide heating and air-conditioning of sufficient capacity to heat the office
to 70°F within 1 hour, and to cool the office 15°F within 1 hour.

If the Contractor fails to provide a field office, or substantive services, amenities or supplies as
described herein for the field office (hereafter “field office services”), at the location on the date agreed
to at the pre-construction meeting, the Engineer will provide Written Notice of such and shall have the
right to withhold progress payments in accordance with Section 1-09.9(3). If within 5 Working Days of
the Engineer sending this Written Notice the Contractor has not provided the field office, or field office
services, then the Engineer will have the option to provide the field office or field office services. If the
Engineer elects to provide the field office or field office services, the Engineer will give the Contractor
a second Written Notice of such; will within three (3) Working Days of giving the second Written Notice
provide the field office or field office services meeting the requirements specified in Section 1-07.29;
and will charge the Contractor by deducting from monies due or to become due the Contractor on
progress payments, all costs associated with providing the field office or field office services as specified
in Section 1-07.29. Upon deliverance of the second Written Notice, the Contractor’s right to provide the
field office or field office services shall be forfeited.

The field office, equipment, and appurtenances supplied by the Contractor shall revert to and be
removed by the Contractor when the Engineer, via the Written Notice of Physical Completion to the
Contractor, establishes the Physical Completion Date. If the Contractor removes, closes, or
discontinues the services specified in Section 1-07.29 prior to receiving the Written Notice of Physical
Completion without first obtaining approval from the Engineer, the Contractor will be charged Liquidated
Damages in accordance with Section 1-08.9.

All costs for the work required to provide, maintain and remove the field office including regular
expenses for telephone, internet, electricity, etc.; incidental constructions to accommodate; and to
procure all permits and licenses required for the field office to meet the requirements of Section 1-
07.29, shall be included in the lump sum Contract Price Bid for “Mobilization” for Bid Schedules A and
B. All costs for the work required to provide and maintain the field office services necessary for
completion of the work of Bid Schedule C shall be included in the lump sum Contract Price Bid for
“Mobilization” for Bid Schedule C. All costs for the work required to relocate the field office, if required,
shall be considered incidental to the Mobilization Bid items.
1-08 PROSECUTION AND PROGRESS
(May 25, 2006 APWA GSP)

1-08.0 Preliminary Matters

Add the following new section:

(October 10, 2008 APWA GSP)

1-08.0(1) Preconstruction Conference

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

1. A breakdown of all lump sum items;
2. A preliminary schedule of working drawing submittals; and
3. A list of material sources for approval if applicable.

Add the following new section:

(1/1/2016 COK GSP)

1-08.0(2) Hours of Work

Except in the event of an emergency, no work shall be done between the hours of 6:00 p.m. and 7:00 a.m., or weekends (except driveway construction), or holidays observed by the City of Kirkland and identified in Section 1-08.5 of the Standard Specifications. No new excavation is to be performed after 3:00 p.m.. If excavation must be performed after 3:00 p.m. contractor is to pay any associated overtime fees for City Inspector. If the proper and efficient prosecution of the work requires operations during the night, hours of operation more than 8 hours per day, or work weeks greater than 40 hours in duration, the written permission of the Owner shall be obtained before starting such items of the work and shall be in full compliance with terms therewith.

Except in the case of emergency or unless otherwise approved by the Contracting Agency, the normal straight time working hours for the contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour lunch break and a 5-day work week. The normal straight time 8-hour working period for the contract shall be established at the preconstruction conference or prior to the Contractor commencing the work.

If a Contractor desires to perform work on holidays, Saturdays, Sundays, or before 7:00 a.m. or after 6:00 p.m. on any day, the Contractor shall apply in writing to the Engineer for permission to work such times. Permission to work longer than an 8-hour period between 7:00 a.m. and 6:00 p.m. is not
required. Such requests shall be submitted to the Engineer no later than noon on the working day prior to the day for which the Contractor is requesting permission to work.

Permission to work between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 10:00 p.m. and 9:00 a.m. on weekends or holidays may also be subject to noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Contracting Agency’s noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor’s operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the Contracting Agency or Engineer. These conditions may include but are not limited to: requiring the Engineer or such assistants as the Engineer may deem necessary to be present during the work; requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency employees who worked during such times, on non Federal aid projects; considering the work performed on Saturdays and holidays as working days with regards to the contract time; and considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period. Assistants may include, but are not limited to, survey crews; personnel from the Contracting Agency’s material testing lab; inspectors; and other Contracting Agency employees when in the opinion of the Engineer, such work necessitates their presence.

**Arterial Streets**

No work will be performed on arterial streets during the peak traffic hours of 7:00 a.m. – 9:00 a.m. and 3:30 p.m. – 6:00 p.m., except emergency work to restore services, unless a City-approved traffic control plan allows work during the peak hours. The following streets are classified as arterials:

<table>
<thead>
<tr>
<th>STREET</th>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Way/NE 85th St</td>
<td>Market St</td>
<td>132nd Ave NE</td>
</tr>
<tr>
<td>Juanita Dr NE /NE Juanita Dr</td>
<td>NE 143rd St (City Limits)</td>
<td>98th Ave NE</td>
</tr>
<tr>
<td>Juanita Woodinville Way</td>
<td>100th Ave NE</td>
<td>NE 145th St (City Limits)</td>
</tr>
<tr>
<td>Lake St/Lake Washington Blvd/Northup Wy</td>
<td>Central Way</td>
<td>Northup Way (City Limits)</td>
</tr>
<tr>
<td>Kirkland Ave/Kirkland Way</td>
<td>Lake St</td>
<td>NE 85th St</td>
</tr>
<tr>
<td>Lakeview Dr /NE 68th St/NE 70th St</td>
<td>Lake Washington Blvd</td>
<td>132nd Ave NE</td>
</tr>
<tr>
<td>Market St/98th Ave NE/100th Ave NE</td>
<td>Central Way</td>
<td>NE 145th St (City Limits)</td>
</tr>
<tr>
<td>NE 116th St</td>
<td>98th Ave NE</td>
<td>Slater Ave NE</td>
</tr>
<tr>
<td>NE 120th St/132nd Ave NE</td>
<td>Slater Ave NE</td>
<td>NE 60th St (City Limits)</td>
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<tr>
<td>NE 124th St</td>
<td>100th Ave NE</td>
<td>East City Limits</td>
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<tr>
<td>NE 128th St</td>
<td>116th Ave NE/116th Way NE</td>
<td>120th Ave NE</td>
</tr>
<tr>
<td>Simonds Rd NE</td>
<td>92nd Ave NE (City Limits)</td>
<td>100th Ave NE</td>
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<tr>
<td>Slater Ave NE</td>
<td>NE 116th St</td>
<td>NE 124th St</td>
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<tr>
<td>Totem Lake Blvd</td>
<td>NE 132nd St</td>
<td>124th Ave NE</td>
</tr>
<tr>
<td>3rd Street/State Street</td>
<td>Central Way</td>
<td>NE 68th Street/Lakeview Dr.</td>
</tr>
<tr>
<td>6th St/6th St S/108th Ave NE</td>
<td>Central Way/NE 85th St</td>
<td>South City Limits</td>
</tr>
<tr>
<td>90th Ave NE/NE 131st Way/NE 132nd St</td>
<td>NE 134th St</td>
<td>132nd Ave NE</td>
</tr>
<tr>
<td>120th Ave NE/116th Ave NE/116th Way NE</td>
<td>NE 112th St</td>
<td>NE 132nd St</td>
</tr>
<tr>
<td>124th Ave NE</td>
<td>NE 85th St</td>
<td>NE 124th St</td>
</tr>
</tbody>
</table>
1-08.1 Subcontracting

**(1/1/2016 COK GSP)**

Section 1-08.1 is supplemented with the following:

A Subcontractor or an Agent to the Subcontractor will not be permitted to perform any work under the contract until the following documents have been completed and submitted to the Engineer:

1. Request to Sublet Work (form 421-012).
2. Statement of Intent to Pay Prevailing Wages (Form 700-029-000).

The Contractor's records pertaining to the requirements of this Special Provision shall be open to inspection or audit by representatives of the Department during the life of the contract and for a period of not less than three years after the date of acceptance of the contract. The Contractor shall retain these records for that period. The Contractor shall also guarantee that these records of all Subcontractors and Agents shall be open to similar inspection or audit for the same period.

**(1/1/2016 COK GSP)**

1-08.3 Progress Schedule

The order of work will be at the Contractor's option, in keeping with good construction practice and the terms of the contract. All work shall be carried out in accordance with the requirements of the City of Kirkland in compliance with the plans and specifications. However, the Contractor shall so schedule the work within the time constraints noted in the various contract documents, including any permits. The Contractor is cautioned to review said documents and permits and schedule the work appropriately as no additional compensation will be made to the Contractor due to the time constraints imposed by such documents.

**(March 13, 2012 APWA GSP)**

1-08.3(2) Type B Progress Schedule

Revise the first paragraph to read:

The Contractor shall submit a preliminary Type B Progress Schedule to the Engineer a minimum of 5 business days prior to the preconstruction conference. The preliminary Type B Progress Schedule shall comply with all of these requirements and the requirements of Section 1-08.3(1), except that it may be limited to only those activities occurring within the first 60-working days of the project.

Revise the first sentence of the second paragraph to read:

The Contractor shall submit five copies of a Type B Progress Schedule depicting the entire project no later than 21-calendar days after the preconstruction conference.

**(******)**

1-08.3(2)E Special Schedule Limitations

Add the following new section:

The Contractor shall account for all days off observed by the City of Kirkland water and sewer department labor Contracts. These days may differ from City observed holidays. The Contractor shall request a copy of the latest list of days off and include those days as non-working days in their schedule.

**(******)**

1-08.3(5) Payment

Payment will be made for the following bid item(s):

Special Provisions -42
Payment for these items will be made on an initial payment of 50% of the bid item upon receipt of the progress schedule incorporating all review comments. The remaining 50% will be prorated monthly based on the total number of contract days for schedule updates.

A minimum bid amount has been entered in the Bid Proposal for this item. The Contractor must bid at least that amount.

(July 23, 2015 APWA GSP)

1-08.4 Prosecution of Work

Delete this section in its entirety, and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of Work

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

(September 12, 2016 APWA GSP)

1-08.4 Prosecution of Work

Supplement the GSP immediately above this Section with the following:

In addition, prior to field work, the Contractor shall have completed submittals of the Type B schedule, traffic control plans, the SPCC Plan and the SWPPP (See Sections 1-07 and 8-01 and the Erosion Control Plan). Ground-disturbing field work shall not begin until City approval of the SPCC Plan and the SWPPP. Work impacting traffic shall not begin until City approval of the Contractor’s traffic control plans.

1-08.5 Time for Completion

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the...
Engineer declares as unworkable. Within 10 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor’s obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a completion date:
   a. Certified Payrolls (per Section 1-07.9(5)).
   b. Material Acceptance Certification Documents
   c. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
   d. Final Contract Voucher Certification
   e. Copies of the approved “Affidavit of Prevailing Wages Paid” for the Contractor and all Subcontractors
   f. Property owner releases per Section 1-07.24.

(1/1/2016 COK GSP)
1-08.5 Time of Completion

Supplement the GSP with the following:

This project shall be physically completed in its entirety within the following count of working days per Bid Schedule:

A. Sewer – 100 working days
B. Water – 50 working days
C. Overlay – 30 working days.

(1/1/2016 COK GSP)
1-08.9 Liquidated Damages

The third paragraph of Section 1-08.9 is revised to read as follows:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and
2. To authorize the Engineer to deduct these liquidated damages from any money due or coming to the Contractor.

**LIQUIDATED DAMAGES FORMULA**

For $C > \$50,000 \rightarrow LD = 0.15 \times \frac{C}{T}$, and
For $C \leq \$50,000 \rightarrow LD = 0.30 \times \frac{C}{T}$.

Where:
- \( LD \) = liquidated damages per working day (rounded to the nearest dollar)
- \( C \) = original Contract amount
- \( T \) = original time for Physical Completion

**(August 14, 2013 APWA GSP)**

1-08.9 Liquidated Damages

Revise the fourth paragraph to read:

When the Contract Work has progressed to **Substantial Completion as defined in the Contract**, the Engineer may determine that the work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

1-09 MEASUREMENT AND PAYMENT

1-09.2 Weighing Equipment

**(July 23, 2015 APWA GSP)**

1-09.2(1) General Requirements for Weighing Equipment

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman's Daily Report, unless the printed ticket contains the same information that is on the Scaleman's Daily Report Form. The scale operator must provide AM and/or PM tare weights for each truck on the printed ticket.

**(1/1/2016 COK GSP)**

1-09.2(1) General Requirements for Weighing Equipment

The second to last paragraph of Section 1-09.2(1) is supplemented with the following:

**Trucks and Tickets**

All tickets shall, at a minimum, contain the following information:

7. Ticket serial number
8. Date and hour of weighing
9. Weigher’s identification

Duplicate tally tickets shall be prepared to accompany each truckload of materials delivered to the project.
It is the responsibility of the Contractor to see that tickets are given to the Inspector on the project for each truckload of material delivered. Pay quantities will be prepared on the basis of said tally tickets, delivered to the Inspector at time of delivery of materials. Tickets not collected at the time of delivery will not be honored for payment.

**(May 2, 2017 APWA GSP)**  
**1-09.2(5) Measurement**

Revise the first paragraph to read:

**Scale Verification Checks** – At the Engineer’s discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

**(October 10, 2008 APWA GSP)**  
**1-09.6 Force Account**

Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor’s total bid. However, the Contracting Agency does not warrant expressly or by implication that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by Engineer.

**(******)**  
**1-09.7 Mobilization**

Revise the partial payments portion of this Section to read as follows:

Based on the lump sum Contract price for “Mobilization/Demobilization- Schedule,” or “Mobilization/Demobilization”, payments shall be made in three steps as listed below, for each Mobilization item. For each payment, the calculation shall be made in the context of the Bid Schedule for the subject item (i.e. payments for Mobilization item in Schedule A shall be for such Work completed in Schedules A and B, and payments for Mobilization in Schedule C shall be for such Work completed in Schedule C).

1. The initial 50% of the amount for Mobilization will be made when 5 percent of the total original Contract amount for the subject Bid Schedule is earned from other Contract items, including set up for the engineer’s field office.
2. Payment will be increased to 90% of the lump sum Contract price incrementally through the period of work through Substantial Completion.
3. The final 10% of the lump sum Contract price will be made after the approved completion of the punch list.

**(March 13, 2012 APWA GSP)**  
**1-09.9 Payments**

Supplement this Section with the following:

Lump sum item breakdowns are not required when the bid price for the lump sum item is less than $20,000.

**(March 13, 2012 APWA GSP)**  
**1-09.9 Payments**

Delete the first four paragraphs and replace them with the following:

Special Provisions -46
The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer’s determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor’s lump sum breakdown for that item, or absent such a breakdown, based on the Engineer’s determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

(1/1/2016 COK GSP)

Unless otherwise agreed to by both parties, the work period shall coincide with the calendar month. A check will be mailed or made available to the Contractor no later than thirty (30) days following the last day of the work period.

(July 23, 2015 APWA GSP)

1-09.11(3)  Time Limitation and Jurisdiction

Revise this section to read:
For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.05 shall control venue and jurisdiction. The parties understand and agree that the Contractor’s failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

(1/1/2016 COK GSP)
1-09.13(3) Claims $250,000 or Less

Delete this Section and replace it with the following:

The Contractor and the Contracting Agency mutually agree that those claims that total $250,000 or less, submitted in accordance with Section 1-09.11 and not resolved by nonbinding ADR processes, provided Contracting Agency agreed to engage such ADR processes, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

(July 23, 2015 APWA GSP)
1-09.13(3)A Administration of Arbitration

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency’s headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.05 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

1-10 TEMPORARY TRAFFIC CONTROL

(1/1/2016 COK GSP)
1-10.2 Traffic Control Management

The first and second sentences of Section 1-10.2(2) are deleted and replaced with the following:

The Contractor shall submit a traffic control plan or plans showing a method of handling traffic including pedestrian and bicycle traffic. All construction signs, flaggers, spotters and other traffic control devices shall be shown on the traffic control plan(s) except for emergency situations.

(******)
1-10.2 Traffic Control Plans

Delete the third sentence of Section 1-10.2(2) regarding proposed use of flaggers.

Supplement the sentences replaced by the GSP immediately above with the following:

The Contractor shall submit the traffic control plan to the Engineer a minimum of 5 business days prior to the preconstruction meeting and a minimum of two weeks prior to the start of construction. The Plans...
include two preliminary and schematic traffic control plans: one for maintenance of one lane of traffic while working between road intersections and one for detour of traffic around the work zone for work impacting road intersections, with provision for local access between the detour point and the work zone.

The traffic control plan prepared by the Contractor shall reflect at a minimum the traffic control signage, flaggers, location plan and other details and information as presented in schematic traffic control plans in the Plans. All construction signs, flaggers, spotters and other traffic control devices shall be shown on the traffic control plan(s) except for emergency situations. Generic "K" Plans will not be acceptable. The Contractor’s proposed traffic control plans shall show the necessary lane closures, lane shifts, construction signs, flaggers, spotters, and other traffic control devices required to support each phase of the construction. A separate plan shall be prepared for each major construction phase. The traffic control plan shall include the location of and parking for the Field Office for the Engineer's staff. The Contractor-provided plans shall be prepared by the Contractor’s Traffic Control Supervisor or a licensed engineer in the State of Washington and shall conform to the requirements contained in the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) and the latest version of the Work Zone Traffic Control Guidelines published by the Washington State Department of Transportation.

Payment for developing an approved traffic control plan shall be considered incidental to the lump sum price in the Proposal for "Project Temporary Traffic Control" for each bid Schedule and no additional compensation will be made. Payment for permitting, furnishing, operating, maintaining and removal of portable changeable message signs shall be considered incidental to the lump sum price in the Proposal for "Project Temporary Traffic Control" for each bid schedule and no additional compensation will be made.

The Contractor shall implement the elements or configuration of the approved traffic control plans applicable to the work to be accomplished each day. Such implementation shall include the signage per the approved traffic control plans and flaggers (minimum of two for plans that utilize flagging). The Traffic Control Supervisor shall personally supervise the setup of signage and confirm that all signage is complete prior to start of work each day. Traffic control setup may not start prior to the approved work hours each day. The signs, supports, and appurtenances shall be removed at the end of the work period daily, no later than the end of the approved work hours each day. Signs, supports and appurtenances shall be stored in a secure place and shall not be set aside in the right of way or adjacent property between work days.

Traffic control plans shall include, but not be limited to, work in the following areas:

1. Intersection of 108th Avenue NE and NE 68th Street; including management of traffic to/from 6th Street S to the north and NE 68th Street to/from the east and west and extending south to the south side of the Fire Station 22 at 6602 108th Ave NE.
2. Intersection of 108th Avenue NE and NE 62nd Street.
3. Intersection of 108th Avenue NE and NE 60th Street.
4. Intersection of 108th Avenue NE and NE 53rd Street.
5. Temporary lane closures along full length of project as work progresses.

1-10.3(1) Traffic Control Labor

1-10.3(1)B Other Traffic Control Labor

Off Duty Police

When construction activities occur at or near a signalized intersection, the Contractor shall provide an off-duty uniformed police officer to control the flow of traffic through the intersection. It is the
Contractor’s responsibility to coordinate the scheduling of the Uniformed Police Officer. The Contractor shall first attempt to schedule with the City of Kirkland Off-Duty Police Officers prior to contacting other agencies’ Off-Duty Police Officers. The numbers below are provided for the convenience of the Contractor:

2. Puget Sound Executive Services (Off-duty Washington State Patrol Troopers): (206) 417-8282

1-10.3(3) Traffic Control Devices

1-10.3(3)C Portable Changeable Message Sign

The Contractor shall provide, operate and maintain (24 hours per day, every day of the week) at least four (4) portable changeable message signs, to be located at the City’s direction on 6th Street South, 108th Ave NE and NE 68th St.

Signs shall be placed and operational a minimum of 10 calendar days prior to any water or sewer main replacement work, pavement repair, planing or paving activity, or any activity that requires significant lane closures. Signs shall provide advance warning to traffic approaching the project area in each direction of travel on the arterial. Signs shall be left up and operational a minimum of 7 calendar days after the final paving. Contractor shall coordinate message text and sign location updates with City Inspector. Prior to sign setup the contractor shall submit plans showing sign location and proposed message for each of the following phases of work. **The Contractor shall obtain any necessary permits required if signs are to be placed outside of Kirkland City Limits.**

1-10.4 Measurement

(1/1/2016 COK GSP)

1-10.4(2) Item Bids with Lump Sum for Incidentals

Section 1-10.4(2) is supplemented with the following:

“Other Traffic Control Labor-Off Duty Police (Min. Bid $75/HR)” will be measured by the hour for each hour a person is actually performing the work.

1-10.5 Payment

1-10.5(2) Item Bids with Lump Sum for Incidentals

Section 1-10.5(2) is supplemented with the following:

“Other Traffic Control Labor-Off Duty Police (Min. Bid $75/HR)”, per hour.

The unit contract price per hour for “Other Traffic Control Labor-Off Duty Police (Min. Bid $75/HR)” shall be full pay for the work described herein. No additional compensation will be made for hours of work on holidays, weekends, or overtime.

Portable Changeable Message Signs will be paid for under the lump sum bid item for “Project Temporary Traffic Control”.

Special Provisions -50
1-10.5(3) Reinstating Unit Items with Lump Sum Traffic Control

Supplement this Section with the following:

"Other Traffic Control Labor, Off Duty Police (Min. Bid $75/HR)\(^{(*)}\), per hour.

The unit Contract price per hour for “Other Traffic Control Labor, Off Duty Police (Min. Bid $75/HR)” shall be full pay for the work described herein. No additional compensation will be made for hours of work on holidays, weekends, or overtime.

The quantity for “Other Traffic Control Labor, Off Duty Police (Min. Bid $75/HR)” is not subject to the provisions of Section 1-04.6 of the Standard Specifications.

"Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\), lump sum.

Costs for layout, installation, removal, and transport of project signage shall be included with the Contract lump sum price for "Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\). This Bid item shall also constitute full compensation for all labor, tools, equipment, and materials necessary and incidental to maintaining temporary driving surface as required by Section 1-07.23(1), traffic and pedestrian control as required throughout the project duration in compliance with the MUTCD including, but not limited to, reflective signage, barricades, lights, traffic cones, and temporary pavement markings. Providing a minimum of two (2) flaggers and one (1) Traffic Control Supervisor during all periods of construction activities shall be included in the lump sum Bid item "Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\). Providing, operating, and maintaining four (4) Portable Changeable Message Signs from 7 calendar days prior to the start of construction and throughout the project duration shall be included in the lump sum Bid item "Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\).

No separate payment will be made for preparation of the Traffic Control or Detour Plans. All costs for developing, updating, and implementing Traffic Control or Detour Plans shall be included in "Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\). No separate payment will be made for materials used to maintain temporary traffic that are not incorporated into the final improvements. Such materials shall be included in and considered incidental to "Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\).

All costs for minimizing drop-offs and maintaining access to existing streets and driveways including, but not limited to, steel sheeting, and channelization devices, shall be included by the Contractor in the lump sum Bid price for "Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\). No additional or separate compensation will be allowed.

The Lump Sum bid item for “Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\)” shall cover the cost to provide temporary traffic control for the for each and every working day (the entire contract duration) allowed as defined in Section 1-08.5 of these Special Provisions. The total allowable working days defined for this contract includes sufficient time to complete all work associated with items allocated to “Minor Change” and Force Account items. Should the Contractor complete the work in fewer working days than allowed the Contract Lump Sum item will be paid in full and shall be consider an incentive to the Contractor for early completion. For additional working days approved via a change order for work that is not identified to be paid by force account, the daily cost for Project Temporary Traffic Control shall be determined by dividing the lump sum Contract price for “Project Temporary Traffic Control (Min. Bid $10,000.00)\(^{(*)}\)” by the original allowed contract working days as defined in Section 1-08.5 of these Special Provisions.

END OF DIVISION 1
DIVISION 2 - EARTHWORK

2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

(******)
2-02.3(3) Removal of Pavement, Sidewalk, Curbs, and Gutters

Supplement this Section with the following:

The contractor shall perform all sawcutting work, including the containment, collection and disposal of sawcutting debris and wastewater, in accordance with Section 1-07.5(3).

(******)
2-02.3(4) Removal/Abandonment of Piping System

This Section is added in its entirety:

Existing piping systems no longer in service shall either be removed in their entirety or abandoned in place. Existing system within 2-feet, vertically or horizontally, of the new piping system shall be removed as part of the trench excavations. Work associated with excavation, removal, sorting and disposal of the removed piping system shall be considered incidental to the new piping system unless noted otherwise.

Piping system no longer in use, that are further than 2-feet away from the new piping system, shall be cut and plugged with brick and mortar a minimum of 2 pipe diameters at each end of the piping system. Gravity system shall, at a minimum, be plugged at structures. Pressure system shall, at a minimum, be plugged at valves or where exposed during excavation for the new systems.

(******)
2-02.3(5) Monitoring Well Decommissioning

This Section is added in its entirety:

Prior to road surface restoration, the existing groundwater monitoring wells shown on the plans shall be decommissioned in accordance with Department of Ecology requirements in place at the time of removal. Contractor or subcontractor shall be responsible for filing Notice of Intent to Decommission a Well form through the Department of Ecology website. State Law requires decommissioning only by licensed well drillers. See http://www.ecy.wa.gov/programs/lvvr/wells/abandon-wells.html for more information. Materials for abandoning groundwater observations wells shall conform to the requirements of 173-160-460 WAC.

(******)
2-02.5 Payment

Supplement this Section with the following:

"Sawcutting Pavement - Up to 9.5" Thick", per linear foot.

"Decommission Monitoring Well" per each.

Sawcutting pavement shall be measured and paid only once under each bid schedule, for final preparation for permanent trench restoration or permanent curb ramp restoration. Pavement cutting and/or removal by any means prior to sawcutting for permanent restoration shall be incidental to the pipe system replacement work.
2-05 DEWATERING

2-05.1 Description

Add a new Section as follows:

The Contractor shall furnish, install, and operate all necessary equipment to keep excavations free from water during construction. The Contractor shall dispose of the dewatered water so as to not cause injury to public or private property or nuisance to the public. Disposal of water shall comply with all local, state, and federal laws and ordinances, including City of Kirkland Policy E-1, included in Appendix C of the Project Manual.

2-05.3 Construction Requirements

Add a new Section as follows:

Provide and operate equipment adequate to keep all excavations free of water in order to install project components. Do not cause settlement or damage to adjacent property. Dispose of water in a manner that will not damage adjacent property or the environment. Dewater from outside structural limits and from a point below the bottom of the excavation when possible. Dewatering from within the excavation will be permitted where the dewatering and shoring design are specifically coordinated for that expressed purpose. The dewatering system design shall prevent removal of fines from existing ground and shall provide for removal of sediments before discharge.

Designs of dewatering systems requiring dewatering wells shall be prepared, stamped, and signed by a professional Civil Engineer or Engineering Geologist who has expertise in that type of facilities, who is registered in the State of Washington, and who is not an employee of the Contractor.

Submit three copies of all dewatering designs to the Engineer a minimum of 5 business days prior to start of any excavation. Submittals of dewatering designs shall be considered informational only and not as constituting Shop Drawings. Any review of such submittals shall be only for compliance with specific stated requirements for their preparation and content and not for the accuracy or completeness of that content or for the adequacy of the dewatering systems, all of which shall be solely the responsibility of the Contractor. Protect the work and the excavation from the entry of surface drainage. The Contractor shall design a dewatering plan prior to construction for approval by the Engineer. This plan shall be kept updated throughout the duration of construction as needed to accommodate construction staging and field conditions. The dewatering plan shall be submitted to the Engineer weekly at the Progress Meetings. The dewatering plan shall show locations of well points, pump sizes and capacities, points of discharge, erosion and sediment control measures, and the use and location of filter bags or sediment ponds. The Contractor shall monitor the dewatering operations on a daily basis and make changes as necessary to assure construction in not delayed.

Dewatering of the sewer main and side sewer trench shall be considered incidental to the sewer main and side sewer replacement Work. Dewatering of the water main and water service trenches shall be considered incidental to the watermain and water service replacement work.

2-09 STRUCTURE EXCAVATION

2-09.3(1)C Removal of Unstable Base Material

Revise this Section to read:

When the material at the bottom of an excavation is not stable enough to support the Structure, the Contractor shall excavate below grade and replace the unstable material with crushed surfacing base course, or other material as directed by the Owner.
Crushed surfacing base course shall meet the requirements of Section 9-03.9(3). It shall be placed in layers not more than 6 inches thick with each layer compacted to 95 percent of the maximum density determined by ASTM 01557 Modified Proctor.

(******)

2-09.5  Payment

Supplement this Section with the following:

"Unsuitable Foundation Excavation including Haul", per cubic yard

Restoration of Structure or pipeline foundation shall be measured and paid per bid item "Crushed Surfacing Base Course", per ton.

END OF DIVISION 2
DIVISION 3 – AGGREGATE PRODUCTION AND ACCEPTANCE

3-02 STOCKPILING AGGREGATES

3-02.2 General Requirements

(******)

3-02.2(6) Construction of Stockpiles

Supplement this Section with the following:

Stockpiling of construction materials in the City of Kirkland right of way without written permission from the Engineer is prohibited.

END OF DIVISION 3
DIVISION 4 – BASES

(no Division 4 Special Provisions)

END OF DIVISION 4
DIVISION 5 – SURFACE TREATMENTS AND PAVEMENTS

5-04 HOT MIX ASPHALT

(******)
5-04.3(14) Planing Bituminous Pavement

Contractor shall provide transition grinds along all asphalt shown to remain in place for a smooth transition between the full depth overlay and the existing asphalt.

(******)
5-04.4 Measurement

Revise the first paragraph to read:

"HMA Cl.1/2” PG 64-22 for Trench Restoration (Temporary)”, per ton.

The contract unit price for “HMA Cl.1/2” PG 64-22 for Trench Restoration (Temporary)” shall be full payment for providing a temporary trench patch over the given piping system and shall include prep of subgrade, purchase, hauling, placement and compaction of HMA to provide a smooth, secure driving surface. All maintenance and/or removal and replacement of temporary patch to maintain a smooth, secure driving surface until such temporary patch is removed and replaced with permanent HMA trench restoration shall the responsibility of the contractor and at no additional cost to the owner.

"HMA Cl. 1/2” PG 64-22 for Trench Restoration (Permanent)”, per ton.

The contract unit price for “HMA Cl. 1/2” PG 64-22 for Trench Restoration (Permanent)” shall be full payment for providing a permanent trench patch over the given piping system within the travelled way, to the limits as directed by the City. The unit price shall include prep of subgrade, purchase, hauling, placement and compaction of HMA to provide a smooth, secure driving surface. All permanent patching shall be completed prior to planing and grinding of the roadway if executed as part of the contract.

"HMA Cl. 1/2” PG 64-22 for 3” Overlay”, per ton.

The contract unit price for “HMA Cl. 1/2” PG 64-22 for 3” Overlay” shall be full payment for providing a permanent driving surface within the limits shown in the contract documents or as directed by the City. The unit price shall include prep of ground surface, purchase, hauling, placement and compaction of HMA to provide a smooth, secure driving surface. The unit price bid shall include temporary and/or permanent adjustments to grade of existing and replacement manholes, valve boxes, monument casings and other castings located in the area. The unit price bid shall include removal and replacement of water valve box top and cover where water valve is not replaced as part of the work of Schedule B.

"HMA Cl. 1/2” PG 64-22 for Traffic Island Restoration”, per ton.

The contract unit price for “HMA Cl. 1/2” PG 64-22 for Traffic Island Restoration” shall be full payment for providing a permanent asphalt surface for the traffic islands within the limits shown in the contract documents. The unit price shall include prep of ground surface, purchase, hauling, placement and compaction of HMA. The unit price bid shall include all labor, materials and equipment to complete the stamped pattern in the surface of the island HMA.

"HMA Cl. 1/2” PG 64-22 for Curb Ramp Restoration”, per ton.

The contract unit price for “HMA Cl. 1/2” PG 64-22 for Curb Ramp Restoration” shall be full payment for providing restoration of asphalt surface impacted by the curb ramp restoration work within the limits
shown in the contract documents. The unit price shall include prep of ground surface, purchase, hauling, placement and compaction of HMA to provide a smooth, secure driving surface.

"Planing Bituminous Pavement", per square yard.

The contract unit price for "Planing Bituminous Pavement" shall be full payment for providing transition grinds along all asphalt shown to remain in place for a smooth transition between the full depth overlay and the existing asphalt to provide a smooth, secure driving surface. The unit price bid shall include temporary and/or permanent adjustments to grade of existing and replacement manholes, valve boxes, monument casings and other castings located in the area.

All HMA bid items will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Furnishing and placing asphalt and other materials for prime coat and edge and joint or crack sealing shall be considered incidental to the HMA bid items.

With the exception of addition of MMA Green Bicycle Lane Treatment per that bid item, all pavement markings shall be incidental to the HMA bid items. Pavement markings shall include, but not be limited to, striping, stop bars, pedestrian cross walks, traffic and bike lane symbols and fire station exit area box and cross striping. Furnishing and placing temporary pavement markings shall be required following:

- placement of temporary trench restoration
- placement of permanent trench restoration
- planing of existing pavement and trench restoration
- permanent overlay of existing pavement and trench restoration

Required temporary pavement markings may include markings by temporary tape, paint or both in succession depending on the conditions immediately following completion of temporary or permanent trench restoration or permanent overlay. Furnishing and placing permanent pavement markings per City Pre-Approved Plans shall be required for all areas where existing pavement markings are disturbed and for all areas of permanent overlay.

END OF DIVISION 5
DIVISION 6 – STRUCTURES

(no Division 6 Special Provisions)

END OF DIVISION 6
DIVISION 7 – DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS AND CONDUITS

7-05 MANHOLES, INLETS, CATCH BASINS AND DRYWELLS

7-05.3 Construction Requirements

(* * * * *)

7-05.3(1) Adjusting Manholes and Catch Basins to Grade

Supplement this Section with the following:

Existing storm and sewer structures within improvements shall be adjusted to finished grade where noted on the Plans. Final adjustment shall be smooth and flush with finished grade. The Contractor shall mark the location of all utilities prior to paving the new surface.

Existing castings shall be inspected by the Owner prior to reuse. Materials in good condition shall be reset in a careful and workmanlike manner to conform to the new grade. Contractor shall remove, dispose of, and replace materials determined to be unsatisfactory, non-City standard, or in poor condition with new materials provided by the Owner. Any damage occurring to the catch basins due to the Contractor’s operations shall be repaired at the Contractor’s own expense. All frames and covers shall be thoroughly cleaned. The Contractor shall be responsible for referencing and keeping a record of such references of all catch basins encountered and shall submit a copy of these references to the Engineer.

The adjustment section, pick holes, joints and other penetrations shall be grouted inside and out to provide a water-tight seal.

Bricks will only be allowed for adjustment where a full concrete adjustment ring cannot be used.

Catch basins and manholes shall be adjusted to finished grade in conformance with City of Kirkland Standard Plan CK-S.26

All work related to adjusting manholes and catch basins to grade shall be incidental to the “HMA Cl. 1/2” PG 64-22 for 3” Overlay” bid item.

(* * * * *)

7-05.4 Measurement

Revise the first paragraph to read:

Manholes shall be measured per each, regardless of height from rim to lowest sewer invert. Excavation for manholes shall be incidental to the manhole bid item.

(* * * * *)

7-05.5 Payment

Revise the second line of the Section to read:

"48" Sanitary Sewer Manhole", per each.

All costs associated with excavation, dewatering, backfill, compaction and all appurtenances per the Pre-Approved Plans and Plans, including removal of existing manhole and appurtenances where existing shall be replaced, shall be included in the unit Contract price for each manhole. Imported material for manhole foundation restoration shall be crushed surfacing base course per Section 9-03.9(3) and shall be measured by the ton. Manhole bedding material shall be crushed.
surfacing base course per Section 9-03.9(3) and shall be incidental, to the depth and area indicated on the City Pre-approved Plan for sewer manholes, to the manhole bid item.

Supplement this Section with the following:

"Connection to Existing Sewer Main", per each.

The unit Contract price shall apply for each connection of a replacement or new main to existing sewer main to remain, including fittings. Sewer mains shall be those pipes which extend beyond the project area and terminate in a City of Kirkland manhole. Connection of existing side sewers to remain or to be replaced to new manholes shall be incidental to the manhole bid item.

7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

7-08.3 Construction Requirements

7-08.3(1) Excavation and Preparation of Trenches

(*)*)

7-08.3(1)A Trenches

Supplement this Section with the following:

Where replacement sewer pipe is to be installed along the same alignment and the same or deeper grade as an existing sewer pipe, the existing sewer pipe, fittings and pipe zone material shall be removed. Existing pipe shall be disposed of properly. The trench shall then be prepared as for new construction.

Prior to excavation through asphalt concrete pavement or cement concrete pavement, the pavement shall be saw cut or planed (mainline only, at the Contractor's option) along a reasonably straight line, removed, and disposed. If the saw cut or planed edge is damaged during Contractor operations or raveling of the pavement occurs during construction, the Contractor shall provide clean saw cut line prior to final paving. All costs including haul and disposal associated with additional saw cutting or planing to achieve a clean pavement edge after the initial saw cut or planing shall be considered incidental to the cost of the pipe and fittings being installed in the subject trench and no additional payment will be made. Sawcutting shall only be paid once, for the final cutting for permanent trench pavement restoration. Pavement trimmed, cut and removed by other methods shall not be considered as the work of sawcutting pavement.

Prior to trenching through areas improved with lawn or through fences, rockeries, shrubs, plants, or other improvements, these improvements shall be removed, stored and protected. After the sewer installation is complete, the improved area shall be returned to a condition equal or better than the area before the sewer installation. If any stored materials are not suitable for reuse after removal, they shall be replaced with an improvement of equal or better quality.

Existing utilities are shown on the Plans subject to the constraints indicated in Section 7-09.3(6). Contractor shall complete work as necessary to verify location, depth of cover and cross sectional dimensions of existing utilities as shown on the Plans, and as marked in the field whether or not shown on the Plans, including but not limited to advance excavation by potholing at locations where pipe system mains and laterals are anticipated to cross existing utilities. Contractor shall anticipate that all existing utilities service lines are not indicated on the Plans and no additional compensation shall be paid for impacts or delays due to existing utilities service lines not indicated on the Plans. Existing utilities shall include, but not be limited to: water mains, hydrant laterals or services; sewer mains, laterals or services; storm drains, laterals or services, telephone or communications cables, conduits and/or duct banks; gas mains, laterals or services; electrical power cables, conduits and/or duct banks; street lighting cables, conduits and/or duct banks, traffic and/or pedestrian signal control cables, conduits and/or duct banks; manholes, catch basins, and structures or vaults associated with any
existing utility. Excavation by potholing shall be completed a minimum of two working days or 100 feet, whichever is greater, in advance of crossing each existing utility. Where the grade or alignment of replacement sewer or side sewer is determined to conflict or likely conflict with an existing utility, the Contractor shall notify the City in writing within 24 hours.

If sewer main replacement work is completed prior to water main replacement work, potholing for sewer main work shall include locations where proposed water main will be installed at existing side sewer crossings, to confirm replacement side sewers will be installed at adequate depth and clearance below replacement water main.

The Contractor shall provide all materials, labor, and equipment necessary to adequately shore trenches to protect existing property, utilities, pavement, and any other improvements, and to provide safe working conditions in the trench. The Contractor may use any method of shoring that complies with all local, state, and federal safety codes. The Contractor alone shall be responsible for worker safety, and the Owner and its agents assume no responsibility. Damages resulting from improper shoring or failure to shore shall be the sole responsibility of the Contractor. Shoring below the pipe will not be removed if, in the opinion of the Engineer, such removal will disturb the pipe bed.

The length of open trench shall not exceed forty (40) feet in advance of pipe laying. The maximum trench width shall be in accordance with the details shown on the Plans.

Side sewers and laterals shall be installed along a straight line and grade between adjusted replacement sewer main and point of connection to existing at limit of right of way or as shown on the Plans. Where laterals cannot be installed along a straight line and grade below water main to remain in service, with 18" or more of clearance from the water main, lateral shall be constructed with one segment of ductile iron pipe, per Section 9.30.2(1) or with PVC pipe per Section 9-30.1(5) and centered at the pipe crossing. Connections between different lateral pipe materials shall be made using Romac 501 couplings, or approved equal. Where side sewers cannot be installed along a straight line and grade with 18" of clearance below water mains to remain in service, the side sewer may be installed deeper than existing grade or straight line and grade to the crossing, then gradually steeper to the point of connection to existing side sewer, or the side sewer may be constructed with ductile iron or PVC pipe as described for lateral crossings. If the side sewer is installed deeper, the minimums slope shall be maintained and vertical bends greater than 11-1/4 degrees may not be used. Connections between different size pipe materials shall be per the requirements of Detail 1, Sheet 21 of the Plans. Additional side sewer depth, fittings, or different pipe materials required to complete the work shall be considered incidental to the sewer replacement work Bid items. Additional lateral fittings or different pipe materials required to complete the work shall be considered incidental to the sewer replacement work Bid items.

All costs associated with dewatering of the trenches and excavations shall be included in the linear foot cost of pipe installed.

All traffic lanes shall be opened to traffic at the end of each work shift. Open trenches will not be allowed.

(*//*)
7-08.3(1)C  Bedding the Pipe

Revise this Section by substituting "Pre-Approved Plans, as modified in the Plans" for "Standard Plans", in three places.

Replace the second paragraph with the following:

Pipe zone bedding shall be as specified in the Pre-Approved Plans and shall be placed in loose layers and compacted to 95 percent maximum density. Bedding shall be placed, spread, and compacted before the pipe is installed so that the pipe is uniformly supported along the barrel. Lifts of not more than 6 inches in thickness shall be placed and compacted along the sides of the pipe to the height
shown in the Pre-Approved Plans. Material shall be worked carefully under the pipe haunches and then compacted.

7-08.3(2)1 Side Sewer Connections

Revise this Section to read:

Side sewer connections or reconnections, whether from the main or from a manhole, shall be completed per the Pre-Approved Plans and Plans and plan detail, using gasketed fittings of material matching the sewer main piping or cored manhole penetration and Kor-n-Seal boot as for sewer main connections.

7-08.3(3) Backfilling

Revise the first paragraph of this Section by substituting "Pre-Approved Plans, as modified in the Plans" for "Standard Plans".

Replace the second and third paragraphs with the following:

Replaced trench foundation material shall be crushed surfacing base course per Section 9-03.9(3). Pipe bedding for water and sewer main and side sewer trenches shall be crushed surfacing top course per Section 9-03.9(3). Trench backfill for water main trenches shall be crushed surfacing top course per Section 9-03.9(3). Trench backfill for sewer main and side sewer trenches within four feet of ground surface shall be crushed surfacing top course per Section 9-03.9(3). Trench backfill for sewer main in the trench cross section from four feet below ground surface to top of pipe bedding may be select native material where suitable for use as trench backfill per Section 9-03.15, or shall be gravel borrow per Section 9-03.14(1) where directed by the City. Trench backfill for full depth of side sewer trenches and lateral sewer trenches shall be crushed surfacing top course per Section 9-03.9(3).

Pipe zone backfill shall be placed in loose layers and compacted to 95 percent maximum density. Backfill shall be brought up simultaneously on each side of the pipe to the top of the pipe zone. The pipe shall then be covered to the top of the pipe zone and the materials compacted in a manner to avoid damaging or disturbing the completed pipe. Backfill above the pipe shall be placed and compacted in lifts no greater than 12 inches.

7-08.3(5) Compaction Testing

Add the following new Sub-Section:

The Contractor shall excavate to depths and locations when and as directed by the Engineer to allow for compaction tests. Shoring shall be supplied by the Contractor at no expense to the Owner. The City will provide all compaction testing services. The Contractor shall supply all required traffic control at no additional cost to the Owner.

Any areas that fail to meet compaction requirements shall be re-tested at the expense of the Contractor. The amount of said expenses shall be computed and determined on the basis of an itemized schedule of engineering, inspection, and testing charges determined for the actual hours of labor taken to retest said area.

No paving will be allowed until trench compaction has been tested and accepted.

7-08.4 Measurement

Revise the first paragraph of this Section to read:
Imported material for trench foundation restoration shall be crushed surfacing base course per Section 9-03.9(3) and shall be measured by the ton.

Revise the last paragraph of this Section to read:

Trench Safety Systems (Shoring) shall be measured per linear foot, as measured along the centerline of completed pipe system main installed per this Contract from center of manhole to center of manhole and along replacement and along the centerline of completed side sewer from connection to sewer main to connection to existing side sewer at property line or along full length of water main and fire hydrant lateral trench. Length or payment shall be regardless of depth and regardless of need to provide shoring around or beyond center of manhole at start or end of sewer main or side sewer, or beyond end of replacement water main or fire hydrant.

7-08.5 Payment
Revise the ninth paragraph of this Section to read:

"Trench Safety Systems (Shoring)", per lineal foot.

WATER MAINS

7-09.1 Description

7-09.1(1)A Trench Widths
Supplement this Section with the following:

No payment will be made for trench backfill or restoration which is outside trench limits (maximum pay limits) as indicated on the Plans, Standard Plans, or specified herein. Excavation and trench backfill outside the trench limits will be considered to be done at the sole benefit of the Contractor. Trench for water main shall be limited to the width necessary to complete the work, with the minimum width being the water pipe diameter plus 24 inches.

7-09.2 Materials
Supplement this Section with the following:

Material(s) shall meet the requirements as supplemented herein. All materials shall be as specified on the Plans and in the City of Kirkland's standard details, unless otherwise specified herein.

Ductile Iron Pipe
All Ductile Iron Pipe shall be Class 52 with push-on type rubber gasketed joints and conforming to AWWA C151 and AWWA C111. The pipe and fittings shall be cement lined and scaled in accordance with AWWA C1 04. Fittings for ductile iron pipe shall meet the requirements of AWWA C110 or AWWA C153.

Fittings
All water main fittings shall be ductile iron conforming to the requirements of Section 9-30.2(1) and shall be installed with appropriate thrust blocking. Other approved means of restraint may be added but are not to be used in lieu of thrust blocking.
Following assembly, all fitting nuts, bolts, exposed threads, and shackle rods shall be treated with two field coats of asphalt varnish, or other suitable material as approved by the Engineer.

Thrust blocking per Section 7 -11.3(13) is required regardless of whether the Contractor elects to use restrained joints for construction purposes.

If used, joint restraints are to be mechanical joint retainer glands, manufactured from ductile iron to a minimum 60-40-12 grade. Set screws are to be manufactured from AISI 4140 steel, case and core hardened, unplated. Screws are to have breakable automatic torque caps. All sizes must be UL listed and meet all specifications of AWWA/ANSI C 111/A21 11-80 where applicable. Retainer glands are to be Auto-Tork as manufactured by Standard International.

**Trench Backfill**

Trench Backfill shall be Crushed Surfacing Top Course meeting the requirements of 09-3.9(3).

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(******)

*7-09.3 Construction Requirements*

(******)

*7-09.3(5) Grade and Alignment*

Supplement this Section with the following:

The water main shall be installed with the minimum depth of cover as feasible, but with no less than 48 inches of cover for 12-inch or larger water mains or no less than 36 inches of cover for 8-inch or smaller water mains or hydrant laterals. Contractor shall anticipate that installation with as much as 60 inches of cover may be necessary, to avoid conflicts with existing utilities.

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(******)

*7-09.3(6) Existing Utilities*

Replace the first paragraph of this Section with the following:

Existing underground utilities and some overhead utilities are shown on the Plans based on plans provided by the utility service providers. Existing underground utility service lines are shown per utility service provider records or where evident from surface elements of such services. All existing utilities information is shown for convenience only, and the Engineer and City assume no responsibility for improper locations or failure to show utility or utility service line locations. The depth of cover or cross-sectional dimension of any existing utility are not known with certainty, including pipe diameter or invert where such can be interpolated for storm drain or sanitary sewer pipe systems.

Supplement this Section with the following:

Contractor shall complete work as necessary to verify location, depth of cover and cross sectional dimensions of existing utilities as shown on the Plans, and as marked in the field whether or not shown on the Plans, including but not limited to: advance excavation by potholing at locations where pipe system mains and laterals are anticipated to cross existing utilities. Contractor shall anticipate that all existing utilities service lines are not indicated on the Plans and no additional compensation shall be paid for impacts or delays due to existing utilities service lines not indicated on the Plans. Existing utilities shall include, but not be limited to: water mains, hydrant laterals or services; sewer mains, laterals or services; storm drains, laterals or services, telephone or communications cables, conduits and/or duct banks; gas mains, laterals or services; electrical power cables, conduits and/or duct banks; street lighting cables, conduits and/or duct banks, traffic and/or pedestrian signal control cables, conduits and/or duct banks; manholes, catch basins, and structures or vaults associated with any existing utility. Excavation by potholing shall be completed a minimum of two working days or 100 feet, whichever is greater, in advance of crossing each existing utility.
Trench Excavation

Existing utilities are shown on the Plans subject to the constraints indicated in Section 7-09.3(6). Contractor shall complete work as necessary to verify location, depth of cover and cross sectional dimensions of existing utilities as shown on the Plans, and as marked in the field whether or not shown on the Plans, including but not limited to advance excavation by potholing at locations where pipe system mains and laterals are anticipated to cross existing utilities. Contractor shall anticipate that all existing utilities service lines are not indicated on the Plans and no additional compensation shall be paid for impacts or delays due to existing utilities service lines not indicated on the Plans. Existing utilities shall include, but not be limited to: water mains, hydrant laterals or services; sewer mains, laterals or services; storm drains, laterals or services, telephone or communications cables, conduits and/or duct banks; gas mains, laterals or services; electrical power cables, conduits and/or duct banks; street lighting cables, conduits and/or duct banks, traffic and/or pedestrian signal control cables, conduits and/or duct banks; manholes, catch basins, and structures or vaults associated with any existing utility. Excavation by potholing shall be completed a minimum of two working days or 100 feet, whichever is greater, in advance of crossing each existing utility. Where the grade or alignment of replacement water main or hydrant lateral is determined to conflict or likely conflict with an existing utility, the Contractor shall notify the City in writing within 24 hours.

Extra Trench Excavation

When it is determined it is necessary to increase pipeline depth of cover from 36 inches (8-inch or smaller water main) or 48 inches (12-inches or larger water main), to more than 60 inches, the Contractor shall make such extra excavation as necessary. Transition of water main grade to and from increased depth of cover shall be accomplished with gradual transition of grade to achieve the necessary depth of cover at the utility crossing, without use of vertical bends or fittings.

Removal and Replacement of Unsuitable Materials

All material removed from the trench shall be hauled to a disposal site provided by the Contractor unless otherwise directed by the Owner's field inspector in writing.

Bedding the Pipe

Pipe zone bedding shall be crushed surfacing top course per Section 09-3.9(3).

Backfilling Trenches

Backfill shall be select trench backfill as described in Section 7-08.3(3) herein.
A sand cushion or Ethafoam pad shall be placed between the new water main and any existing utilities within 12 inches of the new water main. Water and sewer spacing shall comply with the City of Kirkland Pre Approved Plan No. CK-W.01. Backfilling operations shall conform to AWWA C-600.

Excavations will not be allowed to remain open during non-working hours. All open excavation shall be backfilled and covered with HMA or covered with steel sheets with appropriate traffic warning signs. The steel sheets shall not be used over weekends. Steel plates used to cover open trenches within the roadway shall not be allowed to remain in place during non-Working Days if within one hundred (100) feet of any intersection as measured from the mainline stop bar.

(******)
7-09.3(11)  Compaction of Backfill

Supplement this Section with the following:

Backfill shall be compacted to 95 percent of maximum dry density using the modified proctor test in accordance with ASTM D1557.

(******)
7-09.3(11)A  Compaction Testing

Add the following new Sub-Section:

The Contractor shall excavate to depths and locations when and as directed by the Engineer to allow for compaction tests. Shoring shall be supplied by the Contractor at no expense to the Owner. The City will provide all compaction testing services. The Contractor shall supply all required traffic control at no additional cost to the Owner.

Any areas that fail to meet compaction requirements shall be re-tested at the expense of the Contractor. The amount of said expenses shall be computed and determined on the basis of an itemized schedule of engineering, inspection, and testing charges determined for the actual hours of labor taken to retest said area.

No permanent paving will be allowed until trench compaction has been tested and accepted.

(******)
7-09.3(19)A  Connections to Existing Mains

Supplement this Section with the following:

The Work includes the replacement of segments of existing water main, and in some cases, valves and fittings. Connections shall be made to existing, replacement or new fittings, valves or couplings as indicted on the Plans. The sequence of work for each replacement segment shall include the following steps:

1. Coordination with the Engineer 10 working days in advance of planned work and need for water system valve operations.
2. The Contractor shall contact City of Kirkland Department of Public Works five (5) working days prior to any work requiring the shutdown of existing water mains. Shutdowns will be scheduled for Monday through Thursday.
3. Coordinate with Engineer for the City Public Works Department to isolate and de-pressurize select segments of water main to be cut for pipe replacement. Cut and temporarily cap and thrust block existing piping to remain in service. Coordinate with City to re-pressurize and flush the existing piping to remain in service.
4. Remove and replace piping, valve and fittings to the extent practical to disinfect, flush and pressure test the replacement piping segment. Disinfect, flush and pressure test as required by the Contract documents. Coordinate with the Engineer for the City Public Works Department to collect water samples for purity testing.

5. Following notification of satisfactory water quality sample results, coordinate with Engineer for the City Public Works Department to isolate and de-pressurize select segments of water main for final pipe connections. Complete final connections and flush water system segment.

Testing and flushing the replacement water main must meet the following schedule and criteria:

It shall be the Contractor’s responsibility to notify the City of Kirkland Department of Public Works two (2) working days in advance of scheduling the filling and flushing of the replacement water main.

New water mains shall be filled, flushed, and pressure tested with the City’s Field Representative present.

After achieving a successful pressure test the replacement water main segment must be flushed and purity samples taken within 48 hours or as approved by Engineer.

After the new water main has been flushed and acceptable purity samples have been taken it must be connected to the existing system within seven (7) days.

No permanent connections to the existing system shall be made until the new water main has been tested and approved by the Engineer. No temporary connections of the untested, unapproved replacement water main segment to the existing system shall be made without the installation of a double check valve assembly between the replacement water main segment and existing system.

The Contractor shall contact City of Kirkland Department of Public Works five (5) working days prior to any work requiring the shutdown of existing water mains. Shutdowns will be scheduled for Monday through Thursday.

The Contractor is required to give two (2) working days’ notice to all customers affected by a water main shutdown. Shutdowns affecting institutions and commercial use properties shall be scheduled at night. Notices and maps of the affected area will be provided by City of Kirkland Water Division after acceptable purity test results are obtained. The Contractor shall be responsible for filling in the required information and distribution of the door hanging notices.

A maximum of one system connection shall be scheduled per day unless multiple connections are advantageous to the water system and have been approved by the Water Department.

The City Water Department will be responsible for all tasks involved with shut-off and turn-on of the existing water mains. Unless directed otherwise by the Engineer, the Contractor shall not operate existing water system valves or fire hydrants.

Connections to the existing water system shall be considered as one (1) connection regardless of the type of connection being made or the materials necessary to make the connection.

Each connection shall be made in compliance with the Plans. Connections to existing mains shall comply with the requirements for maintaining service as described herein.

The Contractor shall be aware that some existing water facilities are known to contain asbestos cement pipe. The Contractor will conduct all work related to existing asbestos cement pipe in strict accordance with current WISHA safety regulations and provisions contained within WAC 296-62-077. All costs related to work in compliance with established rules and regulations shall be the responsibility of the Contractor. Removal of existing asbestos cement pipe from the ground, if required, will be permitted.
only after the proper permits are obtained from the Puget Sound Air Pollution Control Agency. The Contractor will be responsible for all associated fees and permits required for asbestos removal and disposal. The Contractor shall provide work crews with proper protective clothing and equipment.

Connections to existing AC mains shall be made on rough barrel section of the main, and not at milled joints, using Romac brand couplers with the proper transition gaskets.

Connections shall be less than one pipe length; using the "bell end" or a "wedding band" is not permitted.

(******)
7-09.3(19)B Maintaining Service

Revise this section as follows:

Water service shall be maintained as described on the Plans and as follows:

Prior to commencement of any work on a connection to an existing water main, the Contractor shall assemble all materials, equipment, and labor necessary to properly complete the work. All tie-in materials to the existing water system shall be on-site by 3:00 p.m. of the day prior to the connection. A maximum of one system tie-in shall be permitted per Working Day. Once the water has been shut off, the Contractor shall diligently pursue the connection to completion so that the time required for the shut-off will be held to a minimum. All connections to existing water mains shall be completed the same day that they are started. The Contractor shall time his operations so that the water will not be shut off overnight, over weekends, or during holidays.

The existing water mains are intended to remain in service until testing and disinfecting have been approved by the City and until all water service connections have been transferred. If, due to the Contractor's actions, the existing water system fails to provide service to adjacent residences and businesses, then the Contractor shall provide temporary service to the affected residences and businesses. Furthermore, the temporary services, if required, shall be approved by the Engineer prior to installation. All costs of providing and maintaining temporary service for the necessary time durations shall be completely borne by the Contractor. Should the Contractor neglect or needlessly delay in the pursuit of this work item, the City may at its discretion dispatch crews to remedy the situation and deduct all costs associated with the employment of their crews from moneys owed the Contractor.

Contractor shall test the replacement water main in multiple sections, up to three, to be coordinated with the City, and the existing system shall remain in service until the corresponding replacement main is fully tested and ready for use.

(******)
7-09.3(23) Hydrostatic Pressure Test

Revise this section as follows:

All water mains and appurtenances shall be tested under a hydrostatic pressure equal to 200 psi for 15 minutes with no pressure drop. Water service lines will be visually inspected for leakage. Before applying the test pressure, air shall be expelled completely from the pipe, valves and hydrants. All pumps, gauges, plugs, saddles, corporation stops, backflow prevention devices, miscellaneous hose and piping, and other equipment shown on the Plans and that are necessary for performing the test shall be furnished and operated by the Contractor. The pipeline trench shall be backfilled sufficiently to prevent movement of the pipe under pressure. All thrust blocks shall be in place and sufficiently cured to reach design strength before testing. Where permanent blocking is not required, the Contractor shall furnish and install temporary blocking and remove it after testing. For construction of new water main, the services will be tested with the main.
The mains shall be filled with water and allowed to stand under pressure for a minimum of 24 hours to allow the escape of air and/or allow the lining of the pipe to absorb water. The Owner will furnish the water necessary to fill the pipelines for testing purposes at a time of day when excess quantities of water are available for normal system operation. No connection shall be made between the new main and the existing mains until the new piping has been disinfected, flushed, and passed both pressure and purity testing.

Gauges used in the test may be required to be certified for accuracy at a laboratory by the Owner.

Any visible leakage detected shall be corrected by the Contractor to the satisfaction of the Owner. Should the test section fail to meet the pressure test successfully as specified, the Contractor shall, at his own expense, locate and repair the defects and then retest the pipeline.

After the test has been completed, each valve shall be tested by closing each in turn and relieving the pressure beyond. This test of the valves will be acceptable if there is no immediate loss of pressure on the gauge when the pressure is applied to the valve being checked. The Contractor shall verify that the pressure differential across the valve does not exceed the rated working pressure of the valve. All tests shall be made with the hydrant auxiliary valve open and pressure against the hydrant valve.

Prior to requesting the Engineer to witness the pressure test, the Contractor shall have all equipment set up completely ready for operation and shall have successfully performed the test to assure that the pipe is in a satisfactory condition.

A clean container shall be used for holding water for pumping pressure on the main being tested. This makeup water shall be sterilized by the addition of chlorine to a concentration of 50 mg/l. Upon satisfactory completion of the pressure test, the line shall be disinfected, flushed, and then a sample shall be taken for purity testing by the Public Works Inspector. Results of the purity testing shall be in-hand prior to any commitment to turning on valves.

(******)
7-09.3(23)A  Testing Extensions from Existing Mains
Supplement this Section with the following:

When an extension greater than 18 feet is made from an existing valve, or from a section of main without services which can be isolated by an existing valve, the Contractor may have the option of pressure testing the existing section or valve to eliminate the need for a final connection by pretested, pre-chlorinated pipe, subject to the consent of the Engineer.

In electing and receiving consent to utilize the method of pretesting and direct connection, the Contractor retains all responsibility for successful final testing of the completed new construction and assumes all risk for damages which may be caused to the existing system valves, piping, or appurtenances.

(******)
7-09.3(24)  Disinfection of Water Mains
Supplement this Section with the following:

Prior to discharging chlorinated water to the storm drainage system or any waterway, the Contractor shall obtain approval from the City of Kirkland and all other governing agencies. Once all approvals and permits have been obtained, the Contractor shall completely de-chlorinate the water prior to discharging it to the storm drainage system or any waterway.
Prior to discharging chlorinated water to the sanitary sewer system, the Contractor shall obtain approval from the City of Kirkland Project Manager and Sewer Department Supervisor. The Contractor is responsible for providing advance written notification to all regulatory agencies of its intent to discharge chlorinated water and the scheduled timing of these activities.

(******)
7-09.3(24)A Flushing
Supplement this Section with the following:

Flushing water conveyed to the sanitary sewer system shall be at a rate which does not exceed the capacity of the City's sewer lines and lift stations. This rate will be less than the rate needed to obtain the minimum required flushing velocity of 2.5 feet per second. The Contractor shall provide all necessary tanks and appurtenances for de-chlorination and discharge rate control.

Contractor shall provide a backflow prevention device at the hydrant used for providing water for flushing. Contractor shall also provide an air gap device at the discharge sewer manhole to provide a minimum 2-foot air gap between the discharge pipe invert and the manhole opening.

(******)
7-09.3(25) Working with AC Pipe
Add the following new Sub-Section:

All Contractors working with AC pipe must be state-certified. The Contractor shall provide protective clothing and equipment (coveralls, gloves, boots, head covering, goggles, respirators, etc.) to crews working with asbestos cement pipe in order to assure the worker's exposure to asbestos material is at or below the limits prescribed in WAC 296-62-07705.

(******)
7-09.4 Measurement
Revise the first paragraph of this Section to read:

“Ductile Iron Pipe for Water Main ___ In. Diameter” will be measured per linear foot along the horizontal centerline of the pipe installed, including all necessary fittings as shown on the Plans, and tested.

Supplement the section with the following:

“Connection to Existing Water Main (8”/12”/18”)” will be measured per each.

“Additional Ductile Iron Fittings” will be measured per pound, including follower glands for mechanical joint fittings and bolts, nuts and gaskets for all fittings.

Delete the last two paragraphs of this Section and replace with the following:

Measurement of crushed surfacing top course for trench backfill shall be per ton.

(******) 7-09.5 Payment
Replace the second, third and fourth paragraphs of this Section with the following paragraphs:

“Ductile Iron Pipe for Water Main ___ In. Diameter”, per linear foot

The unit Contract price per linear foot for “Ductile Iron Pipe for Water Main ___ In. Diameter” shall be full pay for all Work to complete the installation of the water main, of the size indicated, including but not
limited to, coordination with the Engineer, City Public Works Department, notice to water system customers impacted by the Work, trench excavation, bedding, furnishing, laying and jointing pipe and all fittings as indicated in the Plans, connection and transition to existing piping, removing and handling of existing asbestos cement water pipe, backfilling, concrete thrust blocking, testing, disinfecting the pipeline, flushing, pressure testing, coordination sampling for water quality analysis and all related work at each connection, flushing, dechlorination of water used for flushing and cleanup.

The unit Contract Price for water main shall also include all fittings and accessories as shown on the Plans for temporary and permanent pipe, fitting and/or valve connections. Tees for fire hydrant assemblies shall be included in the fire hydrant bid item.

Payment for restoration will be made under the applicable items shown in the Proposal. If no pay items for restoration are included in the Proposal, restoration shall be considered incidental to the Work of constructing the replacement water main, and all costs thereof shall be included in the unit Contract price Bid for "Ductile Iron Pipe for Water Main __ In. Diameter".

Supplement the section with the following:

"Connection to Existing Water Main (8"/12"/18")", per each.

The Contract unit price for "Connection to Existing Water Main (8"12"/18")" shall constitute full compensation for all labor, materials, tools and equipment necessary for a complete connection between the proposed water main and the existing water main as shown on the Plans and outlined above and specified herein including but not limited gaskets, bolts, all pipe for which a specific bid item has not been provided, nipples, adapters, couplings, fittings as shown on the Plans, restrained joints (Mega-Lug or similar), thrust blocking, dewatering, excavation, compaction, pressure and purity testing, and temporary blow-offs necessary for testing.

Water used in placing and compacting surfacing materials shall be considered incidental to the material being placed.

"Additional Ductile Iron Fittings", per pound.

The Contract unit price for "Additional Ductile Iron Fittings" per pound shall constitute full compensation for all labor, materials and equipment necessary for additional ductile iron fittings, including mechanical joint follower glands, bolts, nuts, and gaskets where directed by the City or as required and approved by the City to address a revised connection of water system pipe.

7-12 VALVES FOR WATER MAINS

7-12.2 Materials

Supplement this Section with the following:

**Gate Valves- 4 to 12 Inch**

Gate valves shall conform to the standards of AWWA C-509 and/or C-515. Gate valves shall be iron body, bronze mounted, resilient seated, non-rising stem, operating stems equipped with standard 2-inch operation nut, and a-ring stem seals, suitable for installation with the type and class of pipe being installed. Ends to be as specified. Valve opening direction shall be counterclockwise. The gate valves shall be as manufactured by Mueller, Dresser, M&H, Pacific States, or approved equal.
Valve Boxes
Valve boxes shall be Rich Box No. 940 with deep covers or equal and installed per City of Kirkland’s Pre-Approved Plans

Air and Vacuum Release Assembly and Blowoff Assembly
Air and vacuum release assemblies and blowoff assemblies shall comply with City of Kirkland’s standard details. All exposed above-ground piping and materials shall be painted with Kelly Moore DTM 5780 gloss enamel – Safety Blue and shall be identified with an enamel painted marker post. Air-reliefs shall have 6” to 10” clearance from top of device to the finished grade of lid and the box grouted both inside and out. Air reliefs and blowoffs shall be checked for proper function

(******)
7-12.3 Construction Requirements
Supplement this Section with the following:

All valves with operating nuts located more than five (5) feet below finished grade shall be equipped with extension stems and locking lids per City of Kirkland's standard details.

Valve extensions shall be provided per Pre-Approved Plan CK-W.05 if necessary, to adjust valve boxes to grade.

Valve box top sections shall be adjusted flush with the finished pavement and, in those areas to be excavated for future roadway grades, enough adjustment shall be provided in the valve box to allow the top of the box to be adjusted to the required grade.

The valve box shall be free of debris and the lid shall be painted with blue enamel.

The valve box ears shall be lined up in the direction of flow (parallel to the direction of the pipe.)

The water main valves shall have resilient seats for all valves, no matter which type (gate or butterfly). The valve nut shall be centered in the valve box. The valve shall be checked for proper operation before and after the new line is pressurized.

Valve box paving risers shall be cast iron suitable for H-20 traffic loading.

(******)
7-12.5 Payment
Revise the second paragraph of this Section to read:

"Gate Valve __ ln.\text{,} per each."

Supplement this Section with the following:

The unit contract price for "Gate Valve __ ln." shall constitute full pay for all work to furnish and install the valve complete in place on the water main, including trenching, jointing, blocking of valve, painting, disinfecting, hydrostatic testing, valve box, marker post, and adjustment of valves to grade after the final paving operation. No additional compensation will be provided for adjustment of new valves to grade.
7-14 HYDRANTS

7-14.1 Description
Supplement this Section with the following:

This work also includes removing existing fire hydrants.

7-14.2 Materials
Supplement this Section with the following:

All materials for new fire hydrant assemblies shall be per City of Kirkland Standard Plan CK-W.14.

All fire hydrants shall be approved by the National Board of Fire Underwriters and conform to City of Kirkland's standard details and AWWA Specifications C-502. New hydrants shall be used in all cases. Each hydrant shall be equipped with a suitable positive acting drain valve, a 5-⅜ inch female Seattle standard thread rigid Storz adaptor, and 1-⅜ inch pentagonal operating nut (counterclockwise opening). Storz adaptors shall be installed prior to making the new water main and hydrants active. The fire hydrants shall be Mueller (Centurion), M&H (Style 929), Waterous (Pacer), Clow (Medallion), American Darling (B-62-B), or American AVK (Series 2780). Hydrants shall be painted per City Standards with 2 coats of Kelly Moore DTM 5780 enamel - Safety Yellow.

One blue lane marker, Type 2, shall be installed at all fire hydrant locations. The marker shall be permanently adhered to the street pavement.

The hydrant shall utilize shackles rods, mega-lugs, and concrete thrust blocks – no exceptions.

7-14.3 Construction Requirements
Supplement this Section with the following:

See City of Kirkland Policies for additional requirements.

The Contractor shall install Ethafoam at utility crossings where there is less than 12 inches of vertical separation. Any curb not required to be removed for excavation or installation of the hydrant run that is removed or damaged by construction activities shall be replaced at the Contractor’s expense and no additional compensation will be made.

7-14.3(1) Setting Hydrants
Supplement this Section with the following:

Storz adaptors shall be installed prior to activating the new water main and hydrants.

The hydrant shall have a 3-foot minimum surrounding clearance for proper operation. The hydrant shall be set to proper grade and shall be tested for proper function.

Hydrants shall be installed in accordance with the City of Kirkland Standard Plans and Policies.
7-14.3(7) Removing Existing Hydrant

Add the following new Subsection:

Where shown on the Plans, existing fire hydrants assemblies shall be removed. The contractor shall remove the connection to the existing water main, install blind flange or cap at existing tee, remove existing line between main and existing hydrant, remove hydrant and valve and deliver to City of Kirkland Public works yard. All excavations shall be backfilled with crushed surfacing top course.

7-14.4 Measurement

Supplement this Section with the following:

Removal of existing fire hydrants will be incidental to other bid items.

7-14.5 Payment

Supplement this Section with the following:

"Fire Hydrant Assembly", per each.

The unit contract price for “Fire Hydrant Assembly” shall constitute full compensation for all labor, materials, tools and equipment necessary and incidental for complete installation of new fire hydrant assemblies as shown on the Plans and specified herein including but not limited to main line tee, 6-inch auxiliary gate valve and fittings, 6-inch water pipe hydrant run, hydrant, Storz adapter, thrust blocking and joint restraint, all other necessary appurtenances, Ethafoam, trench excavation and dewatering, drain rock, temporary HMA trench patching, maintenance, testing and disinfection, new blue reflector on pavement, and fire hydrant painting. Imported CSTC bedding, backfill, and compaction will be paid under the “Crushed Surfacing Top Course” bid item.

7-15 SERVICE CONNECTIONS

7-15.1 Description

Supplement this Section with the following:

This work shall consist of installing new service connections from the new main to the customer's service line with fittings required to make a watertight connection, installing new meter boxes, service lines, manifolds, saddles, setters, and other appurtenances, reinstalling existing water meters, extending the service line on the private side of the meter and connecting to the existing service line with an appropriate coupler to match existing material type.

7-15.2 Materials

Supplement this Section with the following:

All water service pipe, boxes, and appurtenance materials shall be as specified on the Plans and per the City of Kirkland Standard Plans and Policies.
7-15.3  Construction Requirements

Supplement this Section with the following:

Where shown on the Plans and per City of Kirkland Standard Plans, existing services shall be removed and replaced with completely new water services. Replacement services are to follow existing service alignment, where meter is not noted to be moved laterally. All replacement service lines are drawn to and offset from existing service line alignment for graphical clarity on the plans. All services are to be perpendicular from mains and replaced service lines shall follow existing service line alignment as closely as feasible. Services of 1.5” or larger size shall be replaced to a location next to the existing service, as determined by the City and, when ready for final connection, Contractor shall furnish, install and connect service from customer side of replacement service to customer side of existing service with materials and fittings as necessary. Existing service pipe, meter boxes, and fittings shall be removed and disposed of by the Contractor. Connection to the existing service line shall be made at the right-of-way line where possible. Contractor shall expose and determine the existing service line material type at the point of connection and provide an appropriate fitting for connection.

All materials shall be on-site and approved by the Engineer prior to scheduling water shutdowns. Contractor shall coordinate the water service replacement to limit service outage to less than four (4) hours.

Contractor shall provide written notice of shutdown two (2) Working Days in advance to all affected customers. Written notice shall be reviewed and approved by the City five (5) Working Days prior to shutdown. The Contractor is required to distribute notices.

Each new water service line shall be properly tested, flushed, inspected and approved prior to being connected to its respective water meter.

The Contractor shall install Ethafoam at utility crossings where there is less than 12 inches of vertical separation, and fill voids with crushed surfacing topcourse. The Contractor shall sawcut, remove, and replace existing curb and gutter for excavation for service lines and install Ethafoam at utility crossings where there is less than 12 inches of vertical separation. Any curb not required to be removed for short side water service installation that is removed or damaged shall be replaced at the Contractor’s expense and no additional compensation will be made.

New 1-inch services shall be installed per City of Kirkland Standard Plan CK-W.18 for existing services 1-inch and smaller. Meter boxes shall be installed per City of Kirkland Standard Plan CK-W.21 where placed in planter and CK-W.23 where placed within hard surface or adjacent to driving surface, as noted on the Plans. 1-inch service connections shall include continuous 1-inch diameter polyethylene pipe with tracer wire from main to meter for 3/4-inch and 1-inch services, 1-inch angle stop (with 1 inch x 3/4 inch adapter for 5/8 x 3/4 inch meters), check valve or additional angle stop (see Standard Plan CK-W.18), single strap saddle, corporation stop, meter box and lid, and all other necessary fittings and appurtenances for connection to existing customer-side service pipe. The tracer wire shall be stripped 8-inches from the center of the water meter box. Coordinate reinstallation of existing water meter with the City.

Water Meters and Boxes

Water meter boxes shall be replaced with new meter boxes unless otherwise noted on the Plans. Meter boxes shall be set to grade—raised or lowered to the surrounding grade regardless of prior condition. Where the existing grade at the meter location is sloped, the meter box shall be set flush to match the slope. Meters shall be set between 6 inches and 10 inches below the meter box lid.

Water Meters and boxes shall have the customer side of meter re-plumbed with appropriate materials and related fittings (i.e., brass, copper, polyethylene or PVC rated at 200 p.s.i.)
If the existing meter does not have a check valve installed on the customer side of the meter, an angle stop shall be installed in lieu of the check valve per Standard Plan CK-W.18 and CK-W.19.

(******)

7-15.4 Measurement
Supplement this section with the following:

“Service Connection ___ In. Diam. ___ Side” will be measured per each for each size and location of service connection and also include the water meter assembly, service saddle, and connection to the main.

(******)

7-15.5 Payment
Supplement this section with the following:

“Service Connection ___ In. Diam. ___ Side”, each.

The unit Contract price “Service Connection ___ In. Diam. ___ Side” per each shall constitute full compensation for all labor, materials, tools, and equipment necessary for the complete installation of the water meter assembly and water service line as shown on the Plans and per City of Kirkland Standard Plan CK-W.18, including but not limited to the service saddle and connection to the main, new service line to main, tracer wire, excavation, Ethafoam, new water meter assembly, and connection to the new water meter assembly. This bid item shall be divided between near side and far side services, with near side services defined as all services to meters on the same side of the road center line as the water main and far side services as all services to meters on the opposite side of the road center line from the water main.

7-17 SANITARY SEWERS

(******)

7-17.1 Description
Revise the first paragraph of this Section by substituting "Pre-Approved Plans, as modified in the Plans" for "Standard Plans".

7.17.3 Construction Requirements

(******)

7.17.3(2)A General
Supplement this Section with the following:

Replacement sewer main or laterals not terminating in an existing or new manhole at both extents of the replacement work shall be tested as the replacement work progresses, prior to connection to existing sewer main or lateral. Replacement side sewers shall be tested with the connected sewer main up to the cleanout prior to connection to existing side sewer. Replacement sewer mains and all manhole bench and channel work shall be completed to the City’s requirements before connections to existing laterals and side sewers are completed or before bypassed wastewater is returned to the subject sewer main.
7-17.5 Payment

Revises the eighth paragraph of this Section to read:

The unit Contract price per linear foot for sewer pipe of the kind and size specified shall be full pay for all Work required including furnishing, establishing, maintaining and decommissioning wastewater bypass systems, removal and disposal of surface materials, excavation, dewatering, existing pipe and fittings removal and disposal, furnishing, hauling and assembling in place the completed installation including all wyes, tees, special fittings, joint materials, backfill for pipe zone bedding, trench backfill and compaction and adjustment of inverts to manholes for the completion of the installation to the required lines and grades and testing and television inspection, and all related Work necessary for completion of replacement or re-routed sewer piping as indicated on the Plans, where such work is not included in other bid items.

7-18 SIDE SEWERS

7-18.1 Description

Revises the first paragraph of this Section by substituting "Pre-Approved Plans, as modified in the Plans" for "Standard Plans".

7-18.3 Construction Requirements

7-18.3(1) General

Revises this Section to read:

Side sewers shall be connected to the tee, wye or riser provided in the sewer main as indicated in the Pre-Approved Plans and Plans.

7-18.4 Measurement

Supplements this Section with the following paragraph:

"Side Sewer Connection", per each.

7-18.5 Payment

Supplements this Section with the following paragraph:

The unit Contract price per each "Side Sewer Connection" shall be full pay for all Work required for completion of the connection of existing side sewer to remain to a replacement or new manhole or replacement sewer main, including furnishing, establishing, maintaining and decommissioning wastewater bypass systems, existing pipe and fittings removal and disposal, furnishing, hauling and assembling in place the completed installation including all wyes, tees, special fittings, joint materials, connection to existing side sewer pipe, gravel backfill for pipe zone bedding, dewatering, trench backfill and compaction and adjustment of inverts to sewer mains and manholes for the completion of the installation to the required lines and grades, and all related Work necessary for completion of side sewer connection as indicated on the Plans, where such Work is not included in other Bid items. Payment for Side Sewer Cleanout for existing or replacement side sewers shall be per the Sewer Cleanout bid item.
7-19 SEWER CLEANOUTS

(******)

7-19.1 Description
Revise the first paragraph of this Section by substituting "Pre-Approved Plans, as modified in the Plans" for "Standard Plans".

(******)

7-19.5 Payment
Revise the last paragraph of this Section by substituting "Pre-Approved Plans, as modified in the Plans" for "Standard Plans".

END OF DIVISION 7
DIVISION 8 - MISCELLANEOUS CONSTRUCTION

8-01 EROSION CONTROL AND WATER POLLUTION CONTROL

(******)

8-01.1 Description

Supplement this Section with the following paragraphs:

The Stormwater Pollution Prevention Plan (SWPPP) shall be prepared as part of the work of Bid Schedule A and shall apply to Bid Schedules A, B, and C.

(June 20, 2017 COK GSP)

8-01.1 Description

Section 8-01.1 is supplemented with the following:

Implementation of appropriate TESC BMP’s at the appropriate construction phases is very important to prevent siltation of the subgrade, aggregate courses, and final permeable pavement. The Contractor shall install and maintain all temporary and permanent erosion control measures and Best Management Practices (BMPs) in accordance with the Contract Documents, Standard Specifications, Permit Conditions, the Contractors “Stormwater Pollution Prevention Plan” (SWPPP) and as directed by the Engineer prior to clearing, grubbing, or grading or as necessary, as clearing and grading progress. Such measures shall include, but are not necessarily limited to:

- Commercial construction entrances per CK-E.02.
- Quarry Spall outfall pads for temporary erosion control
- Rock, Wattle, Compost sock check dams
- Straw mulch, netting and tackifier
- Concrete wash
- Baker tanks and/or Settling ponds
- Stabilized construction entrance / exit
- Inlet protection on existing and proposed drainage structures
- Reinforced silt fencing
- Plastic Covering
- Temporary pipe slope drains
- Temporary HMA Curb
- Disposal of sediments and materials
- TESC seeding
- Maintenance of BMPs including in the event of emergencies and as weather and field conditions dictate; and also including installation of additional BMPs which may become required as field and weather conditions evolve.
- Street sweeping and Cleaning
- ESC Lead per 8-01 of the Standard Specifications
- All materials, tools and equipment necessary to meet these requirements

Site Specific BMPs and SWPPP Plan

The Contractor shall provide erosion control as required for all stockpiled materials at no cost to the Contracting Agency. The Engineer, in the event of an emergency, and as weather and field conditions dictate, may require additional erosion controls and BMPs.
Temporary Erosion / Water Pollution Control notes and performance criteria are noted in the Contract Documents. The Contractor shall submit his or her own Storm Water Pollution Prevention Plan (SWPPP) to the Contracting Agency for review and approval prior to the commencement of clearing, grubbing, or grading activities.

Water quality testing and discharge volume reporting required by the project permits shall be performed by the Contractor and is a condition of approval of the SWPPP. The SWPPP shall be submitted 5 working days prior to the Issuance of a Notice To Proceed. The reporting data shall be provided to the Engineer as soon as practical, at regular intervals and prior to reporting deadlines established in the permits. The Contractor will provide a copy of the reporting information within 24 hours of a request to do so by the Engineer. All costs to perform these reporting requirements are to be included in the lump sum contract price for “Water Pollution/Erosion Control (min. Bid $5,000.00)”.

(June 20, 2017 COK GSP)
8-01.3 Construction Requirements
Section 8-01.3 is supplemented with the following:

The Contractor shall bear sole responsibility for damage to completed portions of the project and to property located off the project caused by erosion, siltation, runoff, or other related items during the construction of the project. The Contractor shall also bear sole responsibility for any pollution of rivers, streams, groundwater, or other water that may occur as a result of construction operations.

Any area not covered with established, stable vegetation where no further work is anticipated for a period of 15 days, shall be immediately stabilized with the approved erosion and sedimentation control methods (e.g., seeding and mulching, straw). Where seeding for temporary erosion control is required, fast germinating grasses shall be applied at an appropriate rate (e.g., perennial rye applied at approximately 80 pounds per acre).

At no time shall more than 1 foot of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned at a time designated by the Contracting Agency Construction Inspector.

The cleaning operation shall not flush sediment-laden water into the downstream system. The cleaning shall be conducted using an approved vacuum truck capable of jet rodding the lines. The collection and disposal of the sediment shall be the responsibility of the Contractor at no cost to the Contracting Agency.

8-01.3(1) General
(June 20, 2017 COK GSP)
8-01.3(1)A Submittals
Section 8-01.3(1)A is supplement with the following:

Stormwater Pollution Prevention Plan
The Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with Department of Ecology requirements.

The Contractor shall incorporate the SWPPP implementation schedule into the Contractor’s progress schedule. The SWPPP and implementation schedule shall be submitted in accordance with Sections 1-05.3 and 1-08.3.

In addition, the SWPPP shall outline the procedures to be used to prevent high pH stormwater. The plan shall include how the pH of the water will be maintained between pH 6.5 and pH 8.5 prior to being

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discharged from the project or entering surface waters. Prior to beginning any concrete or grinding work, the Contractor shall submit the plan, for the Engineer’s review and approval.

The Ecology template can be found at the following link:

http://www.ecy.wa.gov/programs/wq/stormwater/construction/

The SWPPP is considered a “living” document that shall be revised to account for additional erosion control/pollution prevention BMPs as they become necessary and are implemented in the field during project construction. A copy of the most current SWPPP shall remain on-site at all times and an additional copy shall be forwarded to the Engineer. At the Contractor’s preference, revisions to the SWPPP may be forwarded to the Engineer rather than submitting a complete document. Revisions to the SWPPP may be kept on-site in a file along with the original SWPPP document.

(June 20, 2017 COK GSP)
8-01.3(1)B Erosion and Sediment Control (ESC) Lead

Supplement this the second paragraph with the following:

3. Inspecting all on-site erosion and sediment control BMPs at least once every five working days and within 24 hours of every runoff event. A SWPPP Inspection report or form shall be prepared for each inspection and shall be included in the SWPPP file. A copy of each SWPPP Inspection report or form shall be submitted to the Engineer no later than the end of the next working day following the inspection. The report or form shall include, but not be limited to the following:

   a. When, where, and how BMPs were installed, maintained, modified, and removed.

   b. Observations of BMP effectiveness and proper placement.

   c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal SWPPP inadequacies.

   d. Approximate amount of precipitation since last inspection and when last inspection was performed.

4. Updating and maintaining a SWPPP file on site that includes, but is not limited to the following:

   a. SWPPP Inspection Reports or Forms.

   b. SWPPP narrative.

   c. Other applicable permits.

(June 20, 2017 COK GSP)
8-01.3(1)C Water Management

Section 8-01.3(1)C is supplemented with the following:

The Contractor will be responsible for meeting the SWPPP requirements.

The Bid Item “Water Pollution/Erosion Control (min. Bid $5,000.00)” shall include the cost of providing temporary detention/retention facilities as illustrated in the Contractor’s SWPPP Plan as well as modifications, additions and removals of such facility as dictated by the Contractor’s sequence of work and may include, but are not limited to:

1. Temporary detention/retention facilities such as ponds, Baker Tanks, or other facilities.

2. If any permanent stormwater facilities are utilized, such as the detention vault, for SWPPP compliance, the Contractor shall remove accumulated sediment and clean the facility prior to final acceptance at no additional cost to the Contracting Agency.
3. Temporary facilities such as wheel wash stations or similar.

4. Temporary construction entrances.

No additional compensation shall be made for construction, alteration, removal, maintenance, and any additional requirements necessary for “Water Pollution/Erosion Control (min. Bid $5,000.00)”. No additional compensation shall be made for conflicts with existing or proposed improvements or construction sequencing of work when facilities are utilized to meet permit requirements.

(******)

8-01.4 Measurement

Supplement this Section with the following paragraph: The means of measurement for Water Pollution/Erosion Control shall be by the lump sum Bid price. The lump sum price for water pollution/erosion control shall be full pay for all Work required for protecting the project area and drainage ways from pollution and erosion, including establishing, maintaining and decommissioning erosion and sedimentation control best management practices as indicated on the Plans, in the Pre-Approved Plans and as specified, post-runoff event and weekly reports and all related Work necessary, where such Work is not included in other Bid items.

The means of measurement for Stormwater Pollution Prevention Plan (SWPPP) shall be by the lump sum Bid price. The lump sum price for Stormwater Pollution Prevention Plan (SWPPP) shall be full pay for all Work required to complete and secure approval of, and update, such plan per Section 8-01.3, the City and application local, state and federal regulations, and all related Work necessary, where such Work is not included in other Bid items, for all work in the executed Contract.

(******)

8-01.5 Payment

Supplement this Section with the following paragraphs:

"Water Pollution/Erosion Control", per lump sum.

Payment will be allocated as 75 percent for implementation of the SWPPP over the duration of the Contract and 25 percent for completing and providing the required inspection reports, per Bid Schedule. The portion for reports will be paid based on a pro-rated allocation over the working days of the executed Contract. The Engineer shall review the weekly and post-runoff event reports at each weekly meeting. If the required reports have not been prepared and provided to the satisfaction of the Engineer, the reports portion of the work for this item shall not be paid for that week and the overall payment shall be reduced by that amount. Such non-payment does not relieve the Contractor from the responsibilities for reporting.

"SWPPP", per lump sum.

Payment will be allocated as 65 percent for preparation, submittals, revisions, ready for approval by the Engineer, of the SWPPP and 25 percent for completing and providing the required SWPPP updates in response to site conditions and 10 percent for provision of a final SWPPP with all updated integrated therein. The portion for updates will be paid based on a pro-rated allocation over the working days of the executed Contract. The Engineer shall review the SWPPP and any updates at each weekly meeting. If the SWPPP has not been updated as deemed appropriate by the Engineer, the reports portion of the work for this item shall not be paid for that week and the overall payment shall be reduced by that amount. Such non-payment does not relieve the Contractor from the responsibilities for updates.
8-02 ROADSIDE RESTORATION

8-02.3(4) Topsoil

Revise this Section to read:

Topsoil Type A shall be a commercially prepared soil, sand and compost mix, screened to $\frac{1}{2}$ inch and smaller particles suitable for lawns, flowers, shrubs and trees, such as Pacific Topsoils’ Special Garden Mix, or equal.

8-02.3(13) Plant Establishment

Supplement this Section with the following:

Plant establishment in the Median Islands shall be supported by hand watering by Contractor, including furnishing water. There will be no water supply source in the island following completion of the Work.

8-02.4 Measurement

Supplement this Section with the following paragraph:

"Median Island 1 Replacement (all other work),” “Median Island 2 Replacement (all other work),” and “Median Island 3 Replacement (all other work)” shall be measured as per each.

8-02.5 Payment

Supplement this Section with the following paragraphs:

"Median Island 1 Replacement (all other work)” per each.

"Median Island 2 Replacement (all other work)” per each.

"Median Island 3 Replacement (all other work)” per each.

The lump sum price for the Median Island Replacement items shall be full payment for all Work required for removing and replacing the respective existing median islands as indicated on the Plans, including but not limited to removal of existing improvements and landscaping, removal and replacement or relocation of existing signs, replacement of painted concrete curb, raised pavement markers, Topsoil Type A, fine grading, medium bark mulch, stamping and painting of median island HMA, and all related Work necessary, where such Work is not included in other Bid items.

8-04 CURBS, GUTTERS, AND SPILLWAYS

8-04.4 Measurement

Insert the following paragraph after the first paragraph:

Lengths of curbs, gutter, and spillways replaced due to disturbance necessary for completion of work

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Supplement this section with the following:

Contractor shall paint restored cement concrete curb to match existing and removed painted cement concrete curb. Painting shall include preparation and repainting of existing painted curb immediately adjacent to, to the full extent of such painted segment, replacement curb painted to match existing conditions.

Revise the second paragraph to read:

"Remove and Replace Cement Conc. Traffic Curb and Gutter", per lineal foot.

Revise the first paragraph to read:

Cement concrete driveway entrances will be measured per each.

Insert the following paragraph after the first paragraph:

Cement concrete driveway entrances replaced due to disturbance necessary for completion of work under both water and sewer schedules shall be measured only once and the total area of such work shall be approximately evenly between Schedules A and B.

Supplement this Section with the following:

Each cement concrete driveway entrance shall include removal of the existing concrete ramp and abutting sidewalk, replacement of the cement concrete driveway ramp and the abutting thickened sidewalk.
8-13 MONUMENT CASES

(******)
8-13.1 Description

Supplement this Section with the following:

The Work also includes pre-construction survey and reference of monuments anticipated to be disturbed by construction, replacement of monument cases and monuments and all other work or action required for compliance with WAC 322-120 and Sections 1-07.16 and 1-07.17.

(******)
8-13.3 Construction Requirements

Supplement this Section with the following:

Survey monuments shall be referenced and replaced per WAC 322-120 and Sections 1-07.16 and 1-07.17 of these specifications.

(******)
8-13.5 Payment

Revise the first paragraph to read:

Payment will be made for the following Bid item:

“Reference and Replace Survey Monument,” per each.

8-14 CEMENT CONCRETE SIDEWALKS

(******)
8-14.1 Description

Supplement this Section with the following:

Removal of the exiting concrete sidewalk is included in the unit price for the removal and replacement of the concrete sidewalk. The cost for removal and disposal of existing concrete sidewalk not scheduled to be replaced shall be incidental to other bid items.

(******)
8-14.4 Measurement

Add the following to the end of the first paragraph:

Areas of cement concrete sidewalks replaced due to disturbance necessary for completion of work under both water and sewer schedules shall be measured only once and the total area of such work shall be allocated approximately evenly between Schedules A and B.

Revise the second paragraph to read:

All concrete curb ramps and landings, regardless of type, will be measured by the square yard and paid for under the “Remove and Replacement Cement Conc. Sidewalk” bid item.

Revise the third paragraph to read:

Detectable warning surfaces will be incidental to the “Remove and Replace Cement Conc. Sidewalk” and “Cement Concrete Crossing with Detectable Warning Surfaces” bid items.
Supplement this Section with the following:

"Cement Concrete Crossing with Detectable Warning Surfaces" will be measured per each and will include all work required for the pedestrian concrete pads in the median islands, with detectable warning surfaces.

******
8-14.5 Payment

Revise the first paragraph to include:

"Remove and Replace Cement Conc. Sidewalk", per square yard.

Revise the first paragraph to include:

"Cement Concrete Crossing with Detectable Warning Surfaces", per each.

8-18 MAILBOX SUPPORT

******
8-18.3 Construction Requirements

Supplement this Section with the following:

Remove and relocate existing mailbox, mailboxes or mailbox structures on to a new foundation per the contract documents. Temporary supports or bases shall be required to maintain the boxes in an acceptable condition for continued mail service.

8-20 ILLUMINATION, TRAFFIC SIGNAL SYSTEMS AND ELECTRICAL

8-20.3 Construction Requirements

(NWR May 5, 2014)

Section 8-20.3(6) is supplemented with the following:

Unless otherwise noted in the Plans or approved by the Engineer, junction boxes, cable vaults and pull boxes shall not be placed within the traveled way or paved shoulders.

All junction boxes, cable vaults, and pull boxes placed within the traveled way or paved shoulders shall be heavy-duty.

Wiring shall not be pulled into any conduit until all associated junction boxes have been adjusted to, or installed in, their final grade and location, unless installation is necessary to maintain system operation. If wire is installed for this reason, sufficient slack shall be left to allow for future adjustment.

Prior to installing new cables or reinstalling existing cables into new or existing cable vaults, pull boxes or junction boxes, the cable vault, pull box or junction box shall be cleaned of all dirt and debris.

When junction boxes, cable vaults and pull boxes are installed or adjusted prior to construction of finished grade, pre-molded joint filler for expansion joints may be placed around the junction boxes, cable vaults and pull boxes. The joint filler shall be removed prior to adjustment to finished grade.
When junction boxes, cable vaults or pull boxes are adjusted to finished grade, the six-inch gravel pad requirements shall be maintained. When existing junction boxes pull boxes or cable vaults do not have this gravel pad, or the gravel pad does not meet these specifications, a gravel pad, meeting these specifications shall be installed as part of the adjustment to finished grade.

Heavy-duty Type 4, 5 and 6 junction boxes, cable vaults and pull boxes shall be installed in accordance with the following:

1. Excavation shall be sufficient to leave one foot in the clear between their outer surface and the earth bank.

2. Junction boxes, cable vaults and pull boxes shall be installed on a level 6-inch layer of crushed surfacing top course, in accordance with 9-03.9(3), placed on a compacted or undisturbed foundation. The crushed surfacing shall be compacted in accordance with Section 2-09.3(1)E.

3. After installation, the lid/cover shall be kept bolted down during periods when work is not actively in progress at the junction box, cable vault or pull box.

4. Before closing the lid/cover, the lid/cover and the frame/ring shall be thoroughly brushed and cleaned of all debris. There shall be absolutely no visible dirt, sand or other foreign matter between the bearing surfaces.

5. When the lid/cover is closed for the final time, a liberal coating of anti-seize compound shall be applied to the bolts and nuts and the lid shall be securely tightened.

6. Hinges on the Type 4, 5 and 6 junction boxes shall be located on the side of the box, which is nearest to the adjacent shoulder. Hinges shall allow the lid to open 180 degrees.

Section 8-20.3(6) is supplemented with the following:

**Replace/New Junction Box**

Where shown on the plans, replace existing junction boxes with new junction boxes. In locations where junction boxes are located within sidewalk, lids shall be replaced with non-slip lids meeting the requirements of the Americans with Disabilities Act. Junction boxes shall be located and oriented as shown on the Plans but may be adjusted in the field by the Engineer to better fit existing conditions. Lettering on the lid shall be “TS”.

**8-20.3(14)C Induction Loop Vehicle Detectors**

Section 8-20.3(14)C is supplemented with the following:

**General**

All loops damaged by the Contractor must be replaced with Type 3 induction loops or as noted on the Plans.

Install loop detectors during conditions of zero precipitation and when the pavement temperature is between 40 degrees F and 100 degrees F.

Clean roadway surface of debris, standing water, or other material which may enter the sawcut and thereby degrade the quality of the installation.
In Section 8-20.3(14)C, Items 2 and 11 and the last two sentences of Item 4 are deleted.

**(NWR August 16, 2010)**

Section 8-20.3(14)C is supplemented with the following:

**Round Loops**

Round loops shall be constructed in accordance with the following requirements:

1. Loop conductor and lead in cable shall conform to Section 9-29.3(2)F of these Special Provisions.

2. Round sawcuts shall be six feet in diameter, except where noted otherwise on the Plans, and shall be constructed using equipment designed for cutting round loops. The equipment shall use a concave, diamond-segmented blade. The sawcuts shall be normal to the pavement surface and shall be a minimum of 0.25 inches wide. The sawcut depth shall be a minimum of 2 5/8 inches and a maximum of three inches measured at any point along the perimeter, except on bridge decks. Other methods of constructing the round sawcut, such as anchoring a router or flat blade saw, will not be allowed.

3. The bottom of the sawcut shall be smooth. No edges created by differences in sawcut depths will be allowed.

4. All sawcut corners shall be rounded to a minimum 1.5 inch radius.

5. All sawcuts shall be cleaned with a 1000 psi high pressure washer as certified by the manufacturer's label on the machine or as measured by an in line pressure gauge. Wash water and slurry shall be vacuumed out and the sawcut shall be blown dry with compressed air. Disposal of the wash water and slurry shall comply with the requirements of Section 1-07.5(3) and the Special Provision **LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC**.

6. Loops shall be installed after grinding and prior to the final lift of roadway surfacing material.

7. The conductor shall be installed one turn on top of the previous turn. All turns shall be installed in a clockwise direction. The conductors shall be secured to prevent floating with 2-inch lengths of high temperature foam backer rod sized for a snug fit. The backer rod shall be spaced at 2-foot intervals around the perimeter of the sawcut and at corners.

8. Installation of the sealant shall completely encapsulate the loop conductors. A minimum of one inch of sealant shall be provided between the top of the conductors and the top of the sawcut. The top of the sealant shall be flush to 1/8 inch below the top of the sawcut.

9. Use of kerosene solvent is prohibited.

**Test for Induction Loops and Lead-in Cable**

Section 8-20.3(14)D is supplemented with the following:
Induction Loop Tests

Test A and Test D are revised as follows:

Test A - The DC resistance between the 2 lead-in cable wires, including the loop, shall be measured by a volt ohmmeter. The resistance shall not exceed 5-ohms or lower the Q of the circuit below 5 where Q is equal to the “Inductive Impedance @ 50 kHz” divided by “Resistance”.

Test D - An inductance test shall be made to determine the inductance level of each inductance loop. The Contractor shall record the inductance level of each inductance loop installed on the project and shall furnish the findings to the Engineer. An induction level, as measured from the controller cabinet, below 50-microhenries is considered a failure.

Existing Lead-in Cable Test

When new induction loops are scheduled to be installed and spliced to an existing two-conductor shielded detector lead-in cable, the Contractor shall perform the following:

1. Disconnect the existing detector lead-in cable in the controller cabinet and at the loop splice.
2. Megger test both detector lead-in cable conductors. A resistance reading of less than 100-megohms is considered a failure.
3. Detector lead-in cables that fail the test shall be replaced and then retested.
4. After final testing of the detector lead-in cable, the loop installation shall be completed and the loop system tested according to Tests A, C and D.
5. Connect the detector lead-in cables in the controller cabinet.

8-20.4 Measurement

Section 8-20.4 is supplemented with the following:

Traffic signal induction loops shall be measured per each.

8-21 PERMANENT SIGNING

8-21.3 Construction Requirements

Supplement this Section with the following:

Street or traffic signs noted to be relocated shall be removed, salvaged and reinstalled in the location shown and per City of Kirkland Pre-Approved Plan CK-R.43. Street or traffic signs damaged during construction shall be replaced at no cost to the owner.

8-22 PAVEMENT MARKINGS

8-22.1 Description

Section 8-22.1 is supplemented with the following:

This work shall consist of furnishing, installing, and removing pavement markings on roadway and parking lot surfaces in accordance with the Plans, City of Kirkland Pre-Approved Plans, and these Specifications, at locations shown in the Plans or as directed by the Engineer.
Painted Bicycle Lane Line

A SOLID WHITE line, 6 inches wide, used to separate vehicular travel lanes from bicycle travel lanes.

A SOLID WHITE line, 4 inches wide, used in bicycle buffer space, at 45-degrees angle from the solid white 6-inch wide line, and at 20-foot intervals or as directed by the Engineer.

Plastic Bicycle Lane Symbol

A SOLID WHITE marking, conforming to the details in the Contract and CK-R.34.

Plastic Stop Line

A SOLID WHITE line, 18 inches wide, conforming to details in the Contract and CK-R.28.

8-22.2 Materials

Pavement marking materials shall be as specified in Section 9-34 of the Standard Specifications and these Special Provisions.

8-22.3 Construction Requirements

8-22.3(2) Preparation of Roadway Surfaces

Section 8-22.3(2) is supplemented with the following:

Any street sweeping necessary to prepare the roadway surface for pavement marking shall be incidental to the cost of associated pavement marking application.

8-22.3(3) Marking Application

Two applications of paint will be required when the paint marking is to be applied to a newly paved surface or when the paint marking is not applied over an existing paint marking. The time period between applications shall be per the Standard Specification.

8-22.3(6) Removal of Pavement Markings

Section 8-22.3(6) is supplemented with the following:

Existing pavement markings including plastic crosswalks, stop bars, traffic arrows, and raised pavement markers (RPMs) shall be removed prior to placement of asphalt overlay.

Pavement markings shall not be removed by grinding method except when preparing for asphalt overlay or when otherwise specifically authorized by the engineer. Damaged pavement shall be repaired/replaced at no cost to the Contracting Agency. Contractor shall use all reasonable means necessary to minimize air and noise pollution. No material associated with pavement marking removal shall be allowed to enter the public storm drainage system.

8-22.4 Measurement

Section 8-22.4 is supplemented with the following:

"MMA Green Bicycle Lane Treatment" shall be measured per square foot of marked area where MMA treatment is applied, not counting any gaps or separations in the striping

The last two paragraphs of Section 8-22.4 are replaced with the following:

No unit of measure shall apply for removal of pavement markings and markers.
8-22.5 Payment
Section 8-22.5 is supplemented with the following:

"MMA Green Bicycle Lane Treatment", per square foot.

8-26 Vacant
(******)

8-26 WASTEWATER BYPASS SYSTEMS
Replace this Section with the following:

8-26.1 Description
This Work consists of planning, coordinating, implementing and decommissioning wastewater bypass systems as necessary and appropriate to provide continuous gravity sewer service to connections to the sewer mains in the project area, and continuous collection and conveyance function in the Owner's gravity sewer system impacted by the Work.

8-26.2 Materials
The Contractor shall furnish all materials, tools, and equipment for the bypass system.

8-26.3 Construction Requirements
The Contractor shall divert sanitary sewage from the work area by designing, installing, maintaining, and removing a sewer bypass system. All sewage must be contained in a closed conduit from where it is removed from the sewer system until it discharged back into the sewer system (e.g. manhole to manhole, clean-out to clean-out, side sewer to side sewer). Such bypass systems typically include a submersible pump and temporary pipe plug to divert the sewage flow around the work area. It is the Contractor’s responsibility to maintain sewer service to upstream customers at all times and to field verify flows in order to provide a properly-sized bypass system. The Contractor shall submit his bypass system plan to the Engineer a minimum of two weeks prior to implementing it.

Pumping systems shall not be utilized overnight or over holidays or weekends.

Bypassing shall occur in such a manner as not to damage private or public property or create a nuisance or public menace. Upon completion of the pipe replacement, the Contractor shall remove all components of the bypass system and restore the site to original condition.

The Contractor shall take all necessary precautions, including constant monitoring of the bypass systems, to ensure that no private residences or properties are subjected to wastewater backup or spill. The Contractor shall be liable for all cleanup, damages, and resultant fines in the event of a backup or spill.

Unless a specific bid item for a bypass system has been provided in the Proposal/ Construction Contract, such work shall be considered incidental to and included in the various bid items of work.

8-26.3(1) Existing Pipe Capacity
The maximum full-flow capacity of the existing main at the downstream end of the project is approximately 1,200 gpm. The maximum full-flow capacity of the existing main second from the downstream end of the project is approximately 900 gpm,
DIVISION 9 - MATERIALS

9-21 RAISED PAVEMENT MARKERS (RPM)

9-21.2 Raised Pavement Markers Type 2

Section 9-21.2 is supplemented with the following:

White Type 2 RPM installed at crosswalk locations shall have reflective faces on opposite sides of the RPM. The RPM shall be installed such that the reflective faces face oncoming traffic and away from oncoming traffic.

9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable

9-29.3(2) Detector Loop Wire

Section 9-29.3(2) is revised to read as follows:

Detector loop wire shall use 14 AWG stranded copper conductors, and shall conform to IMSA Specification 51-7, with cross-linked polyethylene (XLPE) insulation encased in a polyethylene outer jacket (PE tube).

9-29.12 Electrical Splice Materials

Section 9-29.12 is supplemented with the following:

(NWR October 5, 2009)

9-29.12(2) Detector Loop Wire

Section 9-29.12(2) is supplemented with the following:

Induction loop splices shall be either the heat shrink type or the re-enterable type with end cap seals.

(NWR March 1, 2011)

9-29.18 Vehicle Detector

Section 9-29.18 is supplemented with the following:

Loop Sealant

Loop sealant for use in HMA pavement shall be one of the following:

1. RAI Pro-Seal 6006EX
2. QCM EAS-14
3. 3M Black 5000
4. Craftco Inc. Part #34271

Loop sealant for use on concrete bridge decks and PCC pavement shall be one of the following:

1. 3M Black 5000
2. Gold Label Flex 1P
3. QCM EAS-14
4. Craftco Inc. Part #34271
(******)

9-34  PAVEMENT MARKING MATERIAL

9-34.2  Paint

Section 9-34.2 is deleted in its entirety and replaced with the following:

   Paint shall comply with the specifications for low VOC solvent based paint.

9-34.3  Plastic

Section 9-34.3 is supplemented with the following:

   Plastic pavement marking materials shall comply with the specifications for Type A, liquid hot applied thermoplastic. All preformed thermoplastic shall have a minimum skid resistance of 60 BPN. The skid resistance will be determined using ASTM Test Method D4505.

   MMA Green Bicycle Lane Treatment

MMA Green Bicycle Lane Treatment shall be methyl methacrylate (MMA) PreMark by Ennis-Flint or approved equal.

END OF DIVISION 9
PREVAILING
WAGE RATES
The PREVAILING WAGES listed here include both the hourly wage rate and the hourly rate of fringe benefits. On public works projects, worker’s wage and benefit rates must add to not less than this total. A brief description of overtime calculation requirements are provided on the Benefit Code Key.

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<td>King Electricians - Powerline Construction Groundperson</td>
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<td>Cleaner Operator, Foamer Operator</td>
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<td>Change House Or Dry Shack</td>
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<td>Nozzleman (Concrete Pump, Green Cutter When Using Combination Of High Pressure Air &amp; Water On Concrete &amp; Rock, Sandblast, Gunite, Shotcrete, Water Blaster, Vacuum Blaster)</td>
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<td><strong>Plumbers &amp; Pipefitters</strong></td>
<td>Journey Level</td>
<td>$87.69</td>
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<td>Asphalt Plant Operators</td>
<td>$69.16</td>
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<td><strong>Power Equipment Operators</strong></td>
<td>Barrier Machine (zipper)</td>
<td>$68.55</td>
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<td>Batch Plant Operator: concrete</td>
<td>$68.55</td>
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<td>Brokk - Remote Demolition Equipment</td>
<td>$65.05</td>
<td>7A</td>
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<td>$68.55</td>
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<td>Concrete Finish Machine - Laser Screed</td>
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<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Concrete Pump: Truck Mount With Boom Attachment Over 42m</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Concrete Pump: Truck Mount With Boom Attachment Up To 42m</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Conveyors</td>
<td>$68.02</td>
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<tr>
<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Cranes friction: 200 tons and over</td>
<td>$71.26</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Cranes: 20 Tons Through 44 Tons With Attachments</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments</td>
<td>$70.57</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td><strong>Power Equipment Operators</strong></td>
<td>Cranes: 300 tons and over or 300' of boom including jib with</td>
<td>$71.26</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<td>Company</td>
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<tr>
<td>King Power Equipment</td>
<td>Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King Power Equipment</td>
<td>Cranes: A-frame - 10 Tons And Under</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Cranes: Friction cranes through 199 tons</td>
<td>$70.57</td>
<td>7A</td>
<td>3K</td>
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<td>King Power Equipment</td>
<td>Cranes: through 19 tons with attachments, A-frame over 10 tons</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<td>King Power Equipment</td>
<td>Crusher</td>
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<td>7A</td>
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<tr>
<td>King Power Equipment</td>
<td>Deck Engineer/Deck Winches (power)</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Derricks, On Building Work</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Dozers D-9 &amp; Under</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Drill Oilers: Auger Type, Truck Or Crane Mount</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Drilling Machine</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Elevator And Man-lift: Permanent And Shaft Type</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Finishing Machine, Bidwell And Gamaco &amp; Similar Equipment</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td>Forklift: 3000 Lbs And Over With Attachments</td>
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<td>7A</td>
<td>3K</td>
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<td>King Power Equipment</td>
<td>Forklifts: Under 3000 Lbs. With Attachments</td>
<td>$65.05</td>
<td>7A</td>
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<tr>
<td>King Power Equipment</td>
<td>Grade Engineer: Using Blue Prints, Cut Sheets, Etc</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td>King Power Equipment</td>
<td>Gradechecker/Stakeman</td>
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<td>7A</td>
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<td>Guardrail Punch</td>
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<td>7A</td>
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<td>King Power Equipment</td>
<td>Hard Tail End Dump Articulating Off-road Equipment 45 Yards. &amp; Over</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Horizontal/Directional Drill Locator</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<td>King Power Equipment</td>
<td>Horizontal/Directional Drill Operator</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Hydralifts/Boom Trucks Over 10 Tons</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Hydralifts/Boom Trucks, 10 Tons And Under</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Loader, Overhead 8 Yards. But Not Including 8 Yards</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King Power Equipment</td>
<td>Loader, Overhead, 6 Yards. But Not Including 8 Yards</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<td>King Power Equipment</td>
<td>Loaders, Overhead Under 6 Yards</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Loaders, Plant Feed</td>
<td>$68.55</td>
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<td>Loaders: Elevating Type Belt</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Locomotives, All</td>
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<td>Material Transfer Device</td>
<td>$68.55</td>
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<td>Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic)</td>
<td>$68.95</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Motor Patrol Graders</td>
<td>$69.16</td>
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<tr>
<td><strong>King Power Equipment Operators</strong></td>
<td>Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield</td>
<td>$69.16</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Oil Distributors, Blower Distribution &amp; Mulch Seeding Operator</td>
<td>$65.05</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Outside Hoists (Elevators And Manlifts), Air Tuggers, Strato</td>
<td>$68.02</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Overhead, Bridge Type Crane: 20 Tons Through 44 Tons</td>
<td>$68.55</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Overhead, Bridge Type: 100 Tons And Over</td>
<td>$69.85</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Overhead, Bridge Type: 45 Tons Through 99 Tons</td>
<td>$69.16</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Pavement Breaker</td>
<td>$65.05</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Pile Driver (other Than Crane Mount)</td>
<td>$68.55</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Plant Oiler - Asphalt, Crusher</td>
<td>$68.02</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Posthole Digger, Mechanical</td>
<td>$65.05</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Power Plant</td>
<td>$65.05</td>
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<td>Pumps - Water</td>
<td>$65.05</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Quad 9, Hd 41, D10 And Over</td>
<td>$69.16</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Quick Tower - No Cab, Under 100 Feet In Height Based To Boom</td>
<td>$65.05</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Remote Control Operator On Rubber Tired Earth Moving Equipment</td>
<td>$69.16</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Rigger and Bellman</td>
<td>$65.05</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Rigger/Signal Person, Bellman (Certified)</td>
<td>$68.02</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Rollagon</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Roller, Other Than Plant Mix</td>
<td>$65.05</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Roller, Plant Mix Or Multi-lift Materials</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Roto-mill, Roto-grinder</td>
<td>$68.55</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Saws - Concrete</td>
<td>$68.02</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Scraper, Self Propelled Under 45 Yards</td>
<td>$68.55</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Scrapers - Concrete &amp; Carry All</td>
<td>$68.02</td>
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<td>Scrapers, Self-propelled: 45 Yards And Over</td>
<td>$69.16</td>
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<td><strong>King Power Equipment Operators</strong></td>
<td>Service Engineers - Equipment</td>
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<td>Shotcrete/Gunite Equipment</td>
<td>$65.05</td>
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<td>King</td>
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<td>Description</td>
<td>Rate</td>
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<td>Unit</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons</td>
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<td>7A</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Shovel, Excavator, Backhoe, Tractors: Over 30 Metric Tons To 50 Metric Tons</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Shovel, Excavator, Backhoes: Over 90 Metric Tons</td>
<td>$70.57</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Slipform Pavers</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators</td>
<td>Spreader, Topsider &amp; Screedman</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Subgrader Trimmer</td>
<td>$68.55</td>
<td>7A</td>
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<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Tower Bucket Elevators</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators</td>
<td>Tower Crane Up To 175' In Height Base To Boom</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Tower Crane: over 175' through 250' in height, base to boom</td>
<td>$70.57</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Tower Cranes: over 250' in height from base to boom</td>
<td>$71.26</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Transporters, All Track Or Truck Type</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Trenching Machines</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Truck Crane Oiler/driver - 100 Tons And Over</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Truck Crane Oilier/Driver Under 100 Tons</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Truck Mount Portable Conveyor</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators</td>
<td>Welder</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Wheel Tractors, Farmall Type</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Yo Yo Pay Dozer</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators</td>
<td>Asphalt Plant Operators</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Assistant Engineer</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Barrier Machine (zipper)</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Batch Plant Operator, Concrete</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Bobcat</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Brokk - Remote Demolition Equipment</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Brooms</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Bump Cutter</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators- Underground Sewer &amp; Water</td>
<td>Cableways</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X View</td>
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<td>Equipment</td>
<td>Description</td>
<td>Rate</td>
<td>Capacity</td>
<td>Hours</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Chipper</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Compressor</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Concrete Finish Machine - Laser Screed</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Concrete Pump: Truck Mount With Boom Attachment Over 42 M</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Concrete Pump: Truck Mount With Boom Attachment Up To 42m</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Conveyors</td>
<td>$68.02</td>
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<td>8X</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Cranes friction: 200 tons and over</td>
<td>$71.26</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
<td>View</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Concrete: 100 tons through 199 tons, or 150’ of boom (including jib with attachments)</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
<td>View</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Cranes: 20 Tons Through 44 Tons With Attachments</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Cranes: 200 tons- 299 tons, or 250’ of boom including jib with attachments</td>
<td>$70.57</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
<td>View</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Cranes: 300 tons and over or 300’ of boom including jib with attachments</td>
<td>$71.26</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
<td>View</td>
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<tr>
<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Cranes: 45 Tons Through 99 Tons, Under 150’ Of Boom (Including Jib With Attachments)</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Cranes: through 19 tons with attachments, A-frame over 10 tons</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Crusher</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Deck Engineer/Deck Winches (power)</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Dozers D-9 &amp; Under</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Drill Oilers: Auger Type, Truck Or Crane Mount</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Drilling Machine</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<tr>
<td>Equipment Type</td>
<td>Description</td>
<td>Rate</td>
<td>Hours</td>
<td>View</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Elevator And Man-lift: Permanent And Shaft Type</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Finishing Machine, Bidwell And Gamaco &amp; Similar Equipment</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Forklift: 3000 Lbs And Over With Attachments</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Forklifts: Under 3000 Lbs. With Attachments</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Grade Engineer: Using Blue Prints, Cut Sheets, Etc</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Gradechecker/Stakeman</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Guardrail Punch</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. &amp; Over</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards</td>
<td>$68.55</td>
<td>7A</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Horizontal/Directional Drill Locator</td>
<td>$68.02</td>
<td>7A</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Horizontal/Directional Drill Operator</td>
<td>$68.55</td>
<td>7A</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Hydraulifts/Boom Trucks Over 10 Tons</td>
<td>$68.02</td>
<td>7A</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Hydraulifts/Boom Trucks, 10 Tons And Under</td>
<td>$65.05</td>
<td>7A</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Loader, Overhead 8 Yards. &amp; Over</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Loader, Overhead, 6 Yards. But Not Including 8 Yards</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Loader, Overhead Under 6 Yards</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Loaders, Plant Feed</td>
<td>$68.55</td>
<td>7A</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Loaders: Elevating Type Belt</td>
<td>$68.02</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Locomotives, All</td>
<td>$68.55</td>
<td>7A</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Material Transfer Device</td>
<td>$68.55</td>
<td>7A</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Mechanics, All (leadmen - $0.50 Per Hour Over Mechanic)</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Motor Patrol Graders</td>
<td>$69.16</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<td>Power Equipment Operators - Underground Sewer &amp; Water</td>
<td>Oil Distributors, Blower Distribution &amp; Mulch Seeding Operator</td>
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<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Description</td>
<td>Cost</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Outside Hoists (Elevators And Manlifts), Air Tuggers, Strato</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Overhead, Bridge Type Crane: 20 Tons Through 44 Tons</td>
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<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Overhead, Bridge Type: 100 Tons And Over</td>
<td>$69.85</td>
<td>7A</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Overhead, Bridge Type: 45 Tons Through 99 Tons</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Pavement Breaker</td>
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<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Pile Driver (other Than Crane Mount)</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Plant Oiler - Asphalt, Crusher</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Posthole Digger, Mechanical</td>
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<td>7A</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Power Plant</td>
<td>$65.05</td>
<td>7A</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Pumps - Water</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Quad 9, Hd 41, D10 And Over</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Quick Tower - No Cab, Under 100 Feet In Height Based To Boom</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Rigger and Bellman</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Rigger/Signal Person, Bellman (Certified)</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Rollagon</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Roller, Other Than Plant Mix</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Roller, Plant Mix Or Multi-lift Materials</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Rota-mill, Roto-grinder</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Saws - Concrete</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Scraper, Self Propelled Under 45 Yards</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
<td>View</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Scrapers - Concrete &amp; Carry All</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Scrapers, Self-propelled: 45 Yards And Over</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Service Engineers - Equipment</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Shotcrete/Gunite Equipment</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<tr>
<td>King</td>
<td>Power Equipment Operators: Underground Sewer &amp; Water</td>
<td>Shovel , Excavator, Backhoe,</td>
<td>$68.02</td>
<td>7A</td>
<td>3K</td>
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<td>Service</td>
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<tr>
<td>Underground Sewer &amp; Water</td>
<td>Tractors Under 15 Metric Tons</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
<td>8X</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td></td>
<td>Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons</td>
<td>$68.55</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Shovel, Excavator, Backhoe, Tractors: 15 To 30 Metric Tons</td>
<td>$69.85</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td></td>
<td>Shovel, Excavator, Backhoe: Over 50 Metric Tons To 90 Metric Tons</td>
<td>$70.57</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Slipform Pavers</td>
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<td>7A</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Spreader, Topsider &amp; Screedman</td>
<td>$69.16</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Subgrader Trimmer</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td></td>
<td>Tower Bucket Elevators</td>
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<td>7A</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td></td>
<td>Tower Crane Up To 175' In Height Base To Boom</td>
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<td>7A</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Tower Cranes: over 250' in height from base to boom</td>
<td>$70.57</td>
<td>7A</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Transporters, All Track Or Truck Type</td>
<td>$71.26</td>
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<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Trenching Machines</td>
<td>$68.02</td>
<td>7A</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Truck Crane Oiler/driver - 100 Tons And Over</td>
<td>$68.55</td>
<td>7A</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Truck Crane Oiler/Driver Under 100 Tons</td>
<td>$68.02</td>
<td>7A</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Truck Mount Portable Conveyor</td>
<td>$68.55</td>
<td>7A</td>
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<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Welder</td>
<td>$69.16</td>
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<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Wheel Tractors, Farmall Type</td>
<td>$65.05</td>
<td>7A</td>
<td>3K</td>
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<td>King</td>
<td><strong>Power Equipment Operators:</strong> Underwater Sewer &amp; Water</td>
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<td>Hole Digger/Ground Person</td>
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<td>5A</td>
<td>2B</td>
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<td>2B</td>
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<td>Telephone Equipment Operator (Light)</td>
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APPENDIX A

PLANS (INCLUDED BY REFERENCED — PUBLISHED SEPARATELY)
APPENDIX B

GEOTECHNICAL EVALUATION REPORT

City of Kirkland
January 18, 2019
HWA Project No. 2018-060-21

CHS Engineers, LLC
12507 Bel-Red Road, Suite 101
Bellevue, Washington 98005

Attention: Craig Christensen, P.E.

SUBJECT: GEOTECHNICAL REPORT
108th Avenue NE Sewer Main Replacement Project
Kirkland, Washington

Dear Mr. Christensen;

As requested, HWA GeoSciences Inc. (HWA) has performed geotechnical engineering evaluations for the 108th Avenue NE Sewer Main Replacement Project in Kirkland, Washington. The objective of this work is to evaluate subsurface conditions at the site and provide recommendations for design and construction of the proposed replacement of the sewer line and associated manholes along 108th Avenue NE between NE 53rd Street and NE 68th Street. This geotechnical report summarizes the results of our study and presents our conclusions and recommendations.

We appreciate the opportunity to provide geotechnical engineering services on this project. If you have any questions regarding this report or require additional information or services, please contact the undersigned at your convenience.

Sincerely,

HWA GEOSCIENCES INC.

Zakeyo Ngoma, P.E.
Geotechnical Engineer

Enclosure: Geotechnical Report
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Figure 1  Conditions Summary
1. INTRODUCTION

1.1 GENERAL

This report summarizes the results of the geotechnical study conducted in support of design for the 108th Avenue NE Sewer Main Replacement Project in Kirkland, Washington. The purpose of this study was to evaluate the soil and ground water conditions at the project site and provide geotechnical recommendations for design and installation for upsizing the existing sewer mains.

1.2 PROJECT UNDERSTANDING

It is our understanding that the City of Kirkland will be replacing approximately 4,000 feet of sewer line and twenty manholes along 108th Avenue NE between NE 53rd Street and NE 68th Street. Installation of the upsized sewer main will require excavations ranging in depth from 6 feet near the north end to 26 feet near the south end, requiring vertical shoring, dewatering, and pavement restoration.

The approximate location of the project site is shown on the Site Vicinity Map, Figure 1. We understand that pipe bursting is being considered to eliminate the need for open excavations along most of the alignment to minimize excavations and limit disruption to traffic and other utilities.

The proposed locations and orientations of these improvements are indicated in the Conditions Summary (Figure 1) and Sewer Profiles (Figure 2) provided to HWA and are attached as Appendix C. The proposed layout of the new facilities is shown on the Site and Exploration Plan, Figure 2.

2. FIELD AND LABORATORY TESTING

2.1 SUBSURFACE EXPLORATIONS

Eight borings, designated BH-1 through BH-8, were drilled along the alignment to provide information regarding soil and ground water conditions. Four borings in the northern half of the alignment were drilled and sampled to a depth of approximately 21.5 feet. The other four borings in the southern half of the alignment were drilled and sampled to a depth of approximately 31.5 feet. The locations of these borings are shown on the Site and Exploration Plan, Figure 2.

The borings were drilled from May 14 to 16, 2018 by Gregory Drilling, Inc. under subcontract to HWA. The borings were drilled using the hollow-stem auger drilling technique using a CME 75 truck-mounted drill rig. Two of the borings (BH-1 near the southern limit of the alignment and BH-8 near the northern limit) were completed as ground water monitoring wells. A ground
water monitoring transducer was installed within each well on June 1, 2018 to measure groundwater levels over a period of up to six months.

Sampling in the soil borings was performed using Standard Penetration Test (SPT) methods. This includes driving a 2-inch outside diameter split-spoon sampler into the bottom of the borehole at selected depths with a 140-pound automatic hammer. During the SPT, samples were obtained by driving the sampler 18 inches with the hammer free-falling 30 inches. The number of blows required for each 6 inches of penetration was recorded. The N-value (or resistance in terms of blows per foot) is defined as the number of blows recorded to drive the sampler the final 12 inches. This resistance provides an indication of the relative density of granular soils and the relative consistency of cohesive soils. If a total of 50 blows was recorded within a single 6-inch interval, the test was terminated, and the blow count was recorded as 50 blows for the number of inches of penetration achieved.

Each of the explorations was completed under the full-time observation of a geotechnical engineer from HWA. Pertinent information including soil sample depths, stratigraphy, and soil engineering characteristics was recorded as the explorations were advanced. Soils were classified in general accordance with the classification system described on Figure A-1 in Appendix A, which also provides a key to the exploration log symbols. The summary logs are presented on Figures A-2 through A-9.

The stratigraphic contacts shown on the exploration logs represent the approximate boundaries between soil types; actual transitions may be more gradual. The ground water conditions depicted are only for the specific date and location reported and, therefore, are not necessarily representative of other locations and times.

2.2 LABORATORY TESTING

Laboratory tests were conducted at HWA’s laboratory in Bothell, Washington on selected samples to determine relevant index and engineering properties of the soils encountered at the site. The tests included visual classification, natural moisture content, and grain size distribution. The tests were conducted in general accordance with appropriate American Society of Testing and Materials (ASTM) standards. The test results are presented in Appendix B, and/or displayed on the exploration logs in Appendix A, as appropriate.

3. SITE CONDITIONS

3.1 SITE TOPOGRAPHY

The project is located in a sloping glacial upland area between NE 53rd Street and NE 68th Street south of downtown Kirkland, Washington. The highest point of the site is at the south end and it slopes gently down toward the north. The sewer line is in a major collector road having two paved traffic lanes, a center lane with turn pockets and planter strips, and a bike lane on both sides.
3.2 **GENERAL GEOLGIC CONDITIONS**

The project is located within the Puget Lowland. The Puget Lowland has repeatedly been occupied by a portion of the continental glaciers that developed during the ice ages of the Quaternary period. During at least four periods, portions of the ice sheet advanced south from British Columbia into the lowlands of Western Washington. The southern extent of these glacial advances was near Olympia, Washington. Each major advance included numerous local advances and retreats, and each advance and retreat resulted in its own sequence of erosion and deposition of glacial lacustrine, outwash, till, and drift deposits. Between and following these glacial advances, sediments from the Olympic and Cascade Mountains accumulated in the Puget Lowland. As the most recent glacier retreated, it uncovered a sculpted landscape of elongated, north-south trending hills and valleys between the Cascade and Olympic mountain ranges. This landscape is composed of a complex sequence of glacial and interglacial deposits.

Geologic information for the project area was obtained from the *Geologic Map of the Kirkland Quadrangle, Washington* (Minard, 1983). According to this map, near-surface deposits at the project site consist of advance outwash which is a clean, pebbly sand with an increasing gravel component higher in the section. Distinctive features of the outwash are its sorting, cross and horizontal stratification, and cut and fill structures. Locally, some of the sediments are stained by iron oxide precipitated from ground water. Fine grained sand and some silts are common in the lower part of the unit but occur sparingly in the upper part. In general, advance outwash deposits are a dense to very dense, brown or gray, clean to silty, fine to coarse sand, and are locally gravelly.

3.3 **SUBSURFACE CONDITIONS**

Our interpretations of subsurface conditions are based on a review of available geologic and geotechnical information for the project site, as well as our field explorations. The results of our explorations indicate that the project site is underlain by a sequence of fill, weathered outwash, advance outwash, and glaciolacustrine. Brief descriptions of the major soil units observed in our explorations are presented below in order of deposition, beginning with the most recently deposited.

- **Fill**: Fill was encountered near the surface beneath the asphalt concrete in borings BH-1, BH-2, BH-3, BH-5, BH-6, and BH-8. In these borings, the fill below the pavement was medium dense to very dense, olive-gray to olive-brown, silty, gravelly, sand, except for BH-1 where the fill was very loose to loose in the lower 5 feet. This material varied in thickness from about 1 foot in BH-5 and BH-6 to about 7 feet in BH-1.

- **Weathered Outwash**: Weathered outwash deposits were encountered in borings BH-1, BH-4, BH-6, and BH-7 from just below the fill in BH-1 and BH-6 and just below the asphalt concrete pavement in BH-4 and BH-7. The weathered outwash deposits consisted of medium dense olive-gray to olive-brown, slightly silty to silty sand with varying amounts of gravel and are similar in composition to advance outwash deposits.
that were found below the weathered soils. The weathered deposits range in thickness from 4.5 feet in BH-6 to 15 in BH-1.

- **Advance Outwash** – Advance outwash deposits were encountered in all borings except BH-8 and consisted of dense to very dense, slightly gravelly to gravelly, slightly silty to silty sand. The advance outwash was encountered below the fill in BH-2, BH-3 and BH-5, and below the weathered outwash in BH-1, BH-4, BH-6 and BH-7. All the borings, except for BH-6 and BH-8 were terminated with in this unit. The advance outwash deposits have high shear strengths as they have been densified by the weight of the glacial ice during the most recent glacial advance.

- **Glaciolacustrine** – Encountered below the advance outwash in BH-6 and below the fill in BH-8, glaciolacustrine soils were observed below depths of about 13.5 feet and 4.5 feet, respectively. This material generally consisted of silt and clay deposited in a slackwater environment (typically lakes) from glacial meltwater. It includes ice-rafted gravel “dropstones”. In BH-6, the glaciolacustrine soil consisted of hard, gray to dark gray, fine sandy silt, with scattered gravel. In BH-8, the glaciolacustrine soil consisted of sandy silt. It was soft to hard and massive with scattered rounded to subangular gravel. Both BH-6 and BH-8 were terminated within this deposit at a depth of 21.5 feet.

### 3.4 GROUND WATER CONDITIONS

Ground water seepage was observed in borings BH-2, BH-3, BH-4, BH-5 and BH-6 during drilling. The water observed in these borings is within the permeable advance outwash soils. In BH-6 the ground water was perched on top of a low permeability deposit consisting of glaciolacustrine. The ground water observed in the other borings represents the local ground water table and could also be perched on an underlying deposit with low permeability, although it was not encountered within the depth explored for this study.

BH-1 and BH-8 were completed as 2-inch diameter standpipes. As measured using a water level meter on June 1, 2018, BH-1 recorded no ground and in BH-8, the ground water level was 8 feet below the ground surface. This indicates ground water is present, although none was observed during drilling in BH-8. The ground water levels recorded in BH-8 from June 1, 2018 through December 22, 2018 are provided on Figure 3. Based on the transducer data, ground water levels within the permeable advance outwash soils in BH-8 gradually dropped during the dry summer months from a depth of 8 feet below ground surface (bgs) on June 1, 2018 to 8.33 feet bgs on August 26, 2018, before gradually fluctuating upward to a depth of 7.85 feet bgs on December 22, 2018 in response to the onset of the wet season. We expect the water levels to remain high or continue rising during the wet winter months at this location. During the same period, no ground water was recorded in BH-1, continuing the trend observed during drilling.

For borings where no standpipe was installed, it should be noted that the stabilized ground water level is typically higher than the ground water levels observed during drilling. We therefore anticipate that the stabilized ground water levels are expected to be higher than those observed
January 18, 2019  
HWA Project No. 2018-060-21

during drilling for BH-2 through BH-7. We consider it prudent to assume that some ground water will be observed within excavations performed for this project.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 GENERAL

The results of our studies indicate that the ground conditions are suitable for traditional open trench construction, as well as pipe bursting. For open excavations, the Contractor will need to provide adequate shoring and dewatering for the alignment to provide stable excavations to limit caving and allow workers to enter during pipe installation. Dewatering requirements will vary along the length of the pipeline, based on the varying depths to ground water and depths of the proposed pipeline. Trenches will likely be adequately dewatered from within the excavation using sumps and pumps; however, significant seepage should be anticipated where the trench crosses existing trenches with free draining backfill.

If pipe bursting is used for sewer replacement, potential for ground heave and damage to existing utilities should be considered. We don't anticipate ground heave for the proposed sewer depths. Near existing utilities, we recommend making local excavations around any utilities which cross within 3 feet (e.g. 3 times the diameter of the bursting head) of the sewer pipe to relieve the stresses that would occur due to ground displacements during bursting.

4.2 OPEN-CUT EXCAVATIONS

We understand open-cut trenching will be used to replace the pipeline alignment, as well as to install new manholes. If pipe bursting were selected, open-cut excavations would be used for the construction of insertion/receiving pits and side sewer connections.

4.2.1 Excavation and Temporary Shoring

Trench excavations for the pipelines can be accomplished with conventional excavation equipment such as backhoes and trackhoes. Trench excavation should be made with a smooth-edge (toothless) bucket or a bucket with a plate welded over the teeth to minimize disturbance to the pipe subgrade. Although not reported on the exploration logs, there is a potential for oversize objects, such as boulders or buried logs, to be encountered in the excavations.

All temporary cuts more than 4 feet in height should be sloped in accordance with Part N of WAC (Washington Administrative Code) 296-155, or should be temporarily shored. Trench support can be achieved using a trench box, augmented as necessary with steel sheets and struts. Caving of the sidewalls is anticipated, and temporary shoring will be necessary to limit the extents of the excavation.
4.2.2 Dewatering

Low to moderate ground water seepage can be expected within the weathered and advance outwash materials or where perched water collects on top of low permeability glaciolacustrine, although the extent of dewatering required will vary along the alignment. Where observed, we expect that the use of sumps and trash pumps will adequately dewater short sections of shallow open trenches. Pumping rates are likely to vary over time with larger rates anticipated when the trench is first opened and declining to a steady-state rate once the water level has stabilized. Pumping rates will depend on the amount of trench opened at one time and the permeability of the materials encountered during trenching. Note that significant ground water flows could be observed when the excavation crosses existing trenches with free-draining backfill.

4.2.3 Trench Subgrade Preparation

Subgrade preparation and verification should be performed at the base of all excavations. This work should be observed by the geotechnical engineer. Any soft or yielding materials identified at the base of the excavation should be removed and replaced with trench backfill as directed by the geotechnical engineer in the field. Any loose materials should be compacted prior to placement of pipe bedding or foundation pad for manhole structures.

4.2.4 Pipe Bedding

The soils at, or near, the bottom of the proposed sewer line and manhole excavations are expected to consist of slightly silty to silty sand. To provide suitable support and bedding, we recommend the pipes and manholes be founded on suitable bedding material, consisting of Gravel Backfill for Pipe Zone Bedding meeting the requirements of Section 9-03.12(3) of the Standard Specifications (WSDOT, 2018).

Pipe bedding should provide a firm uniform cradle for support of the pipes. A minimum 4-inch thickness of bedding material beneath the pipe should be provided. Prior to installation of the pipe, the pipe bedding should be shaped to fit the lower part of the pipe exterior with reasonable closeness to provide uniform support along the pipe. Pipe bedding material should be used as pipe zone backfill and placed in layers and tamped around the pipe to obtain complete contact. To protect the pipe, bedding material should extend at least 12 inches above the top of the pipe.

4.3 BACKFILL AND COMPACTION

Existing materials along the alignment are anticipated to consist of slightly silty to silty sand to sandy silt and are moisture sensitive. Where these materials are encountered below the ground water table, they are likely to be too wet for compaction; however, these materials may be suitable for re-use as trench backfill if they can be properly moisture conditioned and placed within 3 percent of the optimum moisture content as determined using the test method ASTM
D1557 (Modified Proctor). These materials should be compacted to 95 percent of their maximum dry density as determined by ASTM D1557.

If import materials are needed because the existing materials are too difficult to re-use for compaction; we recommend using clean, free-draining, granular material such as Gravel Borrow as specified in Section 9-03.14(1) of the Standard Specifications (WSDOT, 2018) or Bank Run Gravel for Trench Backfill as specified in Section 9-03.19 of the Standard Specifications (WSDOT, 2018). As with the native materials, import materials should be placed within 3 percent of their optimum water content and compacted to 95 percent of their maximum dry density as determined by ASTM D1557.

Trench backfill should be placed in lifts with a maximum uncompacted thickness of 8 to 12 inches and densely compacted in a systematic manner. The contractor should develop compaction methods that consistently produce adequate compaction levels. All backfilling operations should be monitored full-time by a qualified inspector and a sufficient number of in-place density tests should be performed as the fill is placed to determine that the required compaction is being achieved.

During placement of the initial lifts, the trench backfill material should not be bulldozed into the excavation or dropped directly on the pipe. Furthermore, heavy vibratory equipment should not be permitted to operate directly over the pipe until a minimum of 2 feet of backfill has been placed over the pipe bedding.

A significant cause of trench settlement is inadequate shoring practices and inadequate compaction during shoring removal and backfilling. Special care must be taken to obtain good compaction up to the edges of the excavation as the shoring is removed. Moreover, attention must be paid to ensure good compaction around manholes.

### 4.4 Pipe Bursting

We understand that the trenchless construction method of pipe bursting has been considered as a method of pipe replacement for the respective sewer line to reduce the extents for which open excavations are needed.

The pipe bursting process consists of in-situ pipe fragmentation, displacement, and replacement of the existing pipe with new, typically larger diameter, fusible PVC or high-density polyethylene (HDPE) pipe. The existing pipe is split by one of three main pipe bursting systems: static pull, hydraulic expansion, or a pneumatic bursting-head or nose cone. With the static pull method, the head is simply pulled through the existing pipe by a heavy duty pulling device via a segmented drill rod assembly or heavy anchor chain. In hydraulic expansion, the head expands and closes sequentially as it is pulled through the pipe, bursting the pipe on its way. Pneumatic pipe bursting uses pulsating air pressure to drive the head forward and burst the existing pipe. This method of pipe bursting may create noticeable ground vibrations on the surface above the bursting operation.
A small pulling device guides the head via a constant tension winch and cable. As the existing pipe is burst using any of the three methods, the replacement pipe is pulled along the alignment of the old pipe behind the bursting-head. Typically, the fusible pipe installed during the pipe bursting process consists of 20- to 40-foot sections that are welded together on site. Pipe bursting is conducted between two points of access; i.e., station–to-station with stations consisting of existing or newly constructed manholes, or insertion and extraction pits.

We understand that the existing concrete pipe (8 inches in diameter) in the project alignment will be replaced with 8- to 12-inch HDPE pipe to handle future sewage flows. We do not have the benefit of compaction records documenting the density and type of materials used as trench backfill along the existing alignment. However, it is typical for trench backfill to be medium dense and, in our opinion, the existing conditions are likely suitable for allowing pipe replacement by means of pipe bursting. Notwithstanding, the contractor should anticipate local variations in fill conditions, the presence or absence of ground water, and intrusion of roots. These factors will affect the force required to burst and pull replacement pipe. Other considerations would be the presence of trench dams that would likely obstruct the advance of the pipe bursting head.

Some ground displacement effects should be expected as a result of pipe bursting procedure. Displacements tend to be localized, and develop in the direction of least resistance. The magnitude and orientation of the displaced soil is largely dependent upon the degree of pipe upsizing, the type and compaction level of the soil surrounding the pipe, and the depth of the pipe. Typically, loose soils will undergo uniform displacement whereas more densely compacted soils at the same depth will most likely exhibit vertical (heave) expansion. The localized restraining effect of strong soils along trench sides and bottom also serves to direct ground movement upward above the pipe. Conversely, if the existing pipes were founded on weak soil, displacement could be directed downward. Our subsurface data indicates the native soils are relatively dense; therefore, we anticipate that much of the ground displacements will consist of compaction of the loose to medium dense trench backfill in a generally upward direction.

We understand that the existing pipe invert elevation ranges from 6 feet below existing surface grade near the north end to 26 feet near the south end. At this depth, surface heave is generally not anticipated. In the unlikely event that ground movement (heaving) distorts the existing road surface, we recommend that some contingency provision be made to accommodate the rehabilitation of the existing road surface.

Pipe bursting will require excavations for insertion pits, receiving pits, and reconnection of side sewers.

4.4.1 Pipe Bursting and Adjacent Utilities

Potential impacts to adjacent utilities due to ground disturbance from pipe bursting should be considered. The risk of distress to existing pipes due to vibration and ground displacement from
pipe bursting is typically low for pipes farther than about 3 diameters from the bursting head. Where existing utilities are within this distance, local excavations should be made around the utilities prior to bursting. They should be left open during bursting and backfilled once installation of the pipe is complete.

4.5 PAVEMENT DESIGN

Our pavement design recommendations for pavement restoration along 108th Avenue NE using the design method given in the 1993 AASHTO Design Guide (AASHTO, 1993) are based on the following parameters and traffic loading:

- A resilient modulus of 7,500 psi was assumed for the native soils.
- A resilient modulus of 20,000 psi was estimated for the Crushed Surfacing Base Course (CSBC).
- Initial and terminal serviceability index of 4.5 and 2.2, respectively.
- Reliability and standard deviation of 90% and 0.45, respectively.
- Structural coefficient of 0.42 and 0.14 for the HMA and CSBC, respectively.
- 550,000 Equivalent Single Axle Loads (ESALs) based on an Average Daily Traffic (ADT) of 10,000 in both directions over a 20-year design period and 1% truck traffic at 1.4 ESALs per truck.

These values result in a required AASHTO Structural Number of 3.59. Table 1 provides our Hot Mix Asphalt (HMA) design recommendations for pavement restoration based on the parameters and traffic loading presented above.

**Table 1. Structure Requirements for New HMA Pavement for Trenches**

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Option A Minimum Layer Thickness (inches)</th>
<th>Option B Minimum Layer Thickness (inches)</th>
<th>WSDOT Standard Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMA</td>
<td>7</td>
<td>9</td>
<td>5-04 &amp; 9-02.1</td>
</tr>
<tr>
<td>CSBC</td>
<td>5</td>
<td>-</td>
<td>9-03.9(3)</td>
</tr>
</tbody>
</table>

We recommend that the asphaltic layer consist of HMA Class ½-inch. The maximum lift thickness for HMA Class ½-inch is 0.3 feet (or 3.6 inches), as stipulated by WSDOT *Standard Specifications* (WSDOT, 2018).

We understand that according to the City of Kirkland Plan No. CK-R.12, the pavement restoration patch must always be 1-inch deeper than the existing asphalt; maximum 6 inches deep, or as directed by the engineer. Our explorations indicate that the existing HMA is 8 to 9.5 inches thick. We recommend that the new HMA patch be at least 9 inches thick, as indicated in Option B of Table 1.
Given that the existing pavement along 108th Avenue NE is relatively new, we recommend a 2-inch overlay be placed in one lift over the entire lane width following trench patching.

4.5.1 Pavement Design Considerations

The following design considerations should be noted and implemented:

- The pavement will likely require a functional overlay after about 10 to 12 years because of non-structural associated distress caused by environmental factors such as degradation of the asphalt surface and rutting.

- HMA pavements are susceptible to shoving and rutting from heavy vehicles, such as buses and heavy delivery trucks, particularly at intersections. In these areas, more frequent maintenance and even premature reconstruction of the pavement may be required. As indicated in the following section, we recommend a Performance Grade (PG) asphalt binder that is one grade higher than the standard recommended by WSDOT for this region. By bumping the PG binder one grade, greater resistance to rutting and shoving in higher temperatures will be achieved.

4.5.2 HMA Binder Selection

The selection of the optimum asphalt binder type for the prevailing climate is critical to ensure long-term pavement performance. Use of the wrong binder can result in low temperature cracking or permanent deformation at high temperatures. Based on the climate in Kirkland, we recommend Superpave Performance Grade binder PG 64-22 be used for pavement restoration and pavement overlays to provide greater resistance to potential pavement distresses.

4.5.3 Placement of HMA

Placement of HMA should be in accordance with Section 5-04 of the WSDOT Standard Specifications (WSDOT, 2018). Particular attention should be paid to the following:

- HMA should not be placed until the engineer has accepted the previously constructed pavement layers.

- HMA should not be placed on any frozen or wet surface.

- HMA should not be placed when precipitation is anticipated before the pavement can be compacted, or before any other weather conditions which could prevent proper handling and compaction of HMA.

- HMA should not be placed when the average surface temperatures are less than 45 °F.

- HMA temperature behind the paver should be in excess of 240 °F. Compaction should be completed before the mix temperature drops below 180 °F. Comprehensive temperature records should be kept during the HMA placement.
• For cold joints, tack coat should be applied to the edge to be joined and the paver screed should be set to overlap the first mat by 1 to 2 inches.

4.5.4 Drainage

It is essential to the satisfactory performance of the roadway that good drainage is provided to prevent water ponding on or alongside, or accumulating beneath, the pavement. Water ponding can cause saturation of the pavement and subgrade layers and lead to premature failure. The base layers and subgrade surface should be graded to prevent water being trapped within the layer. The surface of the pavement should be sloped to convey water from the pavement to appropriate drainage facilities.

4.6 Wet Weather Earthwork

If fill is to be placed or earthwork is to be performed in wet weather or under wet conditions, the following recommendations should apply:

• Earthwork should be performed in small sections to minimize exposure to wet weather. Excavation or the removal of unsuitable soil should be followed promptly by the placement and compaction of a suitable thickness of clean structural fill with less than 5 percent of the particles passing the No. 200 sieve.

• The ground surface within the construction area should be sloped and sealed with a smooth drum vibratory roller, or equivalent, to promote rapid runoff of precipitation and to prevent ponding of water.

• No soil should be left uncompacted so it can absorb water. Soils that become too wet for compaction should be removed and replaced with clean granular materials.

• Excavation and placement of fill should be observed by personnel from HWA to verify that all unsuitable materials are removed and suitable compaction and site drainage are achieved.

The above recommendations for wet weather earthwork should be incorporated into the contract specifications.

5. CONDITIONS AND LIMITATIONS

We have prepared this report for CHS Engineers, LLC and the City of Kirkland for their use in design and construction of sewer main replacement on 108th Avenue NE in Kirkland, Washington. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as a warranty of existing subsurface conditions. Experience has shown that soil and ground water conditions can vary significantly over small distances and ground water can vary significantly over time. Inconsistent conditions can occur between exploration locations and may not be detected by a geotechnical study of this nature. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described
January 18, 2019  
HWA Project No. 2018-060-21  

herein, HWA should be notified for review of the recommendations of this report, and revision of such if necessary.

HWA should review the plans and specifications to verify that our recommendations have been properly incorporated into the design. Sufficient geotechnical monitoring, testing, and consultation should be provided during construction to confirm that the conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes should conditions revealed during construction differ substantially from those anticipated, and to verify that geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, HWA attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical and pavement engineering and engineering geology in the area at the time the report was prepared. No warranty, express or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or ground water at this site.

This firm does not practice or consult in the field of safety engineering. We do not direct the contractor’s operations, and cannot be responsible for the safety of personnel other than our own on the site. As such, the safety of others is the responsibility of the contractor. The contractor should notify the owner if he/she considers any of the recommended actions presented herein unsafe.

We appreciate the opportunity to provide geotechnical services on this project. Should you have any questions or comments, or if we may be of further service, please do not hesitate to call.

Sincerely,

HWA GEOSCIENCES INC.

Zakeyo Ngoma, P.E.  
Geotechnical Engineer

JoLyn Gillie, P.E.  
Geotechnical Engineer, Principal
REFERENCES


WSDOT, 2018, Standard Specifications for Road, Bridge, and Municipal Construction, M 41-10 Washington State Department of Transportation.
HWA GeoSciences Inc.

108th AVENUE NE
SEWER MAIN REPLACEMENT
KIRKLAND, WASHINGTON

SITE AND EXPLORATION PLAN

DATE: 08.10.2018

PROJECT # 2018-060-21

FIGURE 2B

MATCHLINE FIGURE 2A

BH-4

MATCHLINE FIGURE 2C

BH-5

BASE MAP PROVIDED BY: CHS ENGINEERS

SCALE: 1" = 50'-0"

Bore Hole Legend

Legend

BH-2: BORING DESIGNATION AND APPROXIMATE LOCATION FOR CURRENT STUDY
108th AVENUE NE
SEWER MAIN REPLACEMENT
KIRKLAND, WASHINGTON

HWA GeoSciences Inc.

SITE AND EXPLORATION PLAN

SCALE: 1" = 50'-0"

BORE HOLE LEGEND

LEGEND
BH-7: BORING DESIGNATION AND APPROXIMATE LOCATION FOR CURRENT STUDY

BASE MAP PROVIDED BY: CHS ENGINEERS

0 25 50 75 100

46.5
Water Elevation from June 1, 2018 to December 22, 2018
Ground Surface Elevation: 210 ft

GROUND WATER ELEVATION DATA IN BH-8

108TH AVENUE NE SEWER MAIN REPLACEMENT
KIRKLAND, WASHINGTON
APPENDIX A

EXPLORATION LOGS
# USCS Soil Classification System

## Major Divisions

### Coarse Grained Soils

- **Gravel and Gravelly Soils**
  - More than 50% of Coarse Fraction Retained on No. 4 Sieve
  - Grain Size Distribution (applicable amount of fines)
  - Consistency: Liquid Limit
  - Approximate Undrained Shear Strength (psf)

### Coarse Gravelly Soils

- **Gravel with Fines**
  - Grain Size Distribution (applicable amount of fines)
  - Consistency: Liquid Limit
  - Approximate Undrained Shear Strength (psf)

### Fine Grained Soils

- **Sand and Sandy Soils**
  - 50% or More of Coarse Fraction Passing No. 4 Sieve
  - Grain Size Distribution (applicable amount of fines)
  - Consistency: Liquid Limit
  - Approximate Undrained Shear Strength (psf)

### Fine Grained Soils

- **Silt and Clay**
  - Grain Size Distribution (applicable amount of fines)
  - Consistency: Liquid Limit
  - Approximate Undrained Shear Strength (psf)

### Highly Organic Soils

- **Organic Silt/Organic Clay**
  - Grain Size Distribution (applicable amount of fines)
  - Consistency: Liquid Limit
  - Approximate Undrained Shear Strength (psf)

## Component Proportions

### Component

- **Boulders**
  - Larger than 12 in
- **Cobbles**
  - 3 in to 12 in
- **Gravel**
  - 3 in to No. 4 (4.5 mm)
- **Coarse gravel**
  - 3 in to 3/4 in
- **Fine gravel**
  - 3/4 in to No. 4 (4.5 mm)
- **Sand**
  - No. 4 (4.5 mm) to No. 200 (0.074 mm)
- **Coarse sand**
  - No. 4 (4.5 mm) to No. 10 (2.0 mm)
- **Medium sand**
  - No. 10 (2.0 mm) to No. 40 (0.42 mm)
- **Fine sand**
  - No. 40 (0.42 mm) to No. 200 (0.074 mm)
- **Silt and Clay**
  - Smaller than No. 200 (0.074 mm)

### Size Range

- **Loose**
  - 0 to 15
- **Medium Dense**
  - 35 to 85
- **Dense**
  - 85 to 100

### Density

- **Very Loose**
  - 0 to 4
- **Loose**
  - 4 to 10
- **Medium Dense**
  - 10 to 30
- **Dense**
  - 30 to 50
- **Very Dense**
  - over 50

### Proportion Range

- **< 5%**
- **5 - 12%**
- **12 - 30%**
- **30 - 50%**

### Descriptive Terms

- **Clean**
- **Slightly (Clayey, Silty, Sandy)**
- **Clayey, Silty, Sandy, Gravelly**
- **Very (Clayey, Silty, Sandy, Gravelly)**

Components are arranged in order of increasing quantities.

### Moisture Content

- **DRY**
  - Absence of moisture, dusty, dry to the touch.
- **MOIST**
  - Damp but no visible water.
- **WET**
  - Visible free water, usually soil is below water table.
8-inch asphalt concrete pavement.
Medium dense, yellow-brown, slightly silty, fine SAND, moist.
(FILL)

Very loose, yellow-brown, slightly silty, fine to medium SAND, moist.
Becomes loose.

Medium dense, rust-mottled light yellow-brown, slightly silty, fine to medium SAND, moist.
(WEATHERED OUTWASH)

Medium dense, olive-gray, fine to medium SAND, moist.

Medium dense, olive-gray, slightly silty, fine to medium SAND, moist.

Medium dense, olive-gray, silty, fine to medium SAND, moist.

Very dense, rust-mottled olive-gray, slightly silty, fine to medium SAND, moist, slightly laminated.
(ADVANCE OUTWASH)

Dense, rust-mottled olive-gray, slightly silty, fine to medium SAND, moist.

Borehole terminated at 31.5' below ground surface (bgs).
No ground water was observed at the time of exploration.
Borehole completed as a 2-inch PVC well (DOE # BLE 751).
No ground water was observed during monitoring.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.
### 108TH AVENUE NE SEWER MAIN REPLACEMENT KIRKLAND, WASHINGTON

**BORING:** BH-2  
**DATE COMPLETED:** 5/16/2018

**DRILLING COMPANY:** Gregory Drilling Inc.  
**DRILLING METHOD:** CME-75, 4.25" ID HSA  
**SAMPLING METHOD:** SPT w/ Auto  
**LOCATION:** See Figure 2

**NOTE:** This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
<th>USCS SOIL CLASS</th>
<th>PEN. RESISTANCE (blows/6 inches)</th>
<th>OTHER TESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM</td>
<td>8-inch asphalt concrete pavement. Very dense, olive-brown grading to gray, silty fine SAND, moist.</td>
<td>SM</td>
<td>14-26-25</td>
<td></td>
</tr>
<tr>
<td>SM</td>
<td>Loose, yellow-brown, silty fine SAND, moist.</td>
<td>SM</td>
<td>3-3-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(ADVANCE OUTWASH) Very dense, olive-gray, slightly gravelly, silty fine SAND, moist.</td>
<td></td>
<td>12-26-27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dense, olive-gray, silty fine SAND, moist.</td>
<td></td>
<td>10-50/2&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grades to very dense.</td>
<td></td>
<td>11-16-24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very dense, olive-gray, gravelly, silty fine to coarse SAND, wet.</td>
<td></td>
<td>20-40-50/5&quot; GS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very dense, olive-gray, gravelly, silty fine to coarse SAND, wet.</td>
<td></td>
<td>26-50/5.5&quot; GS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very dense, olive-brown, silty, fine to coarse SAND, wet.</td>
<td></td>
<td>20-36-48</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20-28-32</td>
<td></td>
</tr>
</tbody>
</table>

Borehole terminated at 31.5' below ground surface (bgs). Ground water seepage was observed at 20' bgs at the time of exploration. Borehole abandoned with 3/8" bentonite chips.

**GROUNDWATER:**

- **Standard Penetration Test** (140 lb. weight, 30" drop)
  - **Blows per foot**

**ELEVATION (feet):**

- **Liquid Limit**
- **Plastic Limit**
- **Natural Water Content**

**DEPTH (feet):**

- **Surf. Elevation:** 290.0 ± feet
8-inch asphalt concrete pavement.
Medium dense, olive-brown to yellow-brown, slightly silty SAND, moist, with scattered gravel.
(MEDIUM DENSE, OLIVE-BROWN, SILTY FINE SAND, MOIST.)

Medium dense, yellow-brown, silty fine SAND, moist.

Very dense, olive-gray, with some rust-mottling, silty SAND with gravel, damp to moist.
(ADVANCE OUTWASH)
Very dense, olive-gray, silty SAND with scattered gravel, moist. Large broken piece of gravel at tip of sample tube.

Very dense, olive-gray, slightly silty to silty SAND with scattered gravel, damp to moist.

Very dense, olive-gray, slightly gravelly, very silty SAND, dry to damp.

Very dense, olive-gray, silty SAND, moist.

Dense, olive-gray, slightly gravelly, silty SAND, wet. Hard, rust-mottled olive-brown, silt lens from 26' to 26.25'.

Very dense, olive-gray, silty, medium to coarse SAND, wet. 0.5" silt band at 30.25'.

Borehole terminated at 31.5' below ground surface (bgs).
Ground water seepage was observed at 25' bgs at the time of exploration.
Borehole abandoned with 3/8" bentonite chips.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.
9.5-inch asphalt concrete pavement.

Medium dense, rust-mottled olive-brown, silty SAND, with gravel, moist.

(WEATHERED OUTWASH)

Medium dense, rust-mottled olive-brown, silty SAND, with gravel, moist.

Medium dense, rust-mottled olive-brown, very silty SAND, with gravel, moist.

(ADVANCE OUTWASH)

Very dense, olive-gray, silty SAND with scattered gravel, moist.

Becomes rust-banded.

Very dense, rust-banded dark olive-gray, slightly silty well-graded SAND, wet.

Very dense, olive-gray, slightly silty, medium SAND, moist.

Very dense, olive-gray, slightly silty, medium SAND, moist to wet.

Borehole terminated at 31.5’ below ground surface (bgs).

Ground water seepage was observed at 20’ bgs at the time of exploration.

Borehole abandoned with 3/8” bentonite chips.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.
9.5-inch asphalt concrete pavement.

Medium dense, olive-brown, silty, gravelly SAND, moist. Gravelly drilling action from 1' to 2.5' reported by driller.

Dense grading to very dense, olive-gray, silty SAND with scattered gravel, moist.

Very dense, olive-gray, silty SAND with scattered gravel, moist.

Very dense, olive-gray, stratified, silty SAND with scattered gravel, moist.

Very dense, olive-gray, silty SAND with scattered gravel, damp to moist. Broken piece of gravel in sample tube.

Very dense, olive-gray, silty SAND with scattered gravel, moist.

Very dense, olive-gray, very silty SAND with scattered gravel, wet.

Very dense, olive-gray, very silty SAND with scattered gravel, moist.

Borehole terminated at 25.4' below ground surface (bgs). Ground water seepage was observed at 19.5' bgs at the time of exploration. Borehole abandoned with 3/8" bentonite chips.
9.5-inch asphalt concrete pavement.

Dense, olive-gray, silty SAND with gravel, moist.

Medium dense, olive-gray, silty SAND with occasional fine to coarse gravel, moist, some silt banding observed.

Medium dense, rust-mottled olive-gray, very silty fine SAND with scattered gravel, moist.

Very dense, dark olive-gray, very silty SAND, wet.

Very dense, light olive-gray, gravelly, silty SAND, damp to moist. Two large broken pieces of gravel in sample tube. Blow count may be exaggerated.

Very dense, olive-gray, silty SAND, wet, interbedded with rust-mottled gray sandy SILT, moist.

Hard, gray to dark gray, fine sandy SILT with scattered gravel, moist to wet.

Borehole terminated at 21.5' below ground surface (bgs). Ground water seepage was observed at 7.5' bgs at the time of exploration. Borehole abandoned with 3/8” bentonite chips.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.
**DESCRIPTION**

- **WEATHERED OUTWASH**
  - 9.5-inch asphalt concrete pavement.
  - Medium dense, olive-brown, silty SAND with scattered fine gravel, moist. Trace organics.

- **ADVANCE OUTWASH**
  - Dense, rust-mottled dark olive-gray, slightly gravelly, silty SAND, moist.
  - Very dense, slightly rust-mottled olive-gray, gravelly, silty SAND, damp to dry. Large pieces of broken gravel.

- Driller reports softer drilling.
- Loose, olive-gray, slightly silty, fine to medium SAND, moist.

- Medium dense to dense, olive-gray, slightly silty, fine to medium SAND, moist.

**GROUNDWATER**

- Borehole terminated at 21.5' below ground surface (bgs).
- No ground water seepage was observed at the time of exploration.
- Borehole abandoned with 3/8" bentonite chips.

**NOTE:** This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.
9.5-inch asphalt concrete pavement.

Very loose, brown to yellow-brown, gravelly SILT, moist.

Soft, brown, gravelly SILT, moist. (GLACIOLACUSTRINE)

Driller reported firmer drilling.
Stiff, very rust-mottled light gray, CLAY, moist. Low plasticity.

Very stiff, rust-mottled light gray to olive-gray, CLAY, moist. Low plasticity.

Driller reports softer drilling.

Very stiff, gray to dark gray, SILT, moist.

Hard, gray to dark gray, SILT, moist.

Borehole terminated at 21.5' below ground surface (bgs).
No ground water was observed at the time of exploration.
Borehole completed as a 2-inch PVC well (DOE # BKB 999).
Ground water was observed at 8' bgs during monitoring on 6/1/18.
APPENDIX B

LABORATORY TEST RESULTS
APPENDIX B

LABORATORY INVESTIGATION

Representative soil samples obtained from the explorations were placed in plastic bags to prevent loss of moisture and transported to our Bothell, Washington, laboratory for further examination and testing. Laboratory tests were conducted on selected soil samples to characterize relevant engineering and index properties of the site soils. Laboratory testing was conducted as described below:

**MOISTURE CONTENT OF SOIL:** The moisture content of selected soil samples (percent by dry mass) was determined in general accordance with ASTM D 2216.

**PARTICLE SIZE ANALYSIS OF SOILS:** Selected samples were tested to determine the particle (grain) size distribution of material in general accordance with ASTM D 422.
<table>
<thead>
<tr>
<th>EXPLORATION DESIGNATION</th>
<th>TOP DEPTH (feet)</th>
<th>BOTTOM DEPTH (feet)</th>
<th>MOISTURE CONTENT (%)</th>
<th>ORGANIC CONTENT (%)</th>
<th>SPECIFIC GRAVITY</th>
<th>ATTERBERG LIMITS (%)</th>
<th>% GRAVEL</th>
<th>% SAND</th>
<th>% FINES</th>
<th>ASTM SOIL CLASSIFICATION</th>
<th>SAMPLE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH-1,S-2</td>
<td>2.5</td>
<td>3.5</td>
<td>6.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SP-SM</td>
<td>Yellowish-brown, poorly graded SAND with silt</td>
</tr>
<tr>
<td>BH-1,S-3</td>
<td>5.0</td>
<td>6.0</td>
<td>7.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SP-SM</td>
<td>Yellowish-brown, poorly graded SAND with silt</td>
</tr>
<tr>
<td>BH-1,S-4</td>
<td>7.5</td>
<td>8.6</td>
<td>8.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SP-SM</td>
<td>Olive-brown, poorly graded SAND with silt</td>
</tr>
<tr>
<td>BH-1,S-5</td>
<td>10.0</td>
<td>11.1</td>
<td>9.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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**108TH AVENUE NE SEWER MAIN REPLACEMENT**
**KIRKLAND, WASHINGTON**

**PARTICLE-SIZE ANALYSIS OF SOILS**
**METHOD ASTM D6913**
PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

108TH AVENUE NE SEWER MAIN REPLACEMENT
KIRKLAND, WASHINGTON

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<td>7.5 - 8.9 (SM) Olive-brown, silty SAND</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>6.9</td>
<td>58.6</td>
<td>34.5</td>
</tr>
<tr>
<td>SYMBOL</td>
<td>SAMPLE</td>
<td>DEPTH (ft.)</td>
<td>CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name</td>
<td>% MC</td>
<td>LL</td>
<td>PL</td>
<td>PI</td>
<td>Gravel %</td>
<td>Sand %</td>
<td>Fines %</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
<td>------------</td>
<td>----------------------------------------------------------</td>
<td>------</td>
<td>---</td>
<td>---</td>
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<td>----------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>●</td>
<td>BH-4</td>
<td>S-7</td>
<td>20.0 - 21.5 (SW-SM) Olive-brown, well-graded SAND with silt</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td>0.6</td>
<td>87.4</td>
<td>12.0</td>
</tr>
<tr>
<td>●</td>
<td>BH-5</td>
<td>S-7</td>
<td>20.0 - 20.9 (SM) Olive-brown, silty SAND</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td>8.9</td>
<td>58.0</td>
<td>33.1</td>
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<tr>
<td>●</td>
<td>BH-6</td>
<td>S-4</td>
<td>7.5 - 9.0 (SM) Olive-brown, silty SAND</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
<td>63.0</td>
<td>34.5</td>
</tr>
</tbody>
</table>

108TH AVENUE NE SEWER MAIN REPLACEMENT
KIRKLAND, WASHINGTON

PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

PROJECT NO.: 2018-060-21
FIGURE: B-6
PARTICLE-SIZE ANALYSIS
OF SOILS
METHOD ASTM D6913

108TH AVENUE NE SEWER MAIN REPLACEMENT
KIRKLAND, WASHINGTON

Gravel
- BH-7 S-3: 5.0 - 6.3
- BH-7 S-6: 15.0 - 16.5

Sands
- (SM) Olive-brown, silty SAND
- (SP-SM) Olive-brown, poorly graded SAND with silt

Classification of Soil - ASTM D2487 Group Symbol and Name

% MC LL PL PI Gravel % Sand % Fines %

- BH-7 S-3: 15 10.7 50.6 38.7
- BH-7 S-6: 10 1.5 89.7 8.8

U.S. STANDARD SIEVE SIZES

<table>
<thead>
<tr>
<th>GRAVEL</th>
<th>SAND</th>
<th>SILT</th>
<th>CLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse</td>
<td>Fine</td>
<td>Coarse</td>
<td>Medium</td>
</tr>
</tbody>
</table>

GRAIN SIZE IN MILLIMETERS

PERCENT FINER BY WEIGHT
City of Kirkland
108TH Street Sewer Main Replacement

FIGURE 1
CONDITIONS SUMMARY
Policy G-3: CONSTRUCTION RECORD DOCUMENT REQUIREMENTS

“CONSTRUCTION RECORD” DRAWINGS

1. Do not erase, but cross out numeric data on plans such as structure tops, inverts, slopes, material, etc. then add “Construction Record” data with a CR in parenthesis following the revised entries.

2. Do not erase, but cross out and re-draw the “Construction Record” graphical changes in their revised locations.

3. Include the approved King County Datum with benchmark elevation and location. All “Construction Record” elevations must be based on the approved King County Datum (NAVD 88 vertical, NAD 83/91 horizontal) unless the project was allowed to be submitted based on the old City of Kirkland Datum.

4. Drawings must display the word “RECORD DRAWING” near the title block in readily recognizable print with the corresponding date and surveyor’s or project engineer’s signature.

5. Submit one set of record drawing bluelines to the Construction Inspector for review before preparing digital copies.

6. Prepare and submit one set of D sized (24”x36” media size, 21”x33” max. plot size) blueline copies of the “Construction Record” documents. Include appropriate permit number in bold lettering on all pages.

7. In addition to the requirements listed above (#6), record drawings shall also be submitted on disc in the following formats: TIF and PDF. Both shall have a minimum resolution of 300dpi. Each page shall have a corresponding file name. The proper format for naming files shall be: ProjectName## (## being the page number). For example: ThomasShortPlat1.tif...ThomasShortPlat4.tif / ThomasShortPlat1.pdf...ThomasShortPlat4.pdf.
Policy E-1: USE OF TEMPORARY SEDIMENT SETTLING TANKS

Purpose
Temporary sediment settling (TSS) tanks are commonly used to remove sediment from stormwater runoff and groundwater associated with construction activities. Common trade names for these facilities include “Baker Tanks” or “Rain For Rent” tanks. Alternative sediment retention facilities include in-ground sediment traps or ponds. TSS tanks are often a good option in cases where the building footprint covers a large portion of the site. The tanks are portable so they can be moved to accommodate construction, and require less area than an in-ground sediment pond or trap.

FREQUENTLY ASKED QUESTIONS ASSOCIATED WITH TSS TANKS & CONSTRUCTION DEWATERING

1. **What are the requirements in Kirkland for Construction Dewatering?**
   It may be necessary during construction to pump groundwater or excess stormwater away from the project site. This water can be contaminated with pollutants (including sediment) and cannot be discharged directly into the street or down a storm drain without any precautions. Discharges to the public stormwater drainage system must be below 25ntu, and not considered an illicit discharge (per KMC 15.52.090). If your construction project causes an illicit discharge to the municipal storm drain system, the City of Kirkland Storm Maintenance Division will be called to clean the public storm system, and other affected public infrastructure. The contractor(s), property owner, and any other responsible party may be charged all costs associated with the clean-up and may also be assessed monetary penalties (KMC 1.12.200).

   The following options are available to applicants for construction dewatering:

   1) Pump the excess water to another area of the site, and allow it to disperse or infiltrate on site.
   2) If infiltration/dispersion is not possible, water can temporarily be pumped to a storage facility (e.g., a pond or tank) to allow settling prior to discharge to storm or sanitary sewer.
      - To discharge to the storm system, water turbidity must be less than 25ntu and cannot have an odor of solvent gasoline, hydrogen sulfide (rotten egg odor), oil sheen, or unusual color.
   3) Before discharging to the sanitary sewer:
      - Notify the City of Kirkland, Public Works Inspector at (425) 587-3800.
      - All projects (except Single Family Infill) must obtain permit authorization from the King County Industrial Waste Program (206-263-3000). More information is available at the website listed below.
      - Single family infill projects may discharge to sanitary sewer without a permit from King County Industrial Waste Program as long as the discharge is less than 7 mg/L of suspended solids.

2. **Where can I get a TSS tank?**

Vendors providing TSS tanks can be found on the internet, ask other contractors for recommendations, or look at the list below. The City of Kirkland provides this list for your convenience and makes no recommendation whatsoever regarding these firms. If you would like your business added to this list, please contact a Surface Water Utility Engineer at (425) 587-3800.

<table>
<thead>
<tr>
<th>BAKER TANKS</th>
<th>RAIN FOR RENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>6100 – 238th St. SE</td>
<td>19430 – 59th Ave. NE</td>
</tr>
<tr>
<td>Woodinville, WA 98072</td>
<td>Arlington, WA 98223</td>
</tr>
<tr>
<td>Phone: (425) 487-6503</td>
<td>Phone: (360) 403-3091</td>
</tr>
<tr>
<td>Or 1-800-225-3712</td>
<td>Or 1-800-742-7246</td>
</tr>
<tr>
<td><a href="http://www.bakercorp.com">www.bakercorp.com</a></td>
<td><a href="http://www.rainforrent.com">www.rainforrent.com</a></td>
</tr>
</tbody>
</table>

3. **How do I determine what size TSS tank to use?**

To determine the appropriate size of a TSS tank, see calculations in the 2009 King County Surface Water Design Manual (Appendix D) or use the size recommended by the product manufacturer.

4. **How do I pump sediment-laden storm runoff into a TSS tank?**

Excavate a small "sump", like a 4’x4’x4’ pit filled with cobbles, at the naturally occurring low elevation on-site. The inlet hose from the sump pump will then discharge storm/ground water collected within this sump into the TSS tank.

5. **How do I determine where and when water in a TSS tank may be discharged?**

The contractor shall coordinate water quality sampling and discharge with the PW Inspector. Prior to discharge, the PW Inspector will verify water quality sampling results, and will determine whether runoff meets guidelines for discharge into a piped stormwater system or a natural drainage course, or for discharge to the sanitary sewer system.

Sampling is used to determine whether storm/ground water meets the discharge guidelines outlined below. The purpose of the guidelines is to keep excess sediment and other contaminants out of natural waterways, the storm drainage system, and the sanitary sewer. The PW Inspector may require a sampling log be kept for record keeping purposes (see sample log on page 4).

<table>
<thead>
<tr>
<th>WATER QUALITY GUIDELINES FOR CONSTRUCTION DEWATERING DISCHARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>&lt; 25 NTUs</strong>&lt;br&gt;May be discharged to a piped stormwater system or “natural” discharge location.</td>
</tr>
<tr>
<td><strong>&gt; 25 NTUs</strong>&lt;br&gt;May be discharged to sanitary sewer based upon PW Inspector’s discretion. Discharge must be translucent, without odor or oil sheen.</td>
</tr>
<tr>
<td><strong>&gt; 7 ml/L</strong>&lt;br&gt;Not allowed for discharge to Storm or Sanitary Sewer.</td>
</tr>
</tbody>
</table>

**Notes:**
The discharge of construction dewatering runoff to the sanitary sewer system requires prior approval from King Co. Dept. of Natural Resources (Contact King Co. Industrial Waste Program, 206-263-3000). In addition, permission from the City of Kirkland Public Works
6. **What is the difference between Total Suspended Solids and Turbidity?**

Total suspended solids (TSS) concentrations and turbidity both indicate the amount of solids suspended in the water, whether mineral (like soil particles) or organic (like algae). The TSS test measures an actual weight of material per volume of water, while turbidity measures the amount of light scattered from a sample (more suspended particles cause greater scattering). TSS concentrations are reported in units of milligrams of suspended solids per liters of water (mg/L). Turbidity is reported as nephelometric turbidity units (NTUs). Although the correlation between turbidity and total suspended solids is inexact and depends on site soils, the City has found that turbidity is a reasonable indicator of the magnitude of the total suspended solids load in the water.

**Nephelometer Sampling Process**

Turbidity measurement does not require any sample preparation, other than shaking the sample bottle well before analysis. The sample is simply poured into a glass tube, placed inside the instrument with a reference solution and the result is read directly from the instrument.

**Imhoff Cone Sampling Process**

A wastewater sample is poured into an Imhoff cone for settleable solids analysis. The sample is added to the 1-liter mark. After 45 minutes, the cone will be turned to loosen material which has stuck to the sides during settling. After another 15 minutes, the volume of collected material will be read, in milliliters, from graduations marked near the bottom of the cone.
This TSS Tank Sampling Log example has been prepared to assist construction contractors and PW Inspectors. City policy provides the PW Inspector with discretion to require the use and maintenance of a TSS Tank Sampling Log to document the effectiveness of this Best Management Practice. In addition to the log, the City will continue to rely upon Federal, State, and municipal regulations to insure water quality requirements have been achieved.

### TEMPORARY SEDIMENT SETTLING TANK SAMPLING LOG

<table>
<thead>
<tr>
<th>Activity Date</th>
<th>Turbidity Reading (NTUs)</th>
<th>Imhoff Cone Reading (ml/L)</th>
<th>Discharge Location (Storm, Stream, or Sanitary sewer)</th>
<th>Total Discharge Volume – Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>/</strong>/__</td>
<td>__ NTUs</td>
<td>__ ml/L</td>
<td>Storm system, Stream, or Sanitary sewer</td>
<td>__ Gal’s.</td>
</tr>
<tr>
<td><strong>/</strong>/__</td>
<td>__ NTUs</td>
<td>__ ml/L</td>
<td>Storm system, Stream, or Sanitary sewer</td>
<td>__ Gal’s.</td>
</tr>
<tr>
<td><strong>/</strong>/__</td>
<td>__ ml/L</td>
<td></td>
<td>Storm system, Stream, or Sanitary sewer</td>
<td>__ Gal’s.</td>
</tr>
<tr>
<td><strong>/</strong>/__</td>
<td>__ ml/L</td>
<td></td>
<td>Storm system, Stream, or Sanitary sewer</td>
<td>__ Gal’s.</td>
</tr>
<tr>
<td><strong>/</strong>/__</td>
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<td></td>
<td>Storm system, Stream, or Sanitary sewer</td>
<td>__ Gal’s.</td>
</tr>
<tr>
<td><strong>/</strong>/__</td>
<td>__ ml/L</td>
<td></td>
<td>Storm system, Stream, or Sanitary sewer</td>
<td>__ Gal’s.</td>
</tr>
</tbody>
</table>

**Tank Installation:** __/__/__

**Notes/Comments:**
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________