

# Contract Provisions

For Construction of:

SR 162

MP 6.61 TO MP 7.10

## PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

PIERCE COUNTY

A STATE PROJECT



**Washington State  
Department of Transportation**

Washington State  
Department of Transportation  
Olympic Region  
Olympia, Washington 98504

November 25, 2014

ATTENTION: All Bidders and Planholders

SR 162  
PUYALLUP RIVER BRIDGE  
BRIDGE REPLACEMENT  
STATE PROJECT

**Addendum No. 2**

The Special Provisions, Appendices, and Addendum 1 for this project are amended as follows:

**Special Provisions**

1. On Page 95, Lines 34 through 36 are deleted and replaced by the following:

(\*\*\*\*\*)

The Utility Company will furnish material for and install the utility supports and pipe for the PSE gas line utility. The Contractor shall install the utility supports (threaded rods, bars, braces, pipe rolls, and associated fastening hardware) and the pipe and casing for the Tacoma Water waterline utility furnished by the Contractor.

**Appendices**

1. New APPENDIX G, Pierce County Shoreline Permit No. SD25-09 is attached.

**Addendum No. 1**

1. The last line of Special Provisions Item 7 is deleted and replaced by the following:

Hydraulic Project Approval (HPA) Permit No. 2014-6-300+01

APPENDIX G:

Pierce County Shoreline Permit No. SD25-09 \*\*\*

Bidders shall furnish the Secretary of Transportation with evidence of the receipt of this addendum. This addendum will be incorporated in the contract when awarded and when formally executed.

KEVIN J. DAYTON  
Olympic Region Administrator

Attachments:  
Appendix G

**NOTE:** This set of plans and specifications does not have this addendum incorporated in it.  
**Acknowledgment of receipt of each addendum is required.**

**Washington State  
Department of Transportation  
Olympic Region  
Olympia, Washington 98504**

November 21, 2014

ATTENTION: All Bidders and Planholders

**SR 162  
PUYALLUP RIVER BRIDGE  
BRIDGE REPLACEMENT  
STATE PROJECT**

**Addendum No. 1**

The Special Provisions, Appendices, Plans, and Proposal for this project are amended as follows:

**Special Provisions**

1. On Page 51, the following is inserted after Line 36:
  4. Geotechnical Recommendations for Drilled Shaft at Pier 2 for Scour – November 3, 2014
  5. Roadway Cross Sections for mainline and approaches
2. On Page 62, the Permit Reference No. for the NPDES Construction Stormwater General Permit in the table following line 36 is revised to read:

[????] WAR302478
3. On Page 62, the Permit Reference No. for the Hydraulic Project Approval in the table following line 36 is revised to read:

[4330] 2014-6-300+01
4. On Page 111, the following is inserted after Line 7:

**Materials**

Section 6-19.2 is supplemented with the following:

**(\*\*\*\*\*)**

***Column Silo Cover Assembly***

Steel (plates, bars and rods) shall conform to ASTM A 36 and shall be galvanized after fabrication in accordance with AASHTO M 111. Bolts and associated hardware shall conform to Section 9-06.5(1) and shall be galvanized after fabrication in accordance with AASHTO M 232. Eye bolts shall conform to ASTM A 743.

5. On Page 111, the following is inserted after Line 9:

Section 6-19.3 is supplemented with the following:

(\*\*\*\*\*)

**Column Silo Cover Assembly**

The Contractor shall submit Type 2 Working Drawings consisting of column silo cover shop drawings.

The column silo cover assembly shall be fabricated and installed to fully cover the opening between the casing and the column (with a 3-inch overlap beyond the casing outside diameter) and to freely rest on the top of the permanent casing shoring (no connection to the casing).

6. On Page 112, the following is inserted after Line 5:

**Payment**

Section 6-19.5 is supplemented with the following:

(\*\*\*\*\*)

All costs in connection with fabricating and installing the column silo cover assembly shall be included in the unit Contract price per linear foot for "Casing Shoring".

7. On Page 137, Line 31 is deleted and replaced with the following:

Compliance with the State of Washington Surface Water Conditions.

**APPENDIX E:**

NPDES Industrial Stormwater Permit for Construction Activities  
Permit No. WAR302478

**APPENDIX F:**

Hydraulic Project Approval (HPA) Permit Number 2014-6-300+01 \*\*\*

**Appendices**

1. New APPENDIX E, NPDES Industrial Stormwater Permit for Construction Activities Permit No. WAR302478 is attached.
2. New APPENDIX F, Hydraulic Project Approval (HPA) Permit Number 2014-6-300+01 is attached.

**Plans**

1. Plan sheets 3, 4, 5, 15, 16, 18, 19, 20, 37, 99, and 101 are revised as shaded and noted on the attached sheets.



## **Proposal**

1. On Page 1, Item No. 6, the PLAN QUANTITY is revised.
2. On Page 3, Item No's. 30 and 31, the PLAN QUANTITY is revised.
3. On Page 5, Item No. 59, the PLAN QUANTITY is revised.
4. On Page 6, Item No. 65, the PLAN QUANTITY is revised.
5. On Page 9 , Item No. 115 is added.
6. On added Page 10, Item No's. 116 and 117 are added.

Bidders shall furnish the Secretary of Transportation with evidence of the receipt of this addendum. This addendum will be incorporated in the contract when awarded and when formally executed.

**KEVIN J. DAYTON**  
**Olympic Region Administrator**

### **Attachments:**

Appendices E and F

Plan Sheets 3, 4, 5, 15, 16, 18, 19, 20, 37, 99, and 101 (Revised 11/18/2014 and 11/20/2014)

Proposal sheets 1, 3, 5, 6, 9, (Revised 11/20/2014) and 10 (Added 11/20/14)

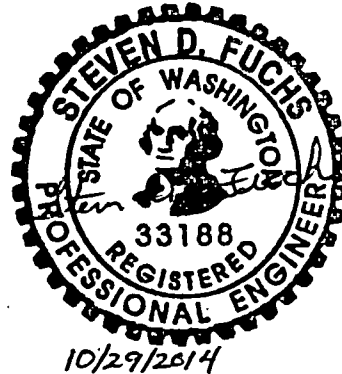
Washington State  
Department of Transportation  
Olympia, Washington 98504

SR 162  
PUYALLUP RIVER BRIDGE  
BRIDGE REPLACEMENT  
13C521  
PIERCE COUNTY

**Notice to All Planholders**

The Engineer assigned to answer questions regarding these bid documents, show this project to prospective bidders, and act as the Contracting Agency's representative who directly supervises the engineering and administration of this project is:

Steve Fuchs, P.E.  
821 Airport Court SE  
Tumwater, WA 98501  
Phone: (360) 570-6750  
Email: FuchsS@wsdot.wa.gov



Kevin J. Dayton, P.E.  
Olympic Region Administrator

As the Engineer in direct responsible charge of developing these contract provisions, I certify these provisions have been developed or incorporated into this project under my supervision or as a result of certified specifications provided by other licensed professionals.

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1     **INTRODUCTION**

2     The following Amendments and Special Provisions shall be used in conjunction with the  
3     2014 Standard Specifications for Road, Bridge, and Municipal Construction.

4  
5                     **AMENDMENTS TO THE STANDARD SPECIFICATIONS**  
6

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

11  
12    Each Amendment contains all current revisions to the applicable section of the Standard  
13    Specifications and may include references which do not apply to this particular project.

14  
15    **Section 1-01, Definitions and Terms**  
16    **August 4, 2014**

17    **1-01.3 Definitions**

18    The definition for “**Engineer**” is revised to read:

19  
20           The Contracting Agency’s representative who directly supervises the engineering and  
21           administration of a construction Contract.

22  
23    The definition for “**Inspector**” is revised to read:

24  
25           The Engineer’s representative who inspects Contract performance in detail.

26  
27    The definition for “**Project Engineer**” is revised to read:

28  
29           Same as Engineer.

30  
31    The definition for “**Working Drawings**” is revised to read:

32  
33           Drawings, plans, diagrams, or any other supplementary data or calculations, including a  
34           schedule of submittal dates for Working Drawings where specified, which the Contractor  
35           must submit to the Engineer.

36  
37    **Section 1-02, Bid Procedures and Conditions**  
38    **April 7, 2014**

39    **1-02.8(1) Noncollusion Declaration**

40    The third paragraph is revised to read:

41  
42           Therefore, by including the Non-collusion Declaration as part of the signed bid Proposal,  
43           the Bidder is deemed to have certified and agreed to the requirements of the  
44           Declaration.

45

1 **Section 1-03, Award and Execution of Contract**

2 **March 3, 2014**

3 **1-03.4 Contract Bond**

4 The last word of item 3 is deleted.

6 Item 4 is renumbered to 5.

8 The following is inserted after item 3 (after the preceding Amendments are applied):

- 10 4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the  
11 project under titles 50, 51, and 82 RCW; and

13 **Section 1-04, Scope of the Work**

14 **August 4, 2014**

15 **1-04.4 Changes**

16 In the third paragraph, item number 1 and 2 are revised to read:

- 18 A. When the character of the Work as altered differs materially in kind or nature from  
19 that involved or included in the original proposed construction; or  
20  
21 B. When an item of Work, as defined elsewhere in the Contract, is increased in excess  
22 of 125 percent or decreased below 75 percent of the original Contract quantity. For  
23 the purpose of this Section, an item of Work will be defined as any item that qualifies  
24 for adjustment under the provisions of Section 1-04.6.

26 The last two paragraphs are deleted.

28 This section is supplemented with the following new subsections:

30 **1-04.4(2) Value Engineering Change Proposal (VECP)**

32 **1-04.4(2)A General**

33 A VECP is a Contractor proposed change to the Contract Provisions which will  
34 accomplish the projects functional requirements in a manner that is equal to or  
35 better than the requirements in the Contract. The VECP may be: (1) at a less cost  
36 or time, or (2) either no cost savings or a minor increase in cost with a reduction in  
37 Contract time. The net savings or added costs to the Contract Work are shared by  
38 the Contractor and Contracting Agency.

40 The Contractor may submit a VECP for changing the Plans, Specifications, or other  
41 requirements of the Contract. The Engineer's decision to accept or reject all or part  
42 of the proposal is final and not subject to arbitration under the arbitration clause or  
43 otherwise subject to litigation.

45 The VECP shall meet all of the following:

- 47 1. Not adversely affect the long term life cycle costs.  
48  
49 2. Not adversely impact the ability to perform maintenance.

3. Provide the required safety and appearance.
4. Provide substitution for deleted or reduced Disadvantaged Business Enterprise Condition of Award Work, Apprentice Utilization and Training.

VECPs that provide a time reduction shall meet the following requirements:

1. Time saving is a direct result of the VECP.
2. Liquidated damages penalties are not used to calculate savings.
3. Administrative/overhead cost savings experienced by either the Contractor or Contracting Agency as a result of time reduction accrue to each party and are not used to calculate savings.

#### **1-04.4(2)B VECP Savings**

##### **1-04.4(2)B1 Proposal Savings**

The incentive payment to the Contractor shall be one-half of the net savings of the proposal calculated as follows:

1.  $(\text{gross cost of deleted work}) - (\text{gross cost of added work}) = (\text{gross savings})$
2.  $(\text{gross savings}) - (\text{Contractor's engineering costs}) - (\text{Contracting Agency's costs}) = (\text{net savings})$
3.  $(\text{net savings}) / 2 = (\text{incentive pay})$

The Contracting Agency's costs shall be the actual consultant costs billed to the Contracting Agency and in-house costs. Costs for personnel assigned to the Engineer's office shall not be included.

##### **1-04.4(2)B2 Added Costs to Achieve Time Savings**

The cost to achieve the time savings shall be calculated as follows:

1.  $(\text{cost of added work}) + (\text{Contractor's engineering costs} - \text{Contracting Agency's engineering costs}) = (\text{cost to achieve time savings})$
2.  $(\text{cost to achieve time savings}) / 2 = (\text{Contracting Agency's share of added cost})$

If the timesaving proposal also involves deleting work and, as a result, creates a savings for the Contracting Agency, then the Contractor shall also receive one-half of the savings realized through the deletion.

#### **1-04.4(2)C VECP Approval**

##### **1-04.4(2)C1 Concept Approval**

The Contractor shall submit a written proposal to the Engineer for consideration. The proposal shall contain the following information:

1. An explanation outlining the benefit provided by the change(s).
2. A narrative description of the proposed change(s). If applicable, the discussion shall include a demonstration of functional equivalency or a description of how the proposal meets the original contract scope of work.
3. A cost discussion estimating any net savings. Savings estimates will generally follow the outline below under the section, "Proposal Savings".
4. A statement providing the Contracting Agency with the right to use all or any part of the proposal on future projects without future obligation or compensation.
5. A statement acknowledging and agreeing that the Engineer's decision to accept or reject all or part of the proposal is final and not subject to arbitration under the arbitration clause or otherwise be subject to claims or disputes.
6. A statement giving the dates the Engineer must make a decision to accept or reject the conceptual proposal, the date that approval to proceed must be received, and the date the work must begin in order to not delay the contract. If the Contracting Agency does not approve the VECP by the date specified by the Contractor in their proposal the VECP will be deemed rejected.
7. The submittal will include an analysis on other Work that may have costs that changed as a result of the VECP. Traffic control and erosion control shall both be included in addition to any other impacted Work.

After review of the proposal, the Engineer will respond in writing with acceptance or rejection of the concept. This acceptance shall not be construed as authority to proceed with any change contract work. Concept approval allows the Contractor to proceed with the Work needed to develop final plans and other information to receive formal approval and to support preparation of a change order.

#### **1-04.4(2)C2 Formal Approval**

The Contractor's submittal to the Engineer for formal approval shall include the following:

1. Deleted Work – Include the calculated quantities of unit price Work to be deleted. Include the proposed partial prices for portions of lump sum Work deleted. For deletion of force account items include the time and material estimates.
2. Added Work – Include the calculated quantities of unit price Work to be added, either by original unit Contract prices or by new, negotiated unit prices. For new items of Work include the quantities and proposed prices.

3. Contractor's Engineering Costs – Submit the labor costs for the engineering to develop the proposal; costs for Contractor employees utilized in contract operations on a regular basis shall not be included.
4. Schedule Analysis – If the VECP is related to time savings, the Contractor shall submit a partial progress schedule showing the changed Work. The submittal shall also include a discussion comparing the partial progress schedule with the approved progress schedule for the project.
5. Working Drawings – Type 3 Working Drawings shall be submitted; those drawings which require engineering shall be a Type 3E.

Formal approval of the proposal will be documented by issuance of a change order. The VECP change order will contain the following statements which the Contractor agrees to by signing the change order:

1. The Contractor accepts design risk of all features, both temporary and permanent, of the changed Work.
2. The Contractor accepts risk of constructability of the changed Work.
3. The Contractor provides the Contracting Agency with the right to use all or any part of the proposal on future projects without further obligation or compensation.

VECP change orders will contain separate pay items for the items that are applicable to the Proposal. These are as follows:

1. Deleted Work.
2. Added Work.
3. The Contractor's engineering costs, reimbursed at 100 percent of the Contractor's cost.
4. Incentive payment to the Contractor.

When added Work costs exceed Deleted Work costs, but time savings make a viable proposal, then items 3 and 4 above are replaced with the following:

3. The Contracting Agency's share of added cost to achieve time savings.
4. The Contractor's share of savings from deleted Work.

#### **1-04.4(2)C3 Authority to Proceed with Changed Work**

The authority for the Contractor to proceed with the VECP Work will be provided by one of the following options:

1. Execution of the VECP change order, or

2. At the Contractor's request the Contracting Agency may provide approval by letter from the Engineer for the Work to proceed prior to execution of a change order. All of the risk for proceeding with the VECP shall be the responsibility of the Contractor. Additionally, the following criteria are required to have been met:

- a) Concept approval has been granted by the Contracting Agency.
- b) All design reviews and approvals have been completed, including plans and specifications.
- c) The Contractor has guaranteed, in writing, the minimum savings to the Contracting Agency.

## **Section 1-05, Control of Work**

### **August 4, 2014**

#### **1-05.1 Authority of the Engineer**

In this section, "Project Engineer" is revised to read "Engineer".

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

The Engineer's decisions will be final on all questions including the following:

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

The Engineer represents the Contracting Agency with full authority to enforce Contract requirements.

#### **1-05.2 Authority of Assistants and Inspectors**

The first paragraph is revised to read:

The Engineer may appoint assistants and Inspectors to assist in determining that the Work and materials meet the Contract requirements. Assistants and Inspectors have the authority to reject defective material and suspend Work that is being done improperly, subject to the final decisions of the Engineer.

In the third paragraph, "Project Engineer" is revised to read "Engineer".

#### **1-05.3 Plans and Working Drawings**

This section's title is revised to read:

##### **Working Drawings**

This section is revised to read:

The Contract may require the Contractor to submit Working Drawings for the performance of the Work. Working Drawings shall be submitted by the Contractor electronically to the Engineer in PDF format; drawing details shall be prepared in accordance with conventional detailing practices. If the PDF format is found to be unacceptable, at the request of the Engineer, the Contractor shall provide paper copies



1 of the Working Drawings with drawings on 11 by 17 inch sheets and calculations/text on  
2 8½ by 11 inch sheets.

3  
4 Working Drawings will be classified under the following categories:

- 5  
6 1. **Type 1** – Submitted for Contracting Agency information. Submittal must be  
7 received by the Contracting Agency a minimum of 7 calendar days before work  
8 represented by the submittal begins.  
9  
10 2. **Type 2** – Submitted for Contracting Agency review and comment. Unless  
11 otherwise stated in the Contract, the Engineer will require up to 20 calendar  
12 days from the date the Working Drawing is received until it is returned to the  
13 Contractor. The Contractor shall not proceed with the Work represented by the  
14 Working Drawing until comments from the Engineer have been addressed.  
15  
16 3. **Type 2E** – Same as a Type 2 Working Drawing with Engineering as described  
17 below.  
18  
19 4. **Type 3** – Submitted for Contracting Agency review and approval. Unless  
20 otherwise stated in the Contract, the Engineer will require up to 30 calendar  
21 days from the date the Working Drawing is received until it is returned to the  
22 Contractor. The Contractor shall obtain the Engineer's written approval before  
23 proceeding with the Work represented by the Working Drawing.  
24  
25 5. **Type 3E** – Same as a Type 3 Working Drawing with Engineering as described  
26 below.  
27

28 All Working Drawings shall be considered Type 3 Working Drawings except as  
29 specifically noted otherwise in the Contract. Unless designated otherwise by the  
30 Contractor, submittals of Working Drawings will be reviewed in the order they are  
31 received by the Engineer. In the event that several Working Drawings are received  
32 simultaneously, the Contractor shall specify the sequence in which they are to be  
33 reviewed. If the Contractor does not submit a review sequence for simultaneous  
34 Working Drawing submittals, the review sequence will be at the Engineer's discretion.  
35

36 Working Drawings requiring Engineering, Type 2E and 3E, shall be prepared by (or  
37 under the direction of) a Professional Engineer, licensed under Title 18 RCW, State of  
38 Washington, and in accordance with WAC 196-23-020. Design calculations shall carry  
39 the Professional Engineer's signature and seal, date of signature, and registration  
40 number on the cover page. The cover page shall also include the Contract number,  
41 Contract title and sequential index to calculation page numbers.  
42

43 If more than the specified number of days is required for the Engineer's review of any  
44 individual Working Drawing or resubmittal, an extension of time will be considered in  
45 accordance with Section 1-08.8.  
46

47 Review or approval of Working Drawings shall neither confer upon the Contracting  
48 Agency nor relieve the Contractor of any responsibility for the accuracy of the drawings  
49 or their conformity with the Contract. The Contractor shall bear all risk and all costs of  
50 any Work delays caused by rejection or nonapproval of Working Drawings.  
51

52 Unit Bid prices shall cover all costs of Working Drawings.

**Section 1-07, Legal Relations and Responsibilities to the Public**  
**January 6, 2014**

**1-07.2 State Taxes**

This section is revised to read:

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 Contracting Agency will not adjust its payment if the Contractor bases a Bid on a misunderstood tax liability.

The Contracting Agency may deduct from its payments to the Contractor, retainage or lien the bond, in the amount the Contractor owes the State Department of Revenue, whether the amount owed relates to the Contract in question or not. Any amount so deducted will be paid into the proper State fund on the contractor's behalf. For additional information on tax rates and application refer to applicable RCWs, WACs or the Department of Revenue's website.

**1-07.2(1) State Sales Tax: Work Performed on City, County, or Federally-Owned Land**

This section including title is revised to read:

**1-07.2(1) State Sales Tax: WAC 458-20-171 – Use Tax**

For Work designated as Rule 171, **Use Tax**, the Contractor shall include for compensation the amount of any taxes paid in the various unit Bid prices or other Contract amounts. Typically, these taxes are collected on materials incorporated into the project and items such as the purchase or rental of; tools, machinery, equipment, or consumable supplies not integrated into the project.

The Summary of Quantities in the Contract Plans identifies those parts of the project that are subject to **Use Tax** under Section 1-07.2(1).

**1-07.2(2) State Sales Tax: Work on State-Owned or Private Land**

This section including title is revised to read:

**1-07.2(2) State Sales Tax: WAC 458-20-170 – Retail Sales Tax**

For Work designated as Rule 170, **Retail Sales Tax**, the Contractor shall collect from the Contracting Agency, **Retail Sales Tax** on the full Contract price. The Contracting Agency will automatically add this **Retail Sales Tax** to each payment to the Contractor and for this reason; the Contractor shall not include the **Retail Sales Tax** in the unit Bid prices or in any other Contract amount. However, the Contracting Agency will not provide additional compensation to the Prime Contractor or Subcontractor for **Retail Sales Taxes** paid by the Contractor in addition to the **Retail Sales Tax** on the total contract amount. Typically, these taxes are collected on items such as 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 prices or in any other Contract amounts.

The Summary of Quantities in the Contract Plans identifies those parts of the project that are subject to **Retail Sales Tax** under Section 1-07.2(2).

1  
2 **1-07.2(3) Services**

3 This section is revised to read:

4  
5 Any contract wholly for professional or other applicable services is generally not subject  
6 to **Retail Sales Tax** and therefore the Contractor shall not collect **Retail Sales Tax** from  
7 the Contracting Agency on those Contracts. Any incidental taxes paid as part of  
8 providing the services shall be included in the payments under the contract.  
9

10 **Section 1-08, Prosecution and Progress**

11 **May 5, 2014**

12 **1-08.1 Subcontracting**

13 The eighth paragraph is revised to read:

14  
15 On all projects, the Contractor shall certify to the actual amounts paid to Disadvantaged,  
16 Minority, Women's, or Small Business Enterprise firms that were used as  
17 Subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service  
18 providers on the Contract. This Certification shall be submitted to the Project Engineer  
19 on a monthly basis each month between Execution of the Contract and Physical  
20 Completion of the contract using the application available at:  
21 <https://remoteapps.wsdot.wa.gov/mapsdata/tools/dbeparticipation>. The monthly report is  
22 due 20 calendar days following the end of the month. A monthly report shall be  
23 submitted for every month between Execution of the Contract and Physical Completion  
24 regardless of whether payments were made or work occurred.  
25

26 The ninth paragraph is deleted.  
27

28 **Section 1-10, Temporary Traffic Control**

29 **August 4, 2014**

30 **1-10.1(1) Materials**

31 The following material reference is deleted from this section:

32  
33 Barrier Drums 9-35.8  
34

35 **1-10.1(2) Description**

36 The first paragraph is revised to read:

37  
38 The Contractor shall provide flaggers, and all other personnel required for labor for  
39 traffic control activities and not otherwise specified as being furnished by the  
40 Contracting Agency.  
41

42 **1-10.2(1) General**

43 In the third paragraph, the first two sentences are revised to read:

44  
45 The primary and alternate TCS shall be certified by one of the organizations listed in the  
46 Special Provisions. Possession of a current Washington State TCS card and flagging  
47 card by the primary and alternate TCS is mandatory.  
48

### **1-10.2(1)B Traffic Control Supervisor**

The first paragraph is revised to read:

A Traffic Control Supervisor (TCS) shall be present on the project whenever flagging or other traffic control labor is being utilized or less frequently, as authorized by the Engineer.

The last paragraph is revised to read:

The TCS may perform the Work described in Section 1-10.3(1)A Flaggers or in Section 1-10.3(1)B Other Traffic Control Labor and be compensated under those Bid items, provided that the duties of the TCS are accomplished.

### **1-10.2(2) Traffic Control Plans**

The first paragraph is revised to read:

The traffic control plan or plans appearing in the Contract documents show a method of handling vehicle, bicycle, and pedestrian traffic. All construction signs, flaggers, and other traffic control devices are shown on the traffic control plan(s) except for emergency situations. If the Contractor proposes adding the use of flaggers to a plan, this will constitute a modification requiring approval by the Engineer. The modified plans shall show locations for all the required advance warning signs and a safe, protected location for the flagging station. If flagging is to be performed during hours of darkness, the plan shall include appropriate illumination for the flagging station.

In the second paragraph, the second sentence is revised to read:

Any Contractor-proposed modification, supplement or replacement shall show the necessary construction signs, flaggers, and other traffic control devices required to support the Work.

### **1-10.2(3) Conformance to Established Standards**

In the second paragraph, the second sentence is revised to read:

The National Cooperative Highway Research Project (NCHRP) Report 350 and the AASHTO Manual for Assessing Safety Hardware (MASH) have established requirements for crash testing.

In the third paragraph, "NCHRP 350" is revised to read "NCHRP 350 or MASH".

In the fourth paragraph, "NCHRP 350" is revised to read "NCHRP 350 or MASH".

In the fifth paragraph, "NCHRP 350" is revised to read "NCHRP 350 or MASH".

### **1-10.3(1) Traffic Control Labor**

The first paragraph is revised to read:

The Contractor shall furnish all personnel for flagging, for the execution of all procedures related to temporary traffic control and for the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations.

1 **1-10.3(1)A Flaggers and Spotters**

2 This section's title is revised to read:

3  
4 **Flaggers**

5  
6 The first paragraph is revised to read:

7  
8 Flaggers shall be posted where shown on approved Traffic Control Plans or where  
9 directed by the Engineer. All flaggers shall possess a current flagging card issued by the  
10 State of Washington, Oregon, Montana, or Idaho. The flagging card shall be  
11 immediately available and shown to the Contracting Agency upon request.

12  
13 The last paragraph is deleted.

14  
15 **1-10.3(1)B Other Traffic Control Labor**

16 This section is revised to read:

17  
18 In addition to flagging duties, the Contractor shall provide personnel for all other traffic  
19 control procedures required by the construction operations and for the labor to install,  
20 maintain and remove any traffic control devices shown on Traffic Control Plans.

21  
22 **1-10.3(3)B Sequential Arrow Signs**

23 This section is supplemented with the following:

24  
25 A sequential arrow sign is required for all lane closure tapers on a multilane facility. A  
26 separate sequential arrow sign shall be used for each closed lane. The arrow sign shall  
27 not be used to laterally shift traffic. When used in the caution mode, the four corner  
28 mode shall be used.

29  
30 **1-10.3(3)C Portable Changeable Message Signs**

31 This section is revised to read:

32  
33 Where shown on an approved traffic control plan or where ordered by the Engineer, the  
34 Contractor shall provide, operate, and maintain portable changeable message signs  
35 (PCMS). A PCMS shall be placed behind a barrier or guardrail whenever possible, but  
36 shall at a minimum provide 4 ft. of lateral clearance to edge of travelled lane and be  
37 delineated by channelization devices. The Contractor shall remove the PCMS from the  
38 clear zone when not in use unless protected by barrier or guardrail.

39  
40 **1-10.3(3)F Barrier Drums**

41 This section including title is deleted in its entirety and replaced with the following:

42  
43 **1-10.3(3)F Vacant**

44  
45 **1-10.3(3)K Portable Temporary Traffic Control Signal**

46 The fifth paragraph is revised to read:

47  
48 The Project Engineer or designee will inspect the signal system at initial  
49 installation/operation and approve the signal timing. Final approval will be based on the  
50 results of the operational inspection.

1 **1-10.4(2) Item Bids With Lump Sum for Incidentals**

2 In the second paragraph, the first and second sentences are revised to read:

3  
4 "Flaggers" will be measured by the hour. Hours will be measured for each flagging  
5 station, shown on an approved Traffic Control Plan, when that station is staffed in  
6 accordance with Section 1-10.3(1)A.

7  
8 The first sentence of the last bulleted item in this section is revised to read:

9  
10 Installing and removing Barricades, Traffic Safety Drums, Cones, Tubular Markers and  
11 Warning Lights and Flashers to carry out approved Traffic Control Plan(s).

12  
13 **1-10.5(2) Item Bids With Lump Sum for Incidentals**

14 This section is deleted and replaced with the following:

15  
16 "Traffic Control Supervisor", lump sum.

17  
18 The lump sum Contract payment shall be full compensation for all costs incurred by the  
19 Contractor in performing the Work defined in Section 1-10.2(1)B.

20  
21 "Pedestrian Traffic Control", lump sum.

22  
23 The lump sum Contract payment shall be full compensation for all costs incurred by the  
24 Contractor in performing the Work for pedestrian traffic control defined in Section 1-10.

25  
26 "Flaggers", per hour.

27  
28 The unit Contract price, when applied to the number of units measured for this item in  
29 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred  
30 by the Contractor in performing the Work defined in Section 1-10.3(1)A.

31  
32 "Other Traffic Control Labor", per hour.

33  
34 The unit Contract price, when applied to the number of units measured for this item in  
35 accordance with Section 1-10.4(2), shall be full compensation for all labor costs incurred  
36 by the Contractor in performing the Work specified for this item in Section 1-10.4(2).

37  
38 "Construction Signs Class A", per square foot.

39  
40 The unit Contract price, when applied to the number of units measured for this item in  
41 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by  
42 the Contractor in performing the Work described in Section 1-10.3(3)A. In the event that  
43 "Do Not Pass" and "Pass With Care" signs must be left in place, a change order, as  
44 described in Section 1-04.4, will be required. When the Bid Proposal contains the item  
45 "Sign Covering", then covering those signs indicated in the Contract will be measured  
46 and paid according to Section 8-21.

47  
48 "Sequential Arrow Sign", per hour.

49  
50 The unit Contract price, when applied to the number of units measured for this item in  
51 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by  
52 the Contractor in performing the Work described in Section 1-10.3(3)B.

1  
2 "Portable Changeable Message Sign", per hour.  
3

4 The unit Contract price, when applied to the number of units measured for this item in  
5 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by  
6 the Contractor in performing the Work for procuring all portable changeable message  
7 signs required for the project and for transporting these signs to and from the project.  
8

9 "Transportable Attenuator", per each.  
10

11 The unit Contract price, when applied to the number of units measured for this item in  
12 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by  
13 the Contractor in performing the Work described in Section 1-10.3(3)J except for costs  
14 compensated separately under the items "Operation of Transportable Attenuator" and  
15 "Repair Transportable Attenuator".  
16

17 "Operation of Transportable Attenuator", per hour.  
18

19 The unit Contract price, when applied to the number of units measured for this item in  
20 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by  
21 the Contractor in performing the Work for operating transportable attenuators on the  
22 project.  
23

24 "Repair Transportable Attenuator", by force account.  
25

26 All costs of repairing or replacing transportable attenuators that are damaged by the  
27 motoring public while in use as shown on an approved Traffic Control Plan will be paid  
28 for by force account as specified in Section 1-09.6. To provide a common Proposal for  
29 all Bidders, the Contracting Agency has estimated the amount of force account for  
30 "Repair Transportable Attenuator" and has entered the amount in the Proposal to  
31 become a part of the total Bid by the Contractor. Transportable attenuators damaged  
32 due to the Contractor's operation or damaged in any manner when not in use shall be  
33 repaired or replaced by the Contractor at no expense to the Contracting Agency.  
34

35 "Other Temporary Traffic Control", lump sum.  
36

37 The lump sum Contract payment shall be full compensation for all costs incurred by the  
38 Contractor in performing the Work defined in Section 1-10, and which costs are not  
39 compensated by one of the above-listed items.  
40

41 "Portable Temporary Traffic Control Signal", lump sum.  
42

43 The lump sum Contract payment shall be full compensation for all costs incurred by the  
44 Contractor in performing the Work as described in Section 1-10.3(3)K, including all  
45 costs for traffic control during manual control, adjustment, malfunction, or failure of the  
46 portable traffic control signals and during replacement of failed or malfunctioning  
47 signals.  
48

**Section 2-01, Clearing, Grubbing, and Roadside Cleanup**  
**August 4, 2014**

**2-01.3(1) Clearing**

In the second paragraph, item number 3 (up until the colon) is revised to read:

3. Follow these requirements for all stumps that will be buried deeper than 5 feet from the top, side, or end surface of the embankment or any structure and are in a location that will not be terraced as described in Section 2-03.3(14):

**Section 2-03, Roadway Excavation and Embankment**  
**August 4, 2014**

**2-03.3(14) Embankment Construction**

The third paragraph is revised to read:

**Hillside Terraces** – The Contractor shall terrace the original ground or embankment when the slope of the surface is 2H:1V or steeper unless otherwise directed by the Engineer. The face of each terrace shall be a minimum of 1 foot and a maximum of 5 feet in height and shall be vertical or near vertical as required to remain stable during material placement and compaction. The bench of the terrace shall slope outward to drain and shall not be inclined steeper than 0.05 foot per foot. Terraces damaged during work shall be reestablished. The Engineer may order the Contractor to place gravel backfill, pipe drains or both to drain any seepage.

**2-03.3(14)L Embankment Widening for Guardrail**

The first sentence is revised to read:

Embankments widened for the installation of beam guardrail shall be terraced in accordance with the requirements for hillside terraces in Section 2-03.3(14).

The second sentence is deleted.

**Section 3-04, Acceptance of Aggregate**  
**August 4, 2014**

**3-04.5 Payment**

In Table 2, the row containing the item "HMA Aggregate" is revised to read:

9-03.8(2)	HMA Aggregate						15	15	Uncompact ed Void Content 15
-----------	---------------	--	--	--	--	--	----	----	------------------------------------

**Section 5-01, Cement Concrete Pavement Rehabilitation**  
**August 4, 2014**

**5-01.2 Materials**

The referenced section for the following item is revised to read:

Dowel Bars                      9-07.5



**5-01.3(4) Replace Portland Cement Concrete Panel**

In the third paragraph, the last sentence is deleted.

The seventeenth paragraph (beginning with "The Contractor shall place a bond-breaking material...") is deleted.

**Section 5-02, Bituminous Surface Treatment**

**August 4, 2014**

**5-02.3(11) Temporary Raised Pavement Markings**

This section's title is revised to read:

**Temporary Pavement Markings**

The word "raised" is deleted from this section.

**Section 5-04, Hot Mix Asphalt**

**August 4, 2014**

**5-04.3(7)A3 Commercial Evaluation**

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

Mix designs for HMA accepted by commercial evaluation shall be submitted to the Project Engineer on WSDOT Form 350-042.

**5-04.3(10)A General**

In the first paragraph, "checking" and "cracking" are deleted.

In the third paragraph, the following new sentence is inserted after the second sentence:

Coverage with a steel wheel roller may precede pneumatic tired rolling.

In the third paragraph, the following new sentence is inserted before the last sentence:

Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat.

**5-04.3(10)B1 General**

In this section, "Project Engineer" is revised to read "Engineer".

The first paragraph is revised to read:

HMA mixture accepted by statistical or nonstatistical evaluation that is used in traffic lanes, including lanes for ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a minimum of 91 percent of the maximum density. The percent of maximum density shall be determined by WSDOT FOP for AASHTO T 729 when using the nuclear density gauge and WSDOT SOP 736 when

1 using cores to determine density. The specified level of density attained will be  
2 determined by the statistical evaluation of the density of the pavement.  
3

4 The following four new paragraphs are inserted after the first paragraph:  
5

6 Tests for the determination of the pavement density will be taken in accordance the  
7 required procedures for measurement by a nuclear density gauge or roadway cores  
8 after completion of the finish rolling.  
9

10 If the Contracting Agency uses a nuclear density gauge to determine density the test  
11 procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the  
12 mix is placed.  
13

14 Roadway cores for density may be obtained by either the Contracting Agency or the  
15 Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches  
16 unless other approved by the Engineer. Roadway cores will be tested by the  
17 Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.  
18

19 If the Contract includes the Bid item "Roadway Core" the cores shall be obtained by the  
20 Contractor in the presence of the Engineer on the same day the mix is placed and at  
21 locations designated by the Engineer. If the Contract does not include the Bid item  
22 "Roadway Core" the Contracting Agency will obtain the cores.  
23

#### 24 **5-04.3(10)B4 Test Results**

25 The first paragraph is revised to read:  
26

27 The results of all compaction acceptance testing and the CPF of the lot after three  
28 sublots have been tested will be available to the Contractor through WSDOT's website.  
29 Determination of the relative density of the HMA with a nuclear density gauge requires a  
30 correlation factor and may require resolution after the correlation factor is known.  
31 Acceptance of HMA compaction will be based on the statistical evaluation and CPF so  
32 determined.  
33

34 In the second paragraph, the first sentence is revised to read:  
35

36 For a subplot that has been tested with a nuclear density gauge that did not meet the  
37 minimum of 91 percent of the reference maximum density in a compaction lot with a  
38 CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may  
39 request that a core be used for determination of the relative density of the subplot.  
40

41 In the second sentence of the second paragraph, "moisture-density" is revised to read  
42 "density".  
43

44 In the second paragraph, the fourth sentence is deleted.  
45

#### 46 **5-04.4 Measurement**

47 The following new paragraph is inserted after the first paragraph:  
48

49 Roadway cores will be measured per each for the number of cores taken.  
50

51 The second to last paragraph is deleted.  
52

**5-04.5 Payment**

The bid item "Removing Temporary Pavement Marking", per linear foot and paragraph following bid item are deleted.

The following new bid item is inserted before the second to last paragraph:

"Roadway Core", per each.

The Contractor's costs for all other Work associated with the coring (e.g., traffic control) shall be incidental and included within the unit Bid price per each and no additional payments will be made.

**Section 5-05, Cement Concrete Pavement  
August 4, 2014**

**5-05.3(1) Concrete Mix Design for Paving**

The second and third rows of the table in item number 3 are revised to read:

Coarse Aggregate	+ 30 Pounds	- 30 Pounds
Fine Aggregate	+ 30 Pounds	- 30 Pounds

**5-05.4 Measurement**

The fourth paragraph is supplemented with the following new sentence:

Tie bars with drill holes in cement concrete pavement placed under the Contract will not be measured.

**5-05.5 Payment**

The paragraph following the Bid item "Tie Bar with Drill Hole", per each is supplemented with the following new sentence:

All costs for tie bars with drill holes in cement concrete pavement placed under the Contract shall be included in the unit Contract price per cubic yard for "Cement Conc. Pavement".

**Section 6-02, Concrete Structures  
August 4, 2014**

**6-02.3(1) Classification of Structural Concrete**

In paragraph two, item number 1 is revised to read:

Mix design and proportioning specified in Sections 6-02.3(2), 6-02.3(2)A and 6-02.3(2)A1.

Item number 3 is renumbered to 4.

After the preceding Amendments are applied, the following new numbered item is inserted after item number 2:

3. Temperature and time for placement requirements specified in Section 6-02.3(4)D.

1 **6-02.3(2) Proportioning Materials**

2 In the third paragraph, the first sentence is revised to read:

3  
4 The use of fly ash is required for Class 4000P concrete, except that ground granulated  
5 blast furnace slag may be substituted for fly ash at a 1:1 ratio.  
6

7 In the table titled "Cementitious Requirement for Concrete", the row beginning with "4000D"  
8 is deleted.  
9

10 The fourth paragraph is revised to read:

11  
12 When both ground granulated blast furnace slag and fly ash are included in the  
13 concrete mix, the total weight of both these materials is limited to 40 percent by weight  
14 of the total cementitious material for concrete class 4000A, and 50 percent by weight of  
15 the total cementitious material for all other classes of concrete.  
16

17 **6-02.3(2)A Contractor Mix Design**

18 The first paragraph is revised to read:

19  
20 The Contractor shall provide a mix design in writing to the Engineer for all classes of  
21 concrete specified in the Plans except for lean concrete and commercial concrete. No  
22 concrete shall be placed until the Engineer has reviewed the mix design. The required  
23 average 28-day compressive strength shall be selected in accordance with ACI 318,  
24 Chapter 5, Section 5.3.2. ACI 211.1 and ACI 318 shall be used to determine proportions.  
25 All proposed concrete mixes except Class 4000D shall meet the requirements in  
26 Cementitious Requirement for Concrete in Section 6-02.3(2).  
27

28 In the fourth paragraph, the fourth sentence is deleted.

29  
30 In the sixth paragraph, the first sentence is deleted.

31  
32 In the seventh paragraph, the last sentence is deleted.  
33

34 The eighth paragraph is revised to read:

35  
36 Air content for concrete Class 4000D shall conform to Section 6-02.3(2)A1. For all  
37 other concrete, air content shall be a minimum of 4.5 percent and a maximum of 7.5  
38 percent for all concrete placed above the finished ground line.  
39

40 The following new sub-section is added:

41  
42 **6-02.3(2)A1 Contractor Mix Design for Concrete Class 4000D**

43 All Class 4000D concrete shall be a project specific performance mix design conforming  
44 to the following requirements:  
45

- 46 1. Aggregate shall use combined gradation in accordance with Section 9-03.1(5)  
47 with a nominal maximum aggregate size of 1-1/2 inches.  
48
- 49 2. Permeability shall be less than 2,000 coulombs at 56 days in accordance with  
50 AASHTO T 277.  
51
- 52 3. Freeze-thaw durability shall be provided by one of the following methods:

- 1 a. The concrete shall maintain an air content between 4.5 and 7.5 percent.
- 2 b. The concrete shall maintain a minimum air content that achieves a
- 3 durability factor of 90 percent, minimum, after 300 cycles in accordance
- 4 with AASHTO T 161, Procedure A. This air content shall not be less than
- 5 3.0 percent. Test samples shall be obtained from concrete batches of a
- 6 minimum of 3.0 cubic yards.
- 7
- 8 4. Scaling shall have a visual rating less than or equal to 2 after 50 cycles in
- 9 accordance with ASTM C 672.
- 10
- 11 5. Shrinkage at 28 days shall be less than 320 micro strain in accordance with
- 12 AASHTO T 160.
- 13
- 14 6. Modulus of elasticity shall be measured in accordance with ASTM C 469.
- 15
- 16 7. Density shall be measured in accordance with ASTM C 138.
- 17

18 The Contractor shall submit the mix design in accordance with Section 6-02.3(2)A. The  
19 submittal shall include test reports for all tests listed above that follow the reporting  
20 requirements of the AASHTO/ASTM procedures. Samples for testing may be obtained  
21 from either laboratory or concrete plant batches. If concrete plant batches are used, the  
22 minimum batch size shall be 3.0 cubic yards. The Contractor shall submit the mix  
23 design to the Engineer at least 30 calendar days prior to the placement of concrete in  
24 the bridge deck.

#### 25 26 **6-02.3(4)D Temperature and Time For Placement**

27 The first two sentences are revised to read:

28  
29 Concrete temperatures shall remain between 55°F and 90°F while it is being placed,  
30 except that Class 4000D concrete temperatures shall remain between 55°F and 75°F  
31 during placement. Precast concrete that is heat cured in accordance with Section 6-  
32 02.3(25)D shall remain between 50°F and 90°F while being placed.

#### 33 34 **6-02.3(5)A General**

35 The first paragraph is revised to read:

36  
37 Concrete for the following applications will be accepted based on a Certificate of  
38 Compliance to be provided by the supplier as described in Section 6-02.3(5)B:

- 39
- 40 1. Lean concrete.
- 41
- 42 2. Commercial concrete.
- 43
- 44 3. Class 4000P concrete for Roadside Steel Sign Support Foundations.
- 45
- 46 4. Class 4000P concrete for Type II, III, and CCTV Signal Standard Foundations
- 47 that are 12'-0" or less in depth.
- 48
- 49 5. Class 4000P concrete for Type IV and V Strain Pole Foundations that are 12'-0"
- 50 or less in depth.
- 51
- 52 6. Class 4000P concrete for Steel Light Standard Foundations Types A & B.

The following new sentence is inserted at the beginning of the second paragraph:

Slip-form barrier concrete will be accepted based on conformance to the requirements for temperature, air content and compressive strength at 28 days for sublots as tested and determined by the Contracting Agency.

#### **6-02.3(5)H Sampling and Testing for Compressive Strength and Initial Curing**

The second paragraph is revised to read:

The Contractor shall provide and maintain a sufficient number of cure boxes in accordance with WSDOT FOP for AASHTO T 23 for curing concrete cylinders. The cure boxes shall be readily accessible and no more than 500 feet from the point of acceptance testing, unless otherwise approved by the Engineer. The Contractor shall also provide, maintain and operate all necessary power sources and connections needed to operate the cure boxes. The cure boxes shall be in-place and functioning at the specified temperature for curing cylinders prior to concrete placement. Concrete cylinders shall be cured in the cure boxes in accordance with WSDOT FOP for AASHTO T 23. The cure boxes shall have working locks and the Contractor shall provide the Engineer with one key to each of the locks. Once concrete cylinders are placed in the cure box, the cure box shall not be disturbed until the cylinders have been removed. The Contractor shall retain the cure box Temperature Measuring Device log and provide it to the Engineer upon request.

The following new paragraph is inserted after the last paragraph:

All cure box costs shall be incidental to the associated item of work.

#### **6-02.3(6)A2 Cold Weather Protection**

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

This Specification applies when the weather forecast on the day of concrete placement predicts air temperatures below 35°F at any time during the 7 days following placement.

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

The temperature of the concrete shall be maintained above 50°F during the entire curing period or 7 days, whichever is greater.

#### **6-02.3(10)D Concrete Placement, Finishing, and Texturing**

This section is supplemented with the following new sub-sections:

##### **6-02.3(10)D1 Test Slab Using Bridge Deck Concrete**

After the Contractor receives the Engineer's approval for the Class 4000D concrete mix design, and a minimum of seven calendar days prior to the first placement of bridge deck concrete, the Contractor shall construct a test slab using concrete of the approved mix design.

The test slab may be constructed on grade, shall have a minimum thickness of eight-inches, shall have minimum plan dimensions of 10-feet along all four edges, and shall be square or rectangular.

1 During construction of the test slab, the Contractor shall demonstrate concrete sampling  
2 and testing, use of the concrete temperature monitoring system, the concrete fogging  
3 system, concrete placement system, and the concrete finishing operation. The  
4 Contractor shall conduct the demonstration using the same type of equipment to be  
5 used for the production bridge decks, except that the Contractor may elect to finish the  
6 test slab with a hand-operated strike-board.  
7

8 After the construction of the test slab and the demonstration of bridge deck construction  
9 operations is complete, the Contractor shall remove and dispose of the test slab in  
10 accordance with Sections 2-02.3 and 2-03.3(7)C.  
11

#### 12 **6-02.3(10)D2 Preparation for Concrete Placement**

13 Before placing bridge approach slab concrete, the subgrade shall be constructed in  
14 accordance with Sections 2-06 and 5-05.3(6).  
15

16 Before any concrete is placed, the finishing machine shall be operated over the entire  
17 length of the deck/slab to check screed deflection. Concrete placement may begin only  
18 if the Engineer approves after this test.  
19

20 Immediately before placing concrete, the Contractor shall check (and adjust if  
21 necessary) all falsework and wedges to minimize settlement and deflection from the  
22 added mass of the concrete deck/slab. The Contractor shall also install devices, such as  
23 telltales, by which the Engineer can readily measure settlement and deflection.  
24

#### 25 **6-02.3(10)D3 Concrete Placement**

26 The placement operation shall cover the full width of the bridge deck or the full width  
27 between construction joints. The Contractor shall locate any construction joint over a  
28 beam or web that can support the deck/slab on either side of the joint. The joint shall not  
29 occur over a pier unless the Plans permit. Each joint shall be formed vertically and in  
30 true alignment. The Contractor shall not release falsework or wedges supporting bridge  
31 deck placement sections on either side of a joint until each side has aged as these  
32 Specifications require.  
33

34 Placement of concrete for bridge decks and bridge approach slabs shall comply with  
35 Section 6-02.3(6). In placing the concrete, the Contractor shall:  
36

- 37 1. Place it (without segregation) against concrete placed earlier, as near as  
38 possible to its final position, approximately to grade, and in shallow, closely  
39 spaced piles;  
40
- 41 2. Consolidate it around reinforcing steel by using vibrators before strike-off by the  
42 finishing machine;  
43
- 44 3. Not use vibrators to move concrete;  
45
- 46 4. Not revibrate any concrete surface areas where workers have stopped prior to  
47 screeding;  
48
- 49 5. Remove any concrete splashed onto reinforcing steel in adjacent segments  
50 before concreting them;  
51

6. Maintain a slight excess of concrete in front of the screed across the entire width of the placement operation;
7. Operate the finishing machine to create a surface that is true and ready for final finish without overfinishing or bringing excessive amounts of mortar to the surface; and
8. Leave a thin, even film of mortar on the concrete surface after the last pass of the finishing machine pan.

Workers shall complete all post screeding operations without walking on the concrete. This may require work bridges spanning the full width of the deck/slab.

After removing the screed supports, the Contractor shall fill the voids with concrete (not mortar).

If the surface left by the finishing machine is porous, rough, or has minor irregularities, the Contractor shall float the surface of the concrete. Floating shall leave a smooth and even surface. Float finishing shall be kept to the minimum number of passes necessary to seal the surface. The floats shall be at least 4-feet long. Each transverse pass of the float shall overlap the previous pass by at least half the length of the float. The first floating shall be at right angles to the strike-off. The second floating shall be at right angles to the centerline of the span. A smooth riding surface shall be maintained across construction joints.

The edge of completed roadway slabs at expansion joints and compression seals shall have a 3/8-inch radius.

After floating, but while the concrete remains plastic, the Contractor shall test the entire deck/slab for flatness (allowing for crown, camber, and vertical curvature). The testing shall be done with a 10-foot straightedge held on the surface. The straightedge shall be advanced in successive positions parallel to the centerline, moving not more than one half the length of the straightedge each time it advances. This procedure shall be repeated with the straightedge held perpendicular to the centerline. An acceptable surface shall be one free from deviations of more than 1/8-inch under the 10-foot straightedge.

If the test reveals depressions, the Contractor shall fill them with freshly mixed concrete, strike off, consolidate, and refinish them. High areas shall be cut down and refinished. Retesting and refinishing shall continue until a surface conforming to the requirements specified above is produced.

#### **6-02.3(10)D4 Monitoring Bridge Deck Concrete Temperature After Placement**

The Contractor shall monitor and record the concrete temperature and ambient temperature hourly for seven calendar days after placement. The Contractor shall monitor and record concrete temperature by placing two maturity meter temperature monitoring devices in the bridge deck at locations specified by the Engineer. The Contractor shall monitor ambient temperature using maturity meters near the locations where concrete temperature is being monitored. When the bridge deck is being enclosed and heated to meet cold weather requirements, ambient temperature readings shall be taken within the enclosure. The Contractor shall submit the concrete



1 temperature and ambient temperature data to the Engineer in spreadsheet format within  
2 14 calendar days from placing the bridge deck concrete.

3  
4 The Contractor shall submit the type and model of maturity meter temperature  
5 monitoring device, and the associated devices responsible for recording and  
6 documenting the temperature and curing time, to the Engineer at least 14 calendar days  
7 prior to the pre-concreting conference for the first bridge deck to be cast. The  
8 placement and operation of the temperature monitoring devices and associated devices  
9 will be an agenda item at the pre-concreting conference for the first bridge deck to be  
10 cast.

11  
12 **6-02.3(10)D5 Bridge Deck Concrete Finishing and Texturing**

13 Except as otherwise specified for portions of bridge decks receiving an overlay or  
14 sidewalk under the same Contract, the Contractor shall texture the surface of the bridge  
15 deck as follows:

16  
17 The Contractor shall texture the bridge deck using diamond tipped saw blades  
18 mounted on a power driven, self-propelled machine that is designed to texture  
19 concrete surfaces. The grooving equipment shall provide grooves that are 1/8" ±  
20 1/64" wide, 3/16" ± 1/16" deep, and spaced at 3/4" ± 1/8". The bridge deck shall  
21 not be textured with a metal tined comb.

22  
23 The Contractor shall submit the type of grooving equipment to be used to the  
24 Engineer for approval 30 calendar days prior to performing the work. The  
25 Contractor shall demonstrate that the method and equipment for texturing the  
26 bridge deck will not chip, spall or otherwise damage the deck. The Contractor shall  
27 not begin texturing the bridge deck until receiving the Engineer's approval of the  
28 Contractor's method and equipment.

29  
30 Unless otherwise approved by the Engineer, the Contractor shall texture the  
31 concrete bridge deck surface either in a longitudinal direction, parallel with  
32 centerline or in a transverse direction, perpendicular with centerline. The  
33 Contractor shall texture the bridge deck surface to within 3-inches minimum and  
34 15-inches maximum of the edge of concrete at expansion joints, within 1-foot  
35 minimum and 2-feet maximum of the curb line, and within 3-inches minimum and 9-  
36 inches maximum of the perimeter of bridge drain assemblies.

37  
38 The Contractor shall contain and collect all concrete dust and debris generated by  
39 the bridge deck texturing process, and shall dispose of the collected concrete dust  
40 and debris in accordance with Section 2-03.3(7)C.

41  
42 If the Plans call for placement of a sidewalk or an HMA or concrete overlay on the  
43 bridge deck, the Contractor shall produce the final finish of these areas by dragging a  
44 strip of damp, seamless burlap lengthwise over the bridge deck or by brooming it lightly.  
45 Approximately 3-feet of the drag shall contact the surface, with the least possible bow in  
46 its leading edge. It shall be kept wet and free of hardened lumps of concrete. When the  
47 burlap drag fails to produce the required finish, the Contractor shall replace it. When not  
48 in use, it shall be lifted clear of the bridge deck.

49  
50 After the bridge deck has cured, the surface shall conform to the surface smoothness  
51 requirements specified in Section 6-02.3(10)D3.  
52

The surface texture on any area repaired to address out-of-tolerance surface smoothness shall match closely that of the surrounding bridge deck area at the completion of the repair. Methods used to remove high spots shall cut through the mortar and aggregate without breaking or dislodging the aggregate or causing spalls.

#### **6-02.3(10)D6 Bridge Approach Slab Finishing and Texturing**

Bridge approach slabs shall be textured either in accordance with Section 6-02.3(10)D5, or using metal tined combs in the transverse direction, except bridge approach slabs receiving an overlay in the same Contract shall be finished as specified in Section 6-02.3(10)D5 only.

The comb shall be made of a single row of metal tines. It shall leave striations in the fresh concrete approximately 3/16-inch deep by 1/8-inch wide and spaced approximately 1/2-inch apart. The Engineer will decide actual depths at the site. If the comb has not been approved, the Contractor shall obtain the Engineer's approval by demonstrating it on a test section. The Contractor may operate the combs manually or mechanically, either singly or with several placed end to end. The timing and method used shall produce the required texture without displacing larger particles of aggregate.

Texturing shall end 2-feet from curb lines. This 2-foot untextured strip shall be hand finished with a steel trowel.

Surface smoothness, high spots, and low spots shall be addressed as specified in Section 6-02.3(10)D5. The surface texture on any area cut down or built up shall match closely that of the surrounding bridge approach slab area. The entire bridge approach slab shall provide a smooth riding surface.

#### **6-02.3(11) Curing Concrete**

Items number 1 through 4 are deleted and replaced with the following 5 new numbered items:

1. Bridge sidewalks, roofs of cut and cover tunnels — curing compound covered by white, reflective type sheeting or continuous wet curing. Curing by either method shall be for at least 10 days.
2. Bridge decks — See Section 6-02.3(11)B.
3. Bridge approach slabs (Class 4000A concrete) - 2 coats of curing compound and continuous wet cure for at least 10-days.
4. Concrete barriers and rail bases – See Section 6-02.3(11)A.
5. All other concrete surfaces — continuous wet cure for at least three days.

In the second paragraph, the first sentence is replaced with the following three new sentences:

During the continuous wet cure, the Contractor shall keep all exposed concrete surfaces saturated with water. Formed concrete surfaces shall be kept in a continuous wet cure by leaving the forms in place. If forms are removed during the continuous wet cure period, the Contractor shall treat the concrete as an exposed concrete surface.

1 The third paragraph is revised to read:

2  
3 When curing Class 4000A, two coats of curing compound that complies with Section 9-  
4 23.2 shall be applied immediately (not to exceed 15 min.) after tining any portion of the  
5 bridge approach slab. The continuous wet cure shall be established as soon as the  
6 concrete has set enough to allow covering without damaging the finish.  
7

8 In the fifth paragraph, the first sentence is revised to read:

9  
10 If the Plans call for an asphalt overlay on the bridge approach slab, the Contractor shall  
11 use the clear curing compound (Type 1, Class B), applying at least 1 gallon per 150  
12 square feet to the concrete surface.  
13

14 The eighth paragraph is deleted.

15  
16 **6-02.3(11)B Curing Bridge Decks**

17 This new section is supplemented with the following new sub-sections:

18  
19 **6-02.3(11)B1 Equipment**

20 The Contractor shall maintain a wet sheen, without developing pooling or sheeting  
21 water, using a fogging apparatus consisting of pressure washers with a minimum nozzle  
22 output of 1,500 psi, or other means approved by the Engineer.  
23

24 The Contractor shall submit a bridge deck curing plan to the Engineer a minimum 14  
25 calendar days prior to the pre-concreting conference. The Contractor's plan shall  
26 describe the sequence and timing that will be used to fog the bridge deck, apply pre-  
27 soaked burlap, install soaker hoses and cover the deck with white reflective sheeting.  
28

29 **6-02.3(11)B2 Curing**

30 The fogging apparatus shall be in place and charged for fogging prior to beginning  
31 concrete placement for the bridge deck.  
32

33 The Contractor shall presoak all burlap to be used to cover the deck during curing.

34  
35 Immediately after the finishing machine passes over finished concrete, the Contractor  
36 shall implement the following tasks:

- 37  
38 1. The Contractor shall fog the bridge deck while maintaining a wet sheen without  
39 developing pooling or sheeting water.  
40  
41 2. The Contractor shall apply the presoaked burlap to the top surface to fully cover  
42 the deck without damaging the finish, other than minor marring of the concrete  
43 surface. The Contractor shall not apply curing compound.  
44  
45 3. The Contractor shall continue to keep the burlap wet by fog spraying until the  
46 burlap is covered by soaker hoses and white reflective sheeting. The  
47 Contractor shall place the soaker hoses and whiter reflective sheeting after the  
48 concrete has achieved initial set. The Contractor shall charge the soaker hoses  
49 frequently so as to keep the burlap covering the entire deck wet during the  
50 course of curing.  
51

As an alternative to tasks 2 and 3 above, the Contractor may propose a curing system using proprietary curing blankets specifically manufactured for bridge deck curing. Details of the proprietary curing blanket system, including product literature and details of how the system is to be installed and maintained, shall be submitted to the Engineer for approval.

The wet curing regime as described shall remain in place for at least 14 consecutive calendar days.

#### **6-02.3(12)A Construction Joints in New Construction**

The third paragraph is deleted and replaced with the following three new paragraphs:

If the Plans require a roughened surface on the joint, the Contractor shall strike it off to leave grooves at right angles to the length of the member. Grooves shall be installed using one of the following options:

1. Grooves shall be ½ to 1 inch wide, ¼ to ½ inch deep, and spaced equally at twice the width of the groove. Grooves shall terminate approximately 1 ½-inches from the face of concrete.
2. Grooves shall be 1 to 2 inches wide, a minimum of ½-inch deep, and spaced a maximum of three times the width of the groove. Grooves shall terminate approximately 1 ½-inches from the face of concrete.

If the Engineer approves, the Contractor may use an alternate method to produce a roughened surface on the joint, provided that such an alternate method leaves a roughened surface of at least a ¼-inch amplitude.

If the first strike-off does not produce the required roughness, the Contractor shall repeat the process before the concrete reaches initial set. The final surface shall be clean and without laitance or loose material.

#### **6-02.3(15) Date Numerals**

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

When an existing Structure is widened or when traffic barrier is placed on an existing Structure, the date shall be for the year in which the original Structure was completed.

#### **6-02.3(16) Plans for Falsework and Formwork**

This section is revised to read:

The Contractor shall submit all plans for falsework and formwork as Type 2E Working Drawings. Submittal is not required for footing or retaining wall formwork if the wall is 4 feet or less in height (excluding pedestal height).

The design of falsework and formwork shall be based on:

1. Applied loads and conditions which are no less severe than those described in Section 6-02.3(17)A, Design Loads;
2. Allowable stresses and deflections which are no greater than those described in Section 6-02.3(17)B, Allowable Stresses and Deflections;

3. Special loads and requirements no less severe than those described in Section 6-02.3(17)C, Falsework and Formwork at Special Locations;
4. Conditions required by other Sections of 6-02.3(17), Falsework and Formwork.

The falsework and formwork plans shall be scale drawings showing the details of proposed construction, including: sizes and properties of all members and components; spacing of bents, posts, studs, wales, stringers, wedges and bracing; rates of concrete placement, placement sequence, direction of placement, and location of construction joints; identification of falsework devices and safe working loads as well as identification of any bolts or threaded rods used with the devices including their diameter, length, type, grade, and required torque. The falsework plans shall show the proximity of falsework to utilities or any nearby Structures including underground Structures. Formwork accessories shall be identified according to Section 6-02.3(17)H, Formwork Accessories. All assumptions, dimensions, material properties, and other data used in making the structural analysis shall be noted on the drawing.

The Contractor shall furnish associated design calculations to the Engineer as part of the submittal. The design calculations shall show the stresses and deflections in load supporting members. Construction details which may be shown in the form of sketches on the calculation sheets shall be shown in the falsework or formwork drawings as well. Falsework or formwork plans will be rejected in cases where it is necessary to refer to the calculation sheets for information needed for complete understanding of the falsework and formwork plans or how to construct the falsework and formwork.

Each sheet of falsework and formwork plans shall carry the following:

1. The initials and dates of all participating design professionals.
2. Clear notation of all revisions including identification of who authorized the revision, who made the revision, and the date of the revision.
3. The Contract number, Contract title, and sequential sheet number. These shall also be on any related documents.
4. Identify where the falsework and formwork plan will be utilized by referencing Contract Plan sheet number and related item or detail.

#### **6-02.3(16)A Nonpreapproved Falsework and Formwork Plans**

This section, including title, is deleted in its entirety and replaced with the following:

#### **6-02.3(16)A Vacant**

#### **6-02.3(16)B Preapproved Formwork Plans**

This section, including title, is revised to read:

#### **6-02.3(16)B Pre-Contract Review of Falsework and Formwork Plans**

The Contractor may request pre-contract review of formwork plans for abutments, wingwalls, diaphragms, retaining walls, columns, girders and beams, box culverts, railings, and bulkheads. Plans for falsework supporting the bridge deck for interior

spans between precast prestressed concrete girders may also be submitted for pre-contract review.

To obtain pre-contract review, the Contractor shall electronically submit drawings and design calculations in PDF format directly to:

BridgeConstructionSupport@wsdot.wa.gov

The Bridge and Structures Office, Construction Support Engineer will return the falsework or formwork plan to the Contractor with review notes, an effective date of review, and any revisions needed prior to use. For each contract on which the pre-reviewed falsework or formwork plans will be used, the Contractor shall submit a copy to the Engineer. Construction shall not begin until the Engineer has given concurrence.

If the falsework or formwork being constructed has any deviations to the preapproved falsework or formwork plan, the Contractor shall submit plan revisions for review and approval in accordance with Section 6-02.3(16).

#### **6-02.3(17)A Design Loads**

The fifth paragraph is revised to read:

Live loads shall consist of a minimum uniform load of not less than 25 psf, applied over the entire falsework plan area, plus the greater of:

1. Actual weights of the deck finishing equipment applied at the rails, or;
2. A minimum load of 75 pounds per linear foot applied at the edge of the bridge deck.

#### **6-02.3(17)J Face Lumber, Studs, Wales, and Metal Forms**

The second to last paragraph is deleted.

#### **6-02.3(17)O Early Concrete Test Cylinder Breaks**

The third paragraph is revised to read:

The cylinders shall be cured in the field in accordance with WSDOT FOP for AASHTO T 23 Section 10.2 Field Curing.

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

The first five paragraphs are deleted and replaced with the following two new paragraphs:

Grout shall conform to Section 9-20.3(2) for anchor bolts and for bearing assemblies with bearing plates. Grout shall conform to Section 9-20.3(3) for elastomeric bearing pads and fabric pad bearings without bearing plates.

Grout shall be a workable mix with a viscosity that is suitable for the intended application. The Contractor shall receive approval from the Engineer before using the grout.

#### **6-02.3(26)F Prestressing Reinforcement**

The last sentence in the fourth paragraph is revised to read:

1 If the prestressing reinforcement will not be stressed and grouted for more than 7  
2 calendar days after it is placed in the ducts, the Contractor shall place an approved  
3 corrosion inhibitor conforming to Federal Specification MIL-I-22110C in the ducts.  
4

#### 5 **6-02.5 Payment**

6 In the paragraph following the bid item "Commercial Concrete", per cubic yard the second  
7 sentence is revised to read:  
8

9 All costs in connection with concrete curing, and furnishing and applying pigmented  
10 sealer to concrete surfaces as specified, shall be included in the unit contract price per  
11 cubic yard for "Conc. Class \_\_\_\_".  
12

13 The following new paragraph is inserted after the bid item "Superstructure (name bridge)",  
14 lump sum:  
15

16 All costs in connection with constructing, finishing and removing the bridge deck test  
17 slab as specified in Section 6-02.3(10)D1 shall be included in the lump sum Contract  
18 price for "Superstructure\_\_\_\_" or "Bridge Deck\_\_\_\_" for one bridge in each project, as  
19 applicable.  
20

21 The bid item "Cure Box", lump sum and paragraph following bid item are deleted.  
22

### 23 **Section 6-03, Steel Structures** 24 **August 4, 2014**

#### 25 **6-03.3(25)A3 Ultrasonic Inspection**

26 The following new paragraph is inserted before the last paragraph:  
27

28 A minimum of 30 percent of complete penetration vertical welds on steel column jackets  
29 thicker than 5/16-inch, within 1.50 column jacket diameter of the top and bottom of each  
30 column, shall be inspected. If any rejectable flaws are found, 100 percent of the weld  
31 within the specified limits shall be inspected. The largest column cross section diameter  
32 for tapered column jackets shall constitute one column jacket diameter.  
33

#### 34 **6-03.3(25)A4 Magnetic Particle Inspection**

35 Items number 3 and 4 are revised to read:  
36

- 37 3. Complete penetration groove welds on plates  $\frac{5}{16}$ -inch or thinner (excluding steel  
38 column jackets) shall be 100 percent tested by the magnetic particle method.  
39 Testing shall apply to both sides of the weld, if backing plate is not used. The ends  
40 of each complete penetration groove weld at plate edges shall be tested by the  
41 magnetic particle method.  
42
- 43 4. A minimum of 30 percent of complete penetration vertical welds on steel column  
44 jackets  $\frac{5}{16}$ -inch or thinner, within 1.50 column jacket diameters of the top and bottom  
45 of each column, shall be magnetic particle inspected. The largest column cross  
46 section diameter for tapered column jackets shall constitute one column jacket  
47 diameter.  
48

49 The last paragraph is supplemented with the following new sentence:  
50

1 If any rejectable flaws are found in any test length of item 4 above, 100 percent of the  
2 weld within the specified limits shall be inspected.  
3

#### 4 **6-03.3(29) Welded Shear Connectors**

5 This section's content is deleted and replaced with the following:  
6

7 Installation, production control, and inspection of welded shear connectors shall  
8 conform to Chapter 7 of the AASHTO/AWS D1.5M/D1.5:2010 Bridge Welding Code. If  
9 welded shear connectors are installed in the shop, installation shall be completed prior  
10 to applying the shop primer coat in accordance with Section 6-07.3(9)G. If welded shear  
11 connectors are installed in the field to a surface prepared in accordance with Section 6-  
12 07.3(9)G, no further surface preparation is necessary provided the shear connectors  
13 pass the production control testing required by Chapter 7 of the AASHTO/AWS  
14 D1.5M/D1.5:2010 Bridge Welding Code.  
15

### 16 **Section 6-05, Piling**

17 **March 3, 2014**

#### 18 **6-05.3(4) Manufacture of Steel Casings for Cast-In-Place Concrete Piles**

19 This section is revised to read:  
20

21 The diameter of steel casings shall be as specified in the Contract. A full-penetration  
22 groove weld between welded edges is required.  
23

#### 24 **6-05.3(5) Manufacture of Steel Piles**

25 This section is revised to read:  
26

27 Steel piles shall be made of rolled steel H-pile sections, steel pipe piles, or of other  
28 structural steel sections described in the Contract. A full-penetration groove weld  
29 between welded edges is required.  
30

#### 31 **6-05.3(6) Splicing Steel Casings and Steel Piles**

32 This section is revised to read:  
33

34 The Engineer will normally permit steel piles and steel casings for cast-in-place  
35 concrete piles to be spliced. But in each case, the Contractor shall obtain approval on  
36 the need and the method for splicing. Welded splices shall be spaced at a minimum  
37 distance of 10 feet. Only welded splices will be permitted.  
38

39 Splice welds for steel piles shall comply with Section 6-03.3(25) and AWS D1.1/D1.1M,  
40 latest edition, Structural Welding Code. Splicing of steel piles shall be performed in  
41 accordance with an approved weld procedure. The Contractor shall submit a weld  
42 procedure to the Engineer for approval prior to welding. For ASTM A 252 material, mill  
43 certification for each lot of pipe to be welded shall accompany the submittal. The ends of  
44 all steel pipe piling shall meet the fit-up requirements of AWS D1.1/D1.1M, latest edition,  
45 Structural Welding Code Section 5.22.3.1, "Girth Weld Alignment (Tubular)," when the  
46 material is spliced utilizing a girth weld.  
47

48 Splice welds of steel casings for cast-in-place concrete piles shall be the Contractor's  
49 responsibility and shall be welded in accordance with AWS D1.1/D1.1M, latest edition,  
50 Structural Welding Code. A weld procedure submittal is not required for steel casings



1       used for cast-in-place concrete piles. Casings that collapse or are not watertight, shall  
2       be replaced at the Contractor's expense.

3  
4       **Section 6-07, Painting**  
5       **January 6, 2014**

6       **6-07.3(10)E Surface Preparation – Full Paint Removal**

7       This section is revised to read:

8  
9       For structures where full removal of existing paint is specified, the Contractor shall  
10      remove any visible oil, grease, and road tar in accordance with SSPC-SP 1.

11  
12      Following preparation by SSPC-SP 1, all steel surfaces to be painted shall be prepared  
13      in accordance with SSPC-SP 10, near-white metal blast cleaning. Surfaces inaccessible  
14      to near-white metal blast cleaning shall be prepared in accordance with SSPC-SP 11,  
15      power tool cleaning to bare metal, as allowed by the Engineer.

16  
17      **Section 6-14, Geosynthetic Retaining Walls**  
18      **April 7, 2014**

19      **6-14.2 Materials**

20      In the first paragraph, the section number next to "Anchor rods and associated nuts, washers  
21      and couplers" is revised to read:

22  
23          9-06.5(4)

24  
25      The following new paragraph is inserted after the first paragraph:

26  
27          Anchor plate shall conform to ASTM A 36, ASTM A 572 Grade 50, or ASTM A 588.

28  
29      **Section 8-01, Erosion Control and Water Pollution Control**  
30      **August 4, 2014**

31      **8-01.2 Materials**

32      This section is supplemented with the following new paragraph:

33  
34          For all seed the Contractor shall furnish the Engineer with the following documentation:

- 35  
36              1. The state or provincial seed dealer license and endorsements.  
37  
38              2. Copies of Washington State Department of Agriculture (WSDA) test results on  
39              each lot of seed. Test results must be within six months prior to the date of  
40              application.

41  
42      **8-01.3(1)A Submittals**

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

44  
45          Modified TESC Plans shall meet all requirements of the current edition of the WSDOT  
46          Temporary Erosion and Sediment Control Manual M 3109.

47

1 **8-01.3(2)A Preparation for Application**

2 This section's content is deleted and replaced with the following two new subsections:

3  
4 **8-01.3(2)A1 Seeding**

5 Areas to be cultivated are shown in the Plans or specified in the Special Provisions. The  
6 areas shall be cultivated to the depths specified to provide a reasonably firm but friable  
7 seedbed. Cultivation shall take place no sooner than 2 weeks prior to seeding.

8  
9 All areas to be seeded, including excavated slopes shall be compacted and prepared  
10 unless otherwise specified or ordered by the Engineer. A cleated roller, crawler tractor,  
11 or similar equipment that forms longitudinal depressions at least 2 inches deep shall be  
12 used for compaction and preparation of the surface to be seeded.

13  
14 The entire area shall be uniformly covered with longitudinal depressions formed  
15 perpendicular to the natural flow of water on the slope. The soil shall be conditioned with  
16 sufficient water so the longitudinal depressions remain in the soil surface until  
17 completion of the seeding.

18  
19 Prior to seeding, the finished grade of the soil shall be 1 inch below the top of all curbs,  
20 junction and valve boxes, walks, driveways, and other Structures. The soil shall be in a  
21 weed free and bare condition.

22  
23 All bags of seed shall be brought to the site in sealed bags and shall have seed labels  
24 attached showing the seed meets the Specifications. Seed which has become wet,  
25 moldy, or otherwise damaged in transit or storage will not be accepted.

26  
27 **8-01.3(2)A2 Temporary Seeding**

28 A cleated roller, crawler tractor, or similar equipment that forms longitudinal depressions  
29 at least 2 inches deep shall be used for compaction and preparation of the surface to be  
30 seeded. The entire area shall be uniformly covered with longitudinal depressions formed  
31 perpendicular to the natural flow of water on the slope. The soil shall be conditioned with  
32 sufficient water so the longitudinal depressions remain in the soil surface until  
33 completion of the seeding.

34  
35 **8-01.3(2)B Seeding and Fertilizing**

36 In the list in the second paragraph, item numbers 1-5 are revised to read:

- 37  
38 1. A hydro seeder that utilizes water as the carrying agent, and maintains continuous  
39 agitation through paddle blades. It shall have an operating capacity sufficient to  
40 agitate, suspend, and mix into a homogeneous slurry the specified amount of seed  
41 and water or other material. Distribution and discharge lines shall be large enough to  
42 prevent stoppage and shall be equipped with a set of hydraulic discharge spray  
43 nozzles that will provide a uniform distribution of the slurry.
- 44  
45 2. Blower equipment with an adjustable disseminating device capable of maintaining a  
46 constant, measured rate of material discharge that will ensure an even distribution of  
47 seed at the rates specified.
- 48  
49 3. Helicopters properly equipped for aerial seeding.
- 50  
51 4. Power-drawn drills or seeders.
- 52

1           5. Areas in which the above methods are impractical may be seeded by hand  
2           methods.  
3  
4       **8-01.3(2)C Liming**  
5       This section including title is deleted in its entirety and replaced with the following:  
6  
7           **8-01.3(2)C Vacant**  
8  
9       **8-01.3(2)D Mulching**  
10       The first sentence of the second paragraph is revised to read:  
11  
12           Distribution of straw mulch material shall be by means that utilizes forced air to blow  
13           mulch material on seeded areas.  
14  
15       **8-01.4 Measurement**  
16       In the twelfth paragraph, "liming" is deleted.  
17  
18       **8-01.5 Payment**  
19       The bid item "Liming", per acre is deleted.  
20  
21       **Section 8-02, Roadside Restoration**  
22       **August 4, 2014**  
  
23       **8-02.3(1) Responsibility During Construction**  
24       The last sentence of the second paragraph is revised to read:  
25  
26           This Work shall include keeping the planted and seeded areas free from insect  
27           infestation, weeds or unwanted vegetation, litter, and other debris along with retaining  
28           the finished grades and mulch in a neat uniform condition.  
29  
30       **8-02.3(2) Roadside Work Plan**  
31       This section's title is revised to read:  
32  
33           **Work Plans**  
34  
35       This section's content is deleted in its entirety and replaced with the following new  
36       subsections:  
37  
38           **8-02.3(2)A Roadside Work Plan**  
39           Before starting any Work that disturbs the earth and as described in Sections 8-01, 8-02  
40           and 8-03, the Contractor shall submit a roadside work plan. The roadside work plan  
41           shall be submitted as a Type 1 Working Drawing and shall define the Work necessary to  
42           provide all Contract requirements, including: wetland excavation, soil preparation,  
43           habitat structure placement, planting area preparation, seeding area preparation, bark  
44           mulch and compost placement, seeding, planting, plant replacement, irrigation, and  
45           weed control in narrative form.  
46  
47           The Roadside Work Plan shall also include a copy of the approved progress schedule.  
48

**8-02.3(2)B Weed and Pest Control Plan**

The Weed and Pest Control Plan shall be submitted as a Type 1 Working Drawing. The weed and pest control plan shall include scheduling and methods of all control measures required under the Contract or proposed by the Contractor including soil preparation methods to meet the required soil surface conditions in the planting, bark mulch, and wetland areas. The weed control plan shall show general weed control including hand, mechanical and chemical methods, timing, application of herbicides including type, rate, use and timing, mowing, and noxious weed control. Target weeds and unwanted vegetation to be removed shall be identified and listed in the weed control plan.

The plan shall be prepared and signed by a licensed Commercial Pest Control Operator or Consultant when chemical pesticides are proposed. The plan shall include methods of weed control; dates of weed control operations; and the name, application rate, and Material Safety Data Sheets of all proposed herbicides. In addition, the Contractor shall furnish the Engineer with a copy of the current product label for each pesticide and spray adjuvant to be used. These product labels shall be submitted with the weed control plan for approval.

**8-02.3(2)C Plant Establishment Plan**

The Plant Establishment Plan shall be prepared in accordance with the requirements of Section 8-02.3(13) and submitted as a Type 1 Working Drawing. The Plan shall show the proposed scheduling of activities, materials, equipment to be utilized for the first-year plant establishment, and an emergency contact person. The Plan shall include the management of the irrigation system, when applicable. 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.

**8-02.3(3) Weed and Pest Control**

This section is supplemented with the following new paragraph:

Grass, including grass applied in accordance with Section 8-01, growing within the mulch ring of a plant shall be considered a weed and be controlled on the project in accordance with the weed and pest control plan.

**8-02.3(4) Topsoil**

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

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 of by the Contractor.

The following new paragraph is inserted after the first paragraph:

Topsoil stockpiled for project use shall be protected to prevent erosion and weed growth. Weed growth on topsoil stockpile sites shall be immediately eliminated in accordance with the approved Weed and Pest Control Plan.

**8-02.3(4)C Topsoil Type C**

The last sentence is revised to read:

1 Topsoil Type C shall meet the requirements of Sections 8-02.3(4), 8-02.3(4)B, and 9-  
2 14.1(3).  
3

#### 4 **8-02.3(13) Plant Establishment**

5 The first sentence of the second paragraph is deleted.  
6

7 The second paragraph is supplemented with the following new sentence:  
8

9 The 1 calendar year shall be extended an amount equal to any periods where the  
10 Contractor does not comply with the plant establishment plan.  
11

12 The first sentence of the fourth paragraph is revised to read:  
13

14 During the first year of plant establishment under PSIP (Plant Selection Including Plant  
15 Establishment), the Contractor shall meet monthly with the Engineer for the purpose of  
16 joint inspection of the planting material on a mutually agreed upon schedule.  
17

#### 18 **8-02.5 Payment**

19 The paragraph following the bid item "Topsoil Type \_\_\_\_", per acre is revised to read:  
20

21 The unit Contract price per acre for "Topsoil Type \_\_\_\_" shall be full payment for all  
22 costs for the specified Work.  
23

24 The bid item "Plant Establishment - \_\_\_\_ Year" is deleted.  
25

### 26 **Section 8-04, Curbs, Gutters, and Spillways**

27 **August 4, 2014**

#### 28 **8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways**

29 The first sentence in the fourth paragraph is revised to read:  
30

31 Expansion joints in the curb or curb and gutter shall be spaced as shown in the Plans,  
32 and placed at the beginning and ends of curb returns, drainage Structures, bridges, and  
33 cold joints with existing curbs and gutters.  
34

35 In the third sentence of the fourth paragraph, "¼-inch" is revised to read "⅜-inch".  
36

#### 37 **8-04.3(1)A Extruded Cement Concrete Curb**

38 The second sentence in the second paragraph is revised to read:  
39

40 Cement concrete curbs shall be anchored to the existing pavement by placing steel  
41 reinforcing bars 1 foot on each side of every joint.  
42

43 The third paragraph is revised to read:  
44

45 Steel reinforcing bars shall meet the dimensions shown in the Standard Plans.  
46

**Section 8-09, Raised Pavement Markers**

**April 7, 2014**

**8-09.3(6) Recessed Pavement Marker**

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

The Contractor shall ensure that grinding of the pavement does not result in any damage, (e.g. chipping, spalling or raveling) to the pavement to remain.

**Section 8-11, Guardrail**

**April 7, 2014**

**8-11.3(1) Beam Guardrail**

After the below Amendments to 8-11.3(1)F and 8-11.3(1)G are applied, this section is supplemented with the following new sub-section:

**8-11.3(1)F Removing and Resetting Beam Guardrail**

The Contractor shall remove and reset existing guardrail posts, rail element, hardware and blocks to the location shown in the Plans. The mounting height of reset rail element shall be at the height shown in the Plans. The void caused by the removal of the post shall be backfilled and compacted.

The Contractor shall remove and replace any existing guardrail posts and blocks that are not suited for re-use, as staked by the Engineer. The void caused by the removal of the post shall be backfilled and compacted. The Contractor shall then furnish and install a new guardrail post to provide the necessary mounting height.

**8-11.3(1)A Erection of Posts**

The second paragraph in this section is deleted.

**8-11.3(1)C Terminal and Anchor Installation**

The last sentence in the last paragraph is deleted.

**8-11.3(1)F Plans**

This section number is revised to:

**8-11.3(1)G**

**8-11.3(1)G Guardrail Construction Exposed to Traffic**

This section number is revised to:

**8-11.3(1)H**

**Section 8-18, Mailbox Support**

**August 4, 2014**

**8-18.3(1) Type 3 Mailbox Support**

In the third paragraph, the first sentence is revised to read:

1 With the Engineer's consent, a Type 3 Mailbox Support design, made of steel or other  
2 durable material, that meets the NCHRP 350 or the Manual for Assessing Safety  
3 Hardware (MASH) crash test criteria may be used in place of the design shown in the  
4 *Standard Plans*.  
5

6 **Section 8-20, Illumination, Traffic Signal Systems, Intelligent Transportation**  
7 **Systems, and Electrical**  
8 **August 4, 2014**

9 **8-20.2(1) Equipment List and Drawings**

10 The fifth paragraph is revised to read:  
11

12 The Contractor will not be required to submit shop drawings for approval for light  
13 standards and traffic signal standards conforming to the preapproved plans listed in the  
14 Special Provisions. The Contractor may use preapproved plans posted on the WSDOT  
15 website with a more current revision date than published in the Special Provisions.  
16

17 **8-20.3(8) Wiring**

18 The second sentence in the eleventh paragraph is revised to read:  
19

20 Every conductor at every wire termination, connector, or device shall have an approved  
21 wire marking sleeve bearing, as its legend, the circuit number indicated in the Contract.  
22

23 **8-20.3(13)A Light Standards**

24 In the third paragraph, the last sentence of item number 1 is revised to read:  
25

26 Conduit shall extend a maximum of 1 inch above the top of the foundation, including  
27 grounding end bushing or end bell bushing.  
28

29 In the fourth paragraph, the second sentence of item number 1 is revised to read:  
30

31 Conduits shall be cut to a maximum height of 2 inches above the foundation including  
32 grounding end bushing or end bell bushing.  
33

34 **Section 8-23, Temporary Pavement Markings**  
35 **April 14, 2014**

36 This section's content is deleted in its entirety and replaced with the following new sub-  
37 sections:  
38

39 **8-23.1 Description**

40 The Work consists of furnishing, installing, and removing temporary pavement  
41 markings. Temporary pavement markings shall be provided where noted in the Plans;  
42 for all lane shifts and detours resulting from construction activities; or when permanent  
43 markings are removed because of construction operations.  
44

45 **8-23.2 Materials**

46 Materials for temporary markings shall be paint, plastic, tape, raised pavement markers  
47 or flexible raised pavement markers. Materials for pavement markings shall meet the  
48 following requirements:  
49

Raised Pavement Markers	9-21
Temporary Marking Paint	9-34.2(6)
Plastic	9-34.3
Glass Beads for Pavement Marking Materials	9-34.4
Temporary Pavement Marking Tape	9-34.5
Temporary Flexible Raised Pavement Markers	9-34.6

### 8.23.3 Construction Requirements

#### 8-23.3(1) General

The Contractor shall select the type of pavement marking material in accordance with the Contract.

#### 8-23.3(2) Preliminary Spotting

All preliminary layout and marking in preparation for application or removal of temporary pavement markings shall be the responsibility of the Contractor.

#### 8-23.3(3) Preparation of Roadway Surface

Surface preparation for temporary pavement markings shall be in accordance with the manufacturer's recommendations.

#### 8-23.3(4) Pavement Marking Application

##### 8-23.3(4)A Temporary Pavement Markings – Short Duration

Temporary pavement markings – short duration shall meet the following requirements:

**Temporary Center Line** – A BROKEN line used to delineate adjacent lanes of traffic moving in opposite directions. The broken pattern shall be based on a 40-foot unit, consisting of a 4-foot line with a 36-foot gap if paint or tape is used. If temporary raised pavement markers are used, the pattern shall be based on a 40-foot unit, consisting of a grouping of three temporary raised pavement markers, each spaced 3 feet apart, with a 34 foot gap.

**Temporary Edge Line** – A SOLID line used on the edges of Traveled Way. The line shall be continuous if paint or tape is used. If temporary raised pavement markers are used, the line shall consist of markers installed continuously at 5-foot spacing.

**Temporary Lane Line** – A BROKEN line used to delineate adjacent lanes with traffic traveling in the same direction. The broken pattern shall be based on a 40-foot unit, consisting of a 4-foot line with a 36-foot gap, if paint or tape is used. If temporary raised pavement markers are used, the pattern shall be based on a 40-foot unit, consisting of a grouping of three temporary raised pavement markers, each spaced 3 feet apart, with a 34 foot gap.

Lane line and right edge line shall be white in color. Center line and left edge line shall be yellow in color. Edge lines shall be installed only if specifically required in the Contract. All temporary pavement markings shall be retroreflective.



1  
2 **8-23.3(4)A1 Temporary Pavement Marking Paint**

3 Paint used for short duration temporary pavement markings shall be  
4 applied in one application at a thickness of 15 mils or 108 square feet per  
5 gallon. Glass beads shall be in accordance with Section 8-22.3(3)G.  
6

7 **8-23.3(4)A2 Temporary Pavement Marking Tape**

8 Application of temporary pavement marking tape shall be in conformance  
9 with the manufacturer's recommendations.  
10

11 Black mask pavement marking tape shall mask the existing line in its  
12 entirety.  
13

14 **8-23.3(4)A3 Temporary Raised Pavement Markers**

15 Temporary raised pavement markers are not allowed on bituminous  
16 surface treatments.  
17

18 **8-23.3(4)A4 Temporary Flexible Raised Pavement Markers**

19 Flexible raised pavement markers are required for new applications of  
20 bituminous surface treatments. Flexible raised pavement markers are not  
21 allowed on other pavement types unless otherwise specified or approved  
22 by the Engineer. Flexible raised pavement markers shall be installed with  
23 the protective cover in place. The cover shall be removed immediately  
24 after spraying asphaltic material.  
25

26 **8-23.3(4)B Temporary Pavement Markings – Long Duration**

27 Application of paint, pavement marking tape and plastic for long duration  
28 pavement markings shall meet the requirements of Section 8-22.3(3);  
29 application of raised pavement markers shall meet the requirements of Section  
30 8-09.3; and application of flexible pavement markings shall be in conformance  
31 with the manufacturer's recommendations.  
32

33 **8-23.3(4)C Tolerance for Lines**

34 Tolerance for lines shall conform to Section 8-22.3(4).  
35

36 **8-23.3(4)D Maintenance of Pavement Markings**

37 Temporary pavement markings shall be maintained in serviceable condition  
38 throughout the project until permanent pavement markings are installed. As  
39 directed by the Engineer; temporary pavement markings that are damaged,  
40 including normal wear by traffic, shall be repaired or replaced immediately.  
41 Repaired and replaced pavement markings shall meet the requirements for the  
42 original pavement marking.  
43

44 **8-23.3(4)E Removal of Pavement Markings**

45 Removal of temporary paint is not required prior to paving; all other temporary  
46 pavement markings shall be removed.  
47

48 All temporary pavement markings that are required on the wearing course prior  
49 to construction of permanent pavement markings and are not a part of the  
50 permanent markings shall be completely removed concurrent with or  
51 immediately subsequent to the construction of the permanent pavement  
52 markings. Temporary flexible raised pavement markers on bituminous surface

treatment pavements shall be cut off flush with the surface if their location conflicts with the alignment of the permanent pavement markings.

All damage to the permanent Work caused by removing temporary pavement markings shall be repaired by the Contractor at no additional cost to the Contracting Agency.

#### **8-23.4 Measurement**

Temporary pavement markings will be measured by the linear foot of each installed line or grouping of markers, with no deduction for gaps in the line or markers and no additional measurement for the second application of paint required for long duration paint lines. Short duration and long duration temporary pavement markings will be measured for the initial installation only; maintenance of lines will not be measured.

#### **8-23.5 Payment**

Payment will be made in accordance with Section 1-04.1, for each of the following Bid items that are included in the Proposal:

"Temporary Pavement Marking – Short Duration", per linear foot.

"Temporary Pavement Marking – Long Duration", per linear foot.

The unit Contract price per linear foot for "Temporary Pavement Marking – Short Duration" and "Temporary Pavement Marking – Long Duration" shall be full pay for all Work.

### **Section 9-03, Aggregates** **August 4, 2014**

#### **9-03.1(2)C Use of Substandard Gradings**

This section including title is deleted in its entirety and replaced with the following:

**Vacant**

#### **9-03.1(4)C Grading**

In the second paragraph, the first sentence is deleted.

The third paragraph is deleted.

#### **9-03.1(5)B Grading**

The last paragraph is revised to read:

The Contracting Agency may sample each aggregate component prior to introduction to the weigh batcher or as otherwise determined by the Engineer. Each component will be sieve analyzed separately in accordance with WSDOT FOP for WAQTC/AASHTO Test Method T-27/11. All aggregate components will be mathematically re-combined by the proportions (percent of total aggregate by weight) provided by the Contractor on Concrete Mix Design Form 350-040.

#### **9-03.8(1) General Requirements**

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

Preliminary testing of aggregates for source approval shall meet the following test requirements:

The list in the first paragraph is supplemented with the following:

Sand Equivalent                      45 min.

The following new paragraph is inserted after the first paragraph:

Aggregate sources that have 100 percent of the mineral material passing the No. 4 sieve shall be limited to no more than 5 percent of the total weight of aggregate.

#### **9-03.14(3) Common Borrow**

This section is revised to read:

Material for common borrow shall consist of granular or nongranular soil and/or aggregate which is free of deleterious material. Deleterious material includes wood, organic waste, coal, charcoal, or any other extraneous or objectionable material. The material shall not contain more than 3 percent organic material by weight. The plasticity index shall be determined using test method AASHTO T 89 and AASHTO T 90.

The material shall meet one of the options in the soil plasticity table below.

Soil Plasticity Table

Option	Sieve	Percent Passing	Plasticity Index
1	No. 200	0 - 12	N/A
2	No. 200	12.1 - 35	6 or Less
3	No. 200	Above 35	0

All percentages are by weight.

If requested by the Contractor, the plasticity index may be increased with the approval of the Engineer.

#### **9-03.14(4) Gravel Borrow for Structural Earth Wall**

In the second table, the row beginning with "pH" is revised to read:

pH	WSDOT Test Method T 417	4.5 - 9	5 - 10
----	-------------------------	---------	--------

### **Section 9-05, Drainage Structures and Culverts**

**April 7, 2014**

#### **9-05.13 Ductile Iron Sewer Pipe**

The first paragraph is deleted.

**Section 9-07, Reinforcing Steel**  
**January 6, 2014**

**9-07.5(2) Corrosion Resistant Dowel Bars (for Cement Concrete Pavement)**

This section's title is revised to read:

**9-07.5(2) Corrosion Resistant Dowel Bars (for Cement Concrete Pavement and  
Cement Concrete Pavement Rehabilitation)**

**Section 9-09, Timber and Lumber**  
**January 6, 2014**

**9-09.3(1) General Requirements**

The fourth paragraph is revised to read:

All orders of treated timber and lumber shall be accompanied by a Certificate of Treatment record. The Certificate of Treatment showing conformance to this specification and AWWPA standards shall include the following information:

- Name and location of the wood preserving company,
- Customer identification,
- Date of treatment and charge number,
- Type of chemical used and amount of retention,
- Treating process and identification of the Specification used,
- Boring records verifying treatment penetration for timber and lumber with a nominal dimension of 6" x 6" or larger,
- Description of material that was treated, and
- Signature of a responsible plant official.

The fifth paragraph is deleted.

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

All timber and lumber to be used in aquatic environments, unless specified otherwise in the Contract, shall be chemically treated using Western Wood Preservers Institute Best Management Practices (BMPs).

**Section 9-10, Piling**  
**March 3, 2014**

**9-10.5 Steel Piling**

This section is revised to read:

The material for rolled steel piling H-piling and pile splices shall conform to ASTM A 36, ASTM A 572 or ASTM A 992. The material for steel pipe piling and splices shall conform to one of the following requirements except as specifically noted in the Plans:

1. API 5L Grade X42 or X52 material may be used for longitudinal seam welded or helical (spiral) seam submerged-arc welded pipe piles of any diameter.
2. ASTM A 252 Grade 2 or 3 material may be used for longitudinal seam welded or helical (spiral) seam submerged-arc welded pipe piles of any diameter. For the purposes of welding and prequalification of base metal, steel pipe pile

- designated as ASTM A 252 may be treated as prequalified provided the chemical composition conforms to a prequalified base metal classification listed in Table 3.1 of the AWS D1.1/D1.1M, latest edition, Structural Welding Code, the grade of pipe piling meets or exceeds the grade specified in the Plans, and the carbon equivalent (CE) is a maximum of 0.45-percent.
3. ASTM A 572 or ASTM A 588 material may be used for longitudinal seam welded piles of any diameter.

For helical (spiral) seam submerged-arc welded pipe piles, the maximum radial offset of strip/plate edges shall be 1/8 inch. The offset shall be transitioned with a taper weld and the slope shall not be less than a 1 in 2.5 taper. The weld reinforcement shall not be greater than 3/16 inches and misalignment of weld beads shall not exceed 1/8 inch.

Steel soldier piles, and associated steel bars and plates, shall conform to ASTM A 36, ASTM A 572 or ASTM A 992, except as otherwise noted in the Plans.

All steel piling may be accepted by the Engineer based on the Manufacturer's Certificate of Compliance submitted in accordance with Section 1-06.3. The manufacturer's certificate of compliance submittal for steel pipe piles shall be accompanied by certified mill test reports, including chemical analysis and carbon equivalence, for each heat of steel used to fabricate the steel pipe piling.

## **Section 9-14, Erosion Control and Roadside Planting**

### **August 4, 2014**

#### **9.14.1 Soil**

This section, including title, is revised to read:

##### **9-14.1 Topsoil**

Topsoil shall not contain any recycled material, foreign materials, or any listed Noxious and Nuisance weeds of any Class designated by authorized State or County officials. Aggregate shall not comprise more than 10% by volume of Topsoil and shall not be greater than two inches in diameter.

##### **9-14.1(2) Topsoil Type B**

The last sentence of the second paragraph is deleted.

#### **9-14.2 Seed**

This section is revised to read:

Seed of the type specified shall be certified in accordance with WAC 16-302. Seed mixes shall be commercially prepared and supplied in sealed containers. The labels shall show:

- (1) Common and botanical names of seed
- (2) Lot number
- (3) Net weight
- (4) Pounds of Pure live seed (PLS) in the mix
- (5) Origin of seed

All seed vendors must have a business license issued by supplier's state or provincial Department of Licensing with a "seed dealer" endorsement.

1  
2 **9-14.4(3) Bark or Wood Chips**

3 This section's title is revised to read:

4  
5 **Bark or Wood Chip Mulch**

6  
7 The first paragraph is revised to read:

8  
9 Bark or wood chip mulch shall be derived from fir, pine, or hemlock species. It shall not  
10 contain resin, tannin, or other compounds in quantities that would be detrimental to  
11 plant life. Sawdust shall not be used as mulch. Mulch produced from finished wood  
12 products or construction debris will not be allowed.

13  
14 **9-14.4(6) Gypsum**

15 The first sentence is revised to read:

16  
17 Gypsum shall consist of Calcium Sulfate ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) in a pelletized or granular form.

18  
19 **9-14.4(7) Tackifier**

20 This section is revised to read:

21  
22 Tackifiers are used as a tie-down for soil, compost, seed, and/or mulch. Tackifiers shall  
23 contain no growth or germination-inhibiting materials and shall not reduce infiltration  
24 rates. Tackifiers shall hydrate in water and readily blend with other slurry materials.

25  
26 The Contractor shall provide test results documenting the tackifier meets the  
27 requirements for Acute Toxicity, Solvents, and Heavy Metals as required in Table 1 in  
28 Section 9-14.4(2). The tests shall be performed at the manufacturer's recommended  
29 application rate.

30  
31 **9-14.4(8) Compost**

32 The second paragraph is revised to read:

33  
34 Compost production and quality shall comply with WAC 173-350.

35  
36 **9-14.4(8)A Compost Submittal Requirements**

37 Item 2 is revised to read:

- 38  
39 5. A copy of the Solid Waste Handling Permit issued to the manufacturer by the  
40 Jurisdictional Health Department in accordance with WAC 173-350 (Minimum  
41 Functional Standards for Solid Waste Handling).

42  
43 **9-14.6(2) Quality**

44 The second and third paragraphs in this section are revised to read:

45  
46 All plant material shall comply with State and Federal laws with respect to inspection  
47 for plant diseases and insect infestation. Plants must meet Washington State  
48 Department of Agriculture plant quarantines and have a certificate of inspection. Plants  
49 originating in Canada must be accompanied by a phytosanitary certificate stating the  
50 plants meet USDA health requirements.

1 All plant material shall be purchased from a nursery licensed to sell plants in their state  
2 or province.  
3

4 **Section 9-15, Irrigation System**  
5 **August 4, 2014**

6 **9-15.18 Detectable Marking Tape**

7 In the second paragraph, the table is supplemented with the following new row:  
8

Non-Potable Water	Purple
-------------------	--------

9  
10  
11 **Section 9-16, Fence and Guardrail**  
12 **August 4, 2014**

13 **9-16.2(1)B Wood Fence Posts and Braces**

14 In the table, the row beginning with "ACA" is deleted.  
15

16 **Section 9-29, Illumination, Signal, Electrical**  
17 **August 4, 2014**

18 **9-29.2(1)B Heavy Duty Junction Boxes**

19 The second paragraph is revised to read:  
20

21 The Heavy-Duty Junction Box steel frame, lid support and lid fabricated from steel plate  
22 and shapes shall be painted with a shop applied, inorganic zinc primer in accordance  
23 with Section 6-07.3. Ductile iron and gray iron castings shall not be painted.  
24

25 The following new paragraph is inserted after the second paragraph:  
26

27 The concrete used in Heavy-Duty Junction Boxes shall have a minimum compressive  
28 strength of 4,000 psi.  
29

30 In the fourth paragraph (after the preceding Amendment is applied), the table is revised to  
31 read:  
32

Materials	Requirement
Concrete	Section 6-02
Reinforcing Steel	Section 9-07
Lid	ASTM A 786 diamond plate steel, rolled from plate complying with ASTM A 572, grade 50 or ASTM A 588, and having a min. CVN toughness of 20 ft-lb at 40 degrees F. Or Ductile iron casting meeting Section 9-05.15
Frame and stiffener plates	ASTM A 572 grade 50 or ASTM A 588, both with min. CVN toughness of 20 ft-lb at 40 degrees F Or Gray iron casting meeting Section 9-05.15
Anchors (studs)	Section 9-06.15

Threaded Anchors for Gray Iron Frame	ASTM F1554 grade 55 Headed Anchor Requirements
Bolts, Studs, Nuts, Washers	ASTM F 593 or A 193, Type 304 or 316, or Stainless steel grade 302, 304, or 316 in accordance with approved shop drawings
Hinges and Locking and Latching Mechanism and associated Hardware and Bolts	In accordance with approved shop drawings
Safety Bars	In accordance with approved shop drawings

The last paragraph is revised to read:

The bearing seat and lid perimeter shall be free from burrs, dirt, and other foreign debris that would prevent solid seating. Bolts and nuts shall be liberally coated with anti-seize compound. Bolts shall be installed snug tight. The bearing seat and lid perimeter shall be machined to allow a minimum of 75 percent of the bearing areas to be seated with a tolerance of 0.0 to 0.005 inches measured with a feeler gage. The bearing area percentage will be measured for each side of the lid as it bears on the frame.

#### **9-29.2(2) Standard Duty and Heavy-Duty Cable Vaults and Pull Boxes**

This section's title is revised to read:

#### **Small Cable Vaults, Standard Duty Cable Vaults, Heavy-Duty Cable Vaults, Standard Duty Pull Boxes, and Heavy-Duty Pull Boxes**

In the first paragraph, the first sentence is revised to read:

Small, Standard Duty and Heavy-Duty Cable Vaults and Standard Duty and Heavy-Duty Pull Boxes shall be constructed as a concrete box and as a concrete lid.

#### **9-29.2(2)A Standard Duty Cable Vaults and Pull Boxes**

This section's title is revised to read:

#### **Small Cable Vaults, Standard Duty Cable Vaults, and Standard Duty Pull Boxes**

The first paragraph is revised to read:

Small and Standard Duty Cable Vaults and Standard Duty Pull boxes shall be concrete and have a minimum load rating of 22,500 pounds and be tested in accordance with Section 9-29.2(1)C for concrete Standard Duty Junction Boxes.

In the second paragraph, the first sentence is revised to read:

Concrete for Small and Standard Duty Cable Vaults and Standard Duty Pull Boxes shall have a minimum compressive strength of 4,000 psi.

In the third paragraph, the first sentence is revised to read:



1 All Small and Standard Duty Cable Vaults and Standard Duty Pull Boxes placed in  
2 sidewalks, walkways, and shared-use paths shall have slip-resistant surfaces.

3  
4 The fourth paragraph (up until the colon) is revised to read:

5  
6 Materials for Small and Standard Duty Cable Vaults and Standard Duty Pull Boxes shall  
7 conform to the following:

8  
9 **9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable**

10 The following new subsection is added:

11  
12 **9-29.3(3) Wire Marking Sleeves**

13 Wire marking sleeves shall be full-circle in design, non-adhesive, printable using an  
14 indelible ink and shall fit snugly on the wire or cable. Marking sleeves shall be made  
15 from a PVC or polyolefin, and provide permanent identification for wires and cables.

16  
17 **Section 9-31, Elastomeric Bearing Pads**

18 **August 4, 2014**

19 This section's title is revised to read:

20  
21 **Elastomeric Pads**

22  
23 **9-31.1 Requirements**

24 In the first paragraph, the word "bearing" is deleted from the first sentence.

25  
26 In the first sentence of the second paragraph, the word "bearing" is deleted and replaced  
27 with "elastomeric".

28  
29 In the last sentence of the second paragraph, the word "Bearing" is deleted and replaced  
30 with "Elastomeric".

31  
32 In the third paragraph, the word "bearing" is deleted and replaced with the word  
33 "elastomeric".

34  
35 **Section 9-32, Mailbox Support**

36 **August 4, 2014**

37 **9-32.7 Type 2 Mailbox Support**

38 The first sentence is revised to read:

39  
40 Type 2 mailbox supports shall be 2-inch 14-gage steel tube and shall meet the NCHRP  
41 350 or the Manual for Assessing Safety Hardware (MASH) crash test criteria.

42  
43 **Section 9-34, Pavement Marking Material**

44 **August 4, 2014**

45 **9-34.2 Paint**

46 The second paragraph is revised to read:

47

Blue and black paint shall comply with the requirements of yellow paint in Section 9-34.2(4) and Section 9-34.2(5), with the exception that blue and black paints do not need to meet the requirements for titanium dioxide, directional reflectance, and contrast ratio.

#### **9-34.5 Temporary Pavement Marking Tape**

This section is revised to read:

Biodegradable tape with paper backing is not allowed.

This section is supplemented with the following new sub-sections:

##### **9-34.5(1) Temporary Pavement Marking Tape – Short Duration**

Temporary pavement marking tape for short duration shall conform to ASTM D4592 Type II 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**

Temporary pavement marking tape for long duration shall conform to ASTM D4592 Type I. Temporary pavement marking tape for long duration, except for black tape, shall have a minimum initial coefficient of retroreflective luminance of  $200 \text{ mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$  when measured in accordance with ASTM E 2832 or ASTM E 2177. Black tape, black mask tape and the black portion of the contrast removable tape, shall be non-reflective.

#### **9-34.6 Temporary Raised Pavement Markers**

This section's title is revised to read:

##### **Temporary Flexible Raised Pavement Markers**

The second paragraph is deleted.

#### **Section 9-35, Temporary Traffic Control Materials August 4, 2014**

##### **9-35.0 General Requirements**

The following item is deleted from the list of temporary traffic control materials:

Barrier Drums

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

Certification for crashworthiness according to NCHRP 350 or the Manual for Assessing Safety Hardware (MASH) will be required as described in Section 1-10.2(3).

##### **9-35.2 Construction Signs**

The first sentence is revised to read:

Construction signs shall conform to the requirements of the MUTCD and shall meet the requirements of NCHRP Report 350 for Category 2 devices or MASH.

##### **9-35.7 Traffic Safety Drums**

The third paragraph is revised to read:

1 Drums and light units shall meet the crashworthiness requirements of NCHRP 350 or  
2 MASH as described in Section 1-10.2(3).  
3

4 **9-35.8 Barrier Drums**

5 This section including title is deleted in its entirety and replaced with the following:  
6

7 **9-35.8 Vacant**  
8

9 **9-35.12 Transportable Attenuator**

10 In the first paragraph, the fourth sentence is revised to read:  
11

12 The Contractor shall provide certification that the transportable attenuator complies with  
13 NCHRP 350 Test level 3 or MASH Test Level 3 requirements.  
14

15 **9-35.13 Tall Channelizing Devices**

16 In the sixth paragraph, the last sentence is revised to read:  
17

18 The method of attachment must ensure that the light does not separate from the device  
19 upon impact and light units shall meet the crashworthiness requirements of NCHRP 350  
20 or MASH as described in Section 1-10.2(3).  
21  
22

## SPECIAL PROVISIONS

The following Special Provisions are made a part of this contract and supersede any conflicting provisions of the 2014 Standard Specifications for Road, Bridge and Municipal Construction, and the foregoing Amendments to the Standard Specifications.

Several types of Special Provisions are included in this contract; General, Region, Bridges and Structures, and Project Specific. Special Provisions types are differentiated as follows:

(date)	General Special Provision
(*****)	Notes a revision to a General Special Provision and also notes a Project Specific Special Provision.
(Regions <sup>1</sup> date)	Region Special Provision
(BSP date)	Bridges and Structures Special Provision

**General Special Provisions** are similar to Standard Specifications in that they typically apply to many projects, usually in more than one Region. Usually, the only difference from one project to another is the inclusion of variable project data, inserted as a "fill-in".

**Region Special Provisions** are commonly applicable within the designated Region. Region designations are as follows:

<u>Regions<sup>1</sup></u>	
ER	Eastern Region
NCR	North Central Region
NWR	Northwest Region
OR	Olympic Region
SCR	South Central Region
SWR	Southwest Region
WSF	Washington State Ferries Division

**Bridges and Structures Special Provisions** are similar to Standard Specifications in that they typically apply to many projects, usually in more than one Region. Usually, the only difference from one project to another is the inclusion of variable project data, inserted as a "fill-in".

**Project Specific Special Provisions** normally appear only in the contract for which they were developed.

### Division 1 General Requirements

#### DESCRIPTION OF WORK

(March 13, 1995)

This Contract provides for the improvement of \*\*\* 0.49 miles of SR 162, MP 6.61 to MP 7.10 in Pierce County by clearing and grubbing, constructing embankment, grading, installing drainage items, relocating water line, surfacing, preleveling and paving with HMA Cl. 1/2 In. PG 64-22, constructing a pre-cast concrete girder bridge and two precast concrete panel noise barrier walls, installing guardrail, fencing, permanent signing, rumble strips, pavement

1 markings, and roadway delineation, providing structure surveying and traffic control, \*\*\* and  
2 other work, all in accordance with the attached Contract Plans, these Contract Provisions,  
3 and the Standard Specifications.  
4

## 5 **Bid Procedures and Conditions**

6

### 7 **Examination of Plans, Specifications and Site of Work**

8

#### 9 ***Subsurface Information***

10  
11 Section 1-02.4(2) is supplemented with the following:

12  
13 ++(January 2, 2012)

14 The soils information used for study and design of this project is available for  
15 review by the bidder at the following location:

16  
17 \*\*\* WSDOT Tumwater Project Engineer's Office  
18 Steve Fuchs, PE  
19 821 Airport Court SE  
20 Olympia, WA 98501  
21

22 or at:

23  
24 [www.wsdot.wa.gov/biz/contaa/wsdotpro/geo-tech%20reports/default.htm](http://www.wsdot.wa.gov/biz/contaa/wsdotpro/geo-tech%20reports/default.htm) \*\*\*  
25

26 The soils information includes the following:

27  
28 \*\*\*

- 29 1. Preliminary Geotechnical Recommendations for Drilled Shafts – Axial  
30 Resistance and Lateral Loading Analysis, SR 162 Puyallup River Bridge  
31 Replacement (162/6) – May 14, 2010
  - 32 2. Revised Geotechnical Recommendations for Lateral Spread and LPile  
33 Parameters, SR 162 Puyallup River Bridge Replacement (162/6) – January 20,  
34 2011
  - 35 3. Supplemental Geotechnical Recommendations for Drilled Shafts, SR 162  
36 Puyallup River Bridge (162/6) Replace Bridge – August 1, 2014  
37 \*\*\*
- 38

## 39 **Preparation of Proposal**

40

41 Section 1-02.6 is supplemented with the following:

42  
43 ***(August 7, 2006)***

#### 44 ***Progress Schedule Minimum Bid***

45 A minimum bid of \*\*\* \$10,000 \*\*\* lump sum has been established for the item "Type \*\*\*  
46 B \*\*\* Progress Schedule." The Contractor's bid shall equal or exceed that amount. If  
47 the Contractor's bid is less than the minimum specified amount, the Contracting Agency  
48 will unilaterally revise the bid amount to the minimum specified amount and recalculate  
49 the Contractor's total bid amount. The corrected total bid amount will be used by the  
50 Contracting Agency for award purposes and to fix the amount of the contract bond.  
51

1 **Public Opening of Proposals**

2  
3 Section 1-02.12 is supplemented with the following:

4  
5 ***(June 19, 2013)***

6 ***Date of Opening Bids***

7 Sealed bids are to be received at one of the following locations prior to the time  
8 Specified:

- 9  
10 1. At Post Office Box 47360, Olympia, Washington 98504-7360 until 11:00:59  
11 A.M. of the bid opening date. The Department of Transportation will consider  
12 notification of bid receipt by the Post Office as the actual receipt of the bid.  
13  
14 2. In the Department of Transportation Bid Room (2D20), located at the  
15 Transportation Building, 310 Maple Park Avenue SE, Room 2D20, Olympia WA  
16 98501-2361, until 11:00:59 A.M. of the bid opening date. Bids delivered in  
17 person will be received only in the Bid Room 2D20 on the bid opening date.  
18  
19 3. Electronically via, Trns Port Expedite software and BidExpress until 11:00:59  
20 am Pacific time. Bids delivered in person or electronically via Trns Port  
21 Expedite software and BidExpress will be received only in the Bid Room on the  
22 bid opening date.  
23

24 The bid opening date for this project is Wednesday, December 3, 2014.  
25 Bids received will be publicly opened and read after 11:00:59 A. M. Pacific Time on this  
26 date.  
27

28 **Award and Execution of Contract**

29  
30 **Execution Of Contract**

31  
32 Section 1-03.3 is supplemented with the following:

33  
34 ***(August 5, 2013)***

35 ***Escrow Bid Documentation***

36 **Scope and Purpose**

37 The purpose of this specification is to preserve the Contractor's bid documents for  
38 use by the Contracting Agency in any litigation between the Contracting Agency  
39 and Contractor arising out of this Contract.  
40

41 The Contractor shall submit a legible copy of all documentation used to prepare the  
42 bid for this contract to a escrow institution designated by the Contracting Agency.  
43 Such documentation shall be placed in escrow with the escrow institution and  
44 preserved by that institution as specified in the following sections of this  
45 specification.  
46

47 **Bid Documentation**

48 The term "bid documentation" as used in this specification means any writings,  
49 working papers, computer printouts, charts, and any other data compilations which  
50 contain or reflect all information, data, and calculations used by the Contractor to  
51 determine the bid in bidding for this project. The term "bid documentation" includes  
52 but is not limited to Contractor equipment rates, Contractor overhead rates, labor

1 rates, efficiency or productivity factors, arithmetic extensions, and quotations from  
2 Subcontractors and materialmen to the extent that such rates and quotations were  
3 used by the Contractor in formulating and determining the amount of the bid. The  
4 term "bid documentation" also includes any manuals which are standard to the  
5 industry used by the Contractor in determining the bid for this project. Such  
6 manuals may be included in the bid documentation by reference. The term does  
7 not include bid documents provided by the Contracting Agency for use by the  
8 Contractor in bidding on this project.  
9

#### 10 **Submittal of Bid Documentation**

11 The Contractor shall submit the bid documentation to the escrow institution. The  
12 bid documentation shall be submitted to the escrow institution within seven  
13 calendar days after the contract for this project has been executed by the  
14 Contracting Agency. The bid documentation shall be submitted in a sealed  
15 container. The container shall be clearly marked "Bid Documentation" and shall  
16 also show on the face of the container the Contractor's name, the date of submittal,  
17 the project title, and the contract number.  
18

#### 19 **Affidavit**

20 The sealed container shall contain, in addition to the bid documentation, an affidavit  
21 signed under oath by an individual authorized by the Contractor to execute bidding  
22 proposals. The affidavit shall list each bid document with sufficient specificity so a  
23 comparison can be made between the list and the bid documentation to ensure that  
24 all of the bid documentation listed in the affidavit has been enclosed in the sealed  
25 container. The affidavit shall show that the affiant has personally examined the bid  
26 documentation and that the affidavit lists all of the documents used by the  
27 Contractor to determine the bid for this project and that all such bid documentation  
28 has been enclosed in the sealed container.  
29

#### 30 **Verification**

31 The escrow institution upon receipt of the sealed container shall place the container  
32 in a safety deposit box, vault, or other secure place, and immediately notify the  
33 Contracting Agency in writing that the container has been received. Upon receipt of  
34 such notice, the Contracting Agency will promptly notify the Contractor in writing  
35 that the Contracting Agency will open the sealed container to verify that the affidavit  
36 has been enclosed and to compare the bid documents listed in the affidavit with the  
37 bid documents enclosed in the container to ensure that all of the bid documentation  
38 has been submitted and that the copies are legible. The notification will advise the  
39 Contractor of the date and time the container will be opened and the name of the  
40 Contracting Agency employee who will verify the contents of the container. The  
41 Contracting Agency employee verifying the contents of the escrow container will not  
42 be involved or connected with the review, evaluation, or resolution of any claim by  
43 the Contractor made to the Contracting Agency in connection with the contract for  
44 which the verification was made. The Contractor may have representatives present  
45 at the opening.  
46

#### 47 **Supplementation**

48 Documents listed in the affidavit but not enclosed in the sealed container through  
49 error or oversight shall be submitted in a sealed container within five calendar days  
50 after the opening of the original container. Also, any bid documentation that is  
51 illegible shall be replaced with legible copies and furnished within five calendar  
52 days after the opening of the original container. The face of the container shall

1 show the same information as the original container except the container shall be  
2 marked "Supplemental Bid Documentation". The same procedure used in verifying  
3 the contents of the original container shall be used in verifying the contents of the  
4 supplemental submittal.  
5

#### 6 **Duration and Use**

7 The bid documentation and affidavit shall remain in escrow during the life of the  
8 contract and will be returned to the Contractor by the escrow institution, provided  
9 that the Contractor has signed the final contract voucher certification and has not  
10 reserved any claims on the final contract voucher certification against the  
11 Contracting Agency arising out of the contract. In the event that claims against the  
12 Contracting Agency are reserved on the final contract voucher certification, the bid  
13 documentation and affidavit shall remain in escrow. If the claims are not resolved  
14 and litigation ensues, the Contracting Agency may serve a request upon the  
15 Contractor to authorize the escrow institution, in writing, to release the bid  
16 documentation and affidavit in escrow to the Contracting Agency. The Contractor  
17 shall respond to the request within 20 days after service of the request. If the  
18 Contractor objects or does not respond to the request within 20 days after service  
19 of the request, the Contracting Agency may file a motion under the Civil Rules  
20 requesting the court to enter an order directing the escrow institution to deliver the  
21 bid documentation and affidavit in escrow to the Contracting Agency. The  
22 Contractor shall respond to the request within the time required by the then  
23 applicable Civil Court Rules for the Superior Court of the State of Washington. If  
24 the Contractor objects or does not respond to the request within the time required  
25 by the then applicable Civil Rules, the Contracting Agency may file a motion  
26 pursuant to such rules requesting the court to enter an order directing the escrow  
27 institution to deliver the bid documentation and affidavit in escrow to the  
28 Contracting Agency. The escrow institution shall release the bid documentation  
29 and affidavit as follows:  
30

- 31 1. To the Contracting Agency upon receipt of a letter from the Contractor  
32 authorizing the release;
- 33 2. To the Contracting Agency upon receipt of a certified copy of a court order  
34 directing the release of the documents;
- 35 3. To the court for an in camera examination pursuant to a certified copy of a  
36 court order;
- 37 4. The bid documentation and affidavit shall be returned to the Contractor if  
38 litigation is not commenced within the time period prescribed by law.  
39

40 The Contractor agrees that the sealed container placed in escrow and any  
41 supplemental sealed container placed in escrow contain all of the bid  
42 documentation used to determine the bid and that no other bid documentation shall  
43 be utilized by the Contractor in litigation over claims brought by the Contractor  
44 arising out of this contract unless otherwise ordered by the court.  
45

#### 46 **Remedies for Refusal or Failure to Provide Bid Documentation**

47 Failure or refusal to provide bid documentation shall be deemed a material breach  
48 of this contract. The Contracting Agency may at its option refuse to make payment  
49 for progress estimates under Section 1-09.9 until the Contractor has submitted the  
50  
51  
52



bid documentation required by this specification. The Contracting Agency may at its option terminate the contract for default under Section 1-08.10. These remedies are not exclusive and the Contracting Agency may take such other action as is available to it under the law.

#### **Confidentiality of Bid Documentation**

The bid documentation and affidavit in escrow are and will remain the property of the Contractor. The Contracting Agency has no interest in or right to the bid documentation and affidavit other than to verify the contents and legibility of the bid documentation unless litigation ensues between the Contracting Agency and Contractor over claims brought by the Contractor arising out of this contract. In the event of such litigation, the bid documentation and affidavit may become the property of the Contracting Agency for use in the litigation as may be appropriate subject to the provisions of any court order limiting or restricting the use or dissemination of the bid documentation and affidavit as provided in the preceding section entitled Duration and Use.

#### **Cost and Escrow Instructions**

The cost of the escrow will be borne by the Contracting Agency. The Contracting Agency will provide escrow instructions to the escrow institution consistent with this specification.

### **Control of Work**

### **Conformity With And Deviations From Plans And Stakes**

Section 1-05.4 is supplemented with the following:

(\*\*\*\*\*)

All survey requests submitted shall include priority numbering representing the order in which the Contractor would like the survey work to be completed.

Stakes destroyed or damaged by the Contractor's operation will be re-staked and treated as a new request. Re-staking may be moved ahead of other prioritized tasks at the Contractor's request.

(\*\*\*\*\*)

#### ***Contractor Surveying - Structure***

Copies of the Contracting Agency provided primary survey control data are available for the bidder's inspection at the office of the Project Engineer.

The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades necessary for the construction of bridges and retaining walls. Except for the survey control data to be furnished by the Contracting Agency, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility.

The Contractor shall inform the Engineer when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments. All monuments noted on the plans "DO NOT DISTURB" shall be protected throughout the length of the project or be replaced at the Contractors expense.

1 Detailed survey records shall be maintained, including a description of the work  
2 performed on each shift, the methods utilized, and the control points used. The record  
3 shall be adequate to allow the survey to be reproduced. A copy of each day's record  
4 shall be provided to the Engineer within three working days after the end of the shift.  
5

6 The meaning of words and terms used in this provision shall be as listed in "Definitions  
7 of Surveying and Associated Terms" current edition, published by the American  
8 Congress on Surveying and Mapping and the American Society of Civil Engineers.  
9

10 The survey work by the Contractor shall include but not be limited to the following:  
11

- 12 1. Verify the primary horizontal and vertical control furnished by the Contracting  
13 Agency, and expand into secondary control by adding stakes and hubs as well  
14 as additional survey control needed for the project. Provide descriptions of  
15 secondary control to the Contracting Agency. The description shall include  
16 coordinates and elevations of all secondary control points.  
17
- 18 2. Establish, by placing hubs and/or marked stakes, the location with offsets of  
19 foundation shafts and piles.  
20
- 21 3. Establish offsets to footing centerline of bearing for structure excavation.  
22
- 23 4. Establish offsets to footing centerline of bearing for footing forms.  
24
- 25 5. Establish wing wall, and retaining wall horizontal alignment.  
26
- 27 6. Establish retaining wall top of wall profile grade.  
28
- 29 7. Establish elevation benchmarks for all substructure formwork.  
30
- 31 8. Check elevations at top of footing concrete line inside footing formwork  
32 immediately prior to concrete placement.  
33
- 34 9. Check column location and pier centerline of bearing at top of footing  
35 immediately prior to concrete placement.  
36
- 37 10. Establish location and plumbness of column forms, and monitor column  
38 plumbness during concrete placement.  
39
- 40 11. Establish pier cap and crossbeam top and bottom elevations and centerline of  
41 bearing.  
42
- 43 12. Check pier cap and crossbeam top and bottom elevations and centerline of  
44 bearing prior to and during concrete placement.  
45
- 46 13. Establish grout pad locations and elevations.  
47
- 48 14. Establish structure bearing locations and elevations, including locations of  
49 anchor bolt assemblies.  
50
- 51 15. Establish box girder bottom slab grades and locations.  
52

16. Establish girder and/or web wall profiles and locations.
17. Establish diaphragm locations and centerline of bearing.
18. Establish roadway slab alignment, grades and provide dimensions from top of girder to top of roadway slab. Set elevations for deck paving machine rails.
19. Establish traffic barrier and curb profile.
20. Profile all girders prior to the placement of any deadload or construction live load that may affect the girder's profile.

The Contractor shall provide the Contracting Agency copies of any calculations and staking data when requested by the Engineer.

To facilitate the establishment of these lines and elevations, the Contracting Agency will provide the Contractor with the following primary survey and control information:

1. Descriptions of two primary control points used for the horizontal and vertical control. Primary control points will be described by reference to the project alignment and the coordinate system and elevation datum utilized by the project. In addition, the Contracting Agency will supply horizontal coordinates for the beginning and ending points and for each Point of Intersection (PI) on each alignment included in the project.
2. Horizontal coordinates for the centerline of each bridge pier.
3. Computed elevations at top of bridge roadway decks at one-tenth points along centerline of each girder web. All form grades and other working grades shall be calculated by the Contractor.

The Contractor shall give the Contracting Agency three weeks notification to allow adequate time to provide the data outlined in Items 2 and 3 above. The Contractor shall ensure a surveying accuracy within the following tolerances:

	<u>Vertical</u>	<u>Horizontal</u>
1. Stationing on structures		±0.02 feet
2. Alignment on structures		±0.02 feet
3. Superstructure elevations	±0.01 feet variation from plan elevation	
4. Substructure	±0.02 feet variation from Plan grades.	

The Contracting Agency may spot-check the Contractor's surveying. These spot-checks will not change the requirements for normal checking by the Contractor.

When staking the following items, the Contractor shall perform independent checks from different secondary control to ensure that the points staked for these items are within the specified survey accuracy tolerances:

Piles  
Shafts  
Footings  
Columns

The Contractor shall calculate coordinates for the points associated with piles, shafts, footings and columns. The Contracting Agency will verify these coordinates prior to issuing approval to the Contractor for commencing with the survey work. The Contracting Agency will require up to seven calendar days from the date the data is received to issuing approval.

Contract work to be performed using contractor-provided stakes shall not begin until the stakes are approved by the Contracting Agency. Such approval shall not relieve the Contractor of responsibility for the accuracy of the stakes.

### ***Payment***

Payment will be made in accordance with Section 1-04.1 for the following bid item when included in the proposal:

"Structure Surveying", lump sum.

The lump sum contract price for "Structure 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.

## **Legal Relations and Responsibilities to the Public**

Section 1-07 is supplemented with the following:

***(February 24, 2014)***

### ***Apprentice Utilization***

This Contract includes an Apprentice Utilization Requirement as defined in this specification. No less than 15 percent of project Labor Hours shall be performed by Apprentices.

### ***Definitions***

For the purposes of this specification the following definitions apply:

1. Apprentice Utilization Requirement is expressed as a percentage of the project Labor Hours performed by Apprentices.
2. Labor Hours are the total hours performed by all workers receiving an hourly wage who are directly employed on the project site including hours performed by workers employed by the prime Contractor and all Subcontractors. Labor Hours do not include hours performed by foremen, superintendents, owners, and workers who are not subject to prevailing wage requirements. Truck driving hours have to be four hours or more of a shift for inclusion.
3. Apprentice is a person enrolled in a State-approved Apprenticeship Training Program.

- 1           4. State-approved Apprenticeship Training Program is an apprenticeship training  
2           program approved by the Washington State Apprenticeship Council.  
3  
4           5. Good Faith Effort is a demonstration that the Contractor has strived to meet  
5           the Apprentice Utilization Requirement including but not necessarily limited to  
6           the specific steps as described elsewhere in this specification.  
7

### 8           ***Electronic Reporting***

9           The Contractor shall use the application available at  
10          <https://RemoteApps.wsdot.wa.gov/Construction/Training/Apprenticeship/> to submit the  
11          "Apprentice Utilization Plan", "Statement of Apprentice/Journeyman Participation" and to  
12          submit "Good Faith Effort" documentation. After execution of the contract, the contractor  
13          shall send an e-mail to [apprenticeship@wsdot.wa.gov](mailto:apprenticeship@wsdot.wa.gov) containing the following  
14          information: the first and last name, e-mail address, title and phone number of the  
15          person that will be submitting the above documents for their company. The e-mail shall  
16          include the WSDOT contract number they will be reporting on. After receipt of this  
17          information by WSDOT, the contractor will receive an e-mail containing their username  
18          and password for the application and a link to the application. Reporting instructions are  
19          available in the application.  
20

### 21          ***Plan***

22          The Contractor shall submit an "Apprentice Utilization Plan" using the application  
23          described in "Electronic Reporting" within 30 days of execution, demonstrating how and  
24          when they intend to achieve the Apprentice Utilization Requirement. The plan shall be  
25          updated and resubmitted as appropriate as the Work progresses. The intent is to  
26          provide the Project Engineer with enough information to track progress in meeting the  
27          utilization requirements. If the Contractor is unable to demonstrate how they intend to  
28          meet the Apprentice Utilization Requirement on the Apprentice Utilization Plan they  
29          must submit Good Faith Effort documentation to the Project Engineer with their  
30          Apprentice Utilization Plan.  
31

### 32          ***Reporting***

33          The Contractor shall submit a "Statement of Apprentice /Journeyman Participation"  
34          using the application described in "Electronic Reporting" on a monthly basis. The report  
35          shall be submitted to the Project Engineer by the last working day of the subsequent  
36          month, until the Physical Completion Date. The data reported shall include the  
37          Contractor and all Subcontractors. At the Contractor's request, the Project Engineer  
38          may suspend this reporting requirement during periods of minimal or no applicable work  
39          activities on the project. Good Faith Effort documentation shall be submitted to the  
40          Project Engineer prior to the Physical Completion Date if the Contractor completes the  
41          project without meeting the Apprentice Utilization Plan.  
42

### 43          ***Contacts***

44          The Contractor may obtain information on State-approved Apprenticeship Training  
45          Programs by contacting the Department of Labor and Industries at:

46                       Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530,  
47                       Olympia, WA 98504-4530 or by phone at (360) 902-5320.  
48  
49

### 50          ***Compliance***

51          In the event that the Contractor is unable to accomplish the Apprentice Utilization  
52          Requirement, the Contractor shall demonstrate that a Good Faith Effort has been made

1 as described elsewhere in this specification. Good Faith Effort documentation shall be  
2 uploaded using the application described in "Electronic Reporting." Failure to comply  
3 with the requirements as specified may result in reduction or revocation of  
4 prequalification as allowed by WAC 468-16-190.  
5

### 6 ***Good Faith Efforts***

7 In fulfilling the Good Faith Effort, the Contractor shall perform and, when appropriate,  
8 require its Subcontractors to perform the following steps:  
9

- 10 1. Solicit Apprentice(s) from State-approved Apprenticeship Training Program(s)
- 11
- 12 2. Document the solicitation and, in the event Apprentice(s) are not available,  
13 obtain supporting documentation from the solicited program(s).
- 14
- 15 3. Demonstrate that the plan was updated as required elsewhere in this  
16 specification.
- 17
- 18 4. Provide documentation demonstrating what efforts the Contractor has taken to  
19 require Subcontractors to solicit and employ Apprentice(s).
- 20

21 In the event that the preceding steps have been followed, the Contractor may also  
22 supplement the Good Faith Efforts documentation with the following documentation:  
23

- 24 5. Submit documentation demonstrating successful Apprentice utilization on  
25 previous contracts.
- 26
- 27 6. Submit documentation indicating company wide Apprentice utilization efforts  
28 and percentages of attainment.
- 29

### 30 ***Payment***

31 Compensation for all costs involved with complying with the conditions of this  
32 specification is included in payment for the associated Contract items of work.  
33

## 34 **Forest Protection and Merchantable Timber Requirements**

### 35 ***Merchantable Timber Requirements***

36 Section 1-07.3(2) is supplemented with the following:  
37

38 (April 7, 2008)

39 This project contains merchantable timber.

40  
41  
42  
43 *Export Restrictions* - DOT Form 410-100, Purchaser Certification for Export  
44 Restricted Timber, will be included when the contract is sent to the Contractor for  
45 execution. The form shall be completed and signed by the Contractor. The  
46 Contractor shall send the original signed form and one copy of the signed form  
47 directly to the Washington State Department of Revenue at the address on the  
48 form. The Contractor shall send one signed copy along with the other documents  
49 required by Section 1-03.3 to the Contracting Agency with the executed contract.  
50

51 *State Tax Requirements* - It shall be the Contractor's responsibility to pay to the  
52 State Department of Revenue all taxes on harvested timber.

1  
2 **Environmental Regulations**  
3

4 Section 1-07.5 is supplemented with the following:  
5

6 **(September 20, 2010)**

7 ***Environmental Commitments***

8 The following Provisions summarize the requirements, in addition to those required  
9 elsewhere in the Contract, imposed upon the Contracting Agency by the various  
10 documents referenced in the Special Provision **Permits and Licenses**. Throughout the  
11 work, the Contractor shall comply with the following requirements:  
12

13 (January 7, 2013)

14 Stormwater, dewatering water, or other authorized non-stormwater discharges that  
15 has come into contact with pH modifying substances such as concrete rubble,  
16 concrete pours or amended soils, need to be maintained between 6.5 – 8.5  
17 standard units (su). If pH exceeds 8.5 su, the Contractor shall immediately  
18 discontinue work and initiate treatment to prevent discharges outside the  
19 acceptable range from occurring. All neutralization methods used shall be in  
20 accordance with the permit. Work may resume once treatment has been  
21 implemented and pH of the stormwater or authorized non-stormwater discharge is  
22 between 6.5 - 8.5 su or it can be demonstrated that high pH waters will not  
23 discharge to surface waters.  
24

25 Stormwater, dewatering water, and other authorized non-stormwater discharges are  
26 monitored weekly for compliance with the turbidity benchmark (25 nephelometric  
27 turbidity units (ntu)) and the phone reporting trigger value (250 ntu) by the  
28 Contracting Agency. When the turbidity benchmark is breached, the best  
29 management practices (BMPs) installed on-site are not working adequately and  
30 need to be adapted, maintained or more BMPs shall be installed. When the  
31 turbidity phone reporting trigger value is breached, immediate action is required in  
32 order to lower the turbidity to  $\leq 25$  ntu or to eliminate the discharge. Daily follow-up  
33 discharge samples will be collected at all locations where a discharge of 250 ntu or  
34 higher was collected unless the discharge was stopped or eliminated.  
35

36 (August 3, 2009)

37 The Contractor shall dispose of all creosoted timber, creosote piling and associated  
38 debris as shown in the Plans in accordance with current federal, state, and local  
39 regulations and provisions, and following Best Management Practices. Disposal  
40 shall be made in a landfill which meets the liner and leachate standards of the  
41 Minimum Functional Standards, Chapter 173-304 WAC. The Contractor shall  
42 provide receipts from the disposal facility to the Project Engineer. If the material is  
43 transported to a transfer station, the Contractor shall obtain documentation  
44 indicating that final disposal will comply with the standards referenced above.  
45

46 (August 3, 2009)

47 No Contractor staging areas will be allowed within \*\*\* 200 \*\*\* feet of any waters of  
48 the State including wetlands.  
49

50 (\*\*\*\*\*)

1 All equipment requiring hydraulic fluid, when conducting work within the Ordinary  
2 High Water Line (OHWL), on the bank, or within wetlands, shall use vegetable oil or  
3 other biodegradable hydraulic fluid substitute.  
4

5 All lighting shall be targeted to the roadway and not unduly contribute to light  
6 pollution in this rural area.  
7

### 8 ***Air Quality***

9

10 Section 1-07.5(4) is supplemented with the following:  
11

12 (OR February 1, 2011)

13 The Contractor shall base fugitive dust control on Best Management Practices  
14 (BMPs) set forth in the Associated General Contractors of Washington Education  
15 Foundation and Fugitive Dust Task Force Pamphlet, "Guide To Handling Fugitive  
16 Dust From Construction Projects".  
17

18 ***(August 3, 2009)***

### 19 ***Payment***

20 All costs to comply with this special provision for the environmental commitments and  
21 requirements are incidental to the contract and are the responsibility of the Contractor.  
22 The Contractor shall include all related costs in the associated bid prices of the contract.  
23

### 24 **Permits and Licenses**

25

26 Section 1-07.6 is supplemented with the following:  
27

28 (September 20, 2010)

29 The Contracting Agency has obtained the below-listed permit(s) for this project. A copy  
30 of the permit(s) is attached as an appendix for informational purposes. All contacts with  
31 the permitting agency concerning the below-listed permit(s) shall be through the  
32 Engineer. The Contractor shall obtain additional permits as necessary. All costs to  
33 obtain and comply with additional permits shall be included in the applicable bid items  
34 for the work involved. Copies of these permits are required to be onsite at all times.  
35  
36

\*\*\*

NAME OF DOCUMENT	PERMITTING AGENCY	PERMIT REFERENCE NO.
NPDES Construction Stormwater General Permit	Department of Ecology	????
Hydraulic Project Approval	Department of Fish & Wildlife	1330
Shoreline Permit, Variance, or Exemption	Pierce County	SD25-09
Compliance Implementing Agreement (2004)	Department of Ecology	

37 \*\*\*  
38  
39

### 40 **Load Limits**

41 Section 1-07.7 is supplemented with the following:  
42



(March 13, 1995)

If the sources of materials provided by the Contractor necessitates hauling over roads other than State Highways, the Contractor shall, at the Contractor's expense, make all arrangements for the use of the haul routes.

## **Requirements for Nondiscrimination**

Section 1-07.11 is supplemented with the following:

**(May 5, 2014)**

### ***Minority and Women's Business Enterprise (M/WBE) Participation***

#### **General Statement**

In accordance with the legislative findings and policies set forth in Chapter 39.19 RCW the State of Washington encourages participation in all of its contracts by M/WBE firms certified by the office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to a solicitation/invitation or as a subcontractor to a Bidder/Proposer. No preference will be included in the evaluation of bids/proposals, no minimum level of M/WBE participation shall be required as a condition for receiving an award and bids/proposals will not be rejected or considered non-responsive on that basis.

#### **Voluntary M/WBE Goals**

Voluntary numerical M/WBE participation goals shall be established for all solicitation/invitations where applicable. These goals are voluntary, but achievement of the goals is encouraged. No preference will be included in the evaluation of bids/proposals, no minimum level of M/WBE participation shall be required as a condition of award or completion of the contract work, and bids/proposals will not be rejected or considered non-responsive on that basis. Bidders may contact OMWBE at 360-753-9693 to obtain information on certified firms.

#### **Required M/WBE Participation Plan**

Prime Contractors shall submit an M/WBE Participation Plan as part of responsibility, before work begins. Although the goals contained within each Contract are voluntary, that is, award of the contract is not conditioned upon attainment of the voluntary M/WBE goals, the outreach efforts to provide M/WBEs maximum practicable opportunities are not. For M/WBE Participation Plan Drafting Guidelines, please visit: <http://www.wsdot.wa.gov/equalopportunity>

#### **Required M/WBE Reporting**

The Prime Contractor shall submit a Monthly Report of Amounts Paid to M/WBEs to the Project Engineer each month between Execution of the Contract and Physical Completion of the Contract using the application available at: <https://remoteapps.wsdot.wa.gov/mapsdata/tools/dbeparticipation>. The monthly report is due 20 calendar days following the end of the month. A monthly report shall be submitted for every month between Execution of the Contract and Physical Completion regardless of whether payments were made or work occurred. After Execution of the Contract, the Prime Contractor shall send an e-mail to DBEAdmin@wsdot.wa.gov containing the following information: the first and last name, e-mail address, title and phone number of the person that will be submitting the above documents for their company. The e-mail shall include the WSDOT contract number they will be reporting on. After receipt of this information by

1 WSDOT, the contractor will receive an e-mail containing their username and  
2 password for the application and a link to the application. Reporting instructions are  
3 available in the application.  
4

#### 5 **Non-discrimination**

6 Contractors, Bidders, and Proposers shall not create barriers to open and fair  
7 opportunities for all businesses including M/WBEs to participate in all State  
8 contracts and to obtain or compete for contracts and subcontracts as sources of  
9 supplies, equipment, construction and services. In considering offers from and  
10 doing business with subcontractors and suppliers, the Contractor shall not  
11 discriminate on the basis of race, color, creed, religion, national origin, sex, age,  
12 nationality, marital status, or the presence of any mental or physical disability in an  
13 otherwise qualified disabled person.  
14

15 The Contractor shall make the M/WBE Participation General Statement cited  
16 previously in this Special Provision a part of all subcontracts and agreements  
17 entered into as a result of this contract.  
18

#### 19 **Definitions**

20 When referred to in this contract, the terms Minority, Minority Business Enterprise  
21 (MBE), and Women's Business Enterprise (WBE) will be construed to have the  
22 following meanings:  
23

24 Minority means a person who is a citizen or lawful permanent resident of the  
25 United States and who is:

- 26
- 27 (a) Black: having origins in any of the black racial groups of Africa;
  - 28
  - 29 (b) Hispanic: of Mexican, Puerto Rican, Cuban, Central or South  
30 American, or other Spanish or Portuguese culture or origin,  
31 regardless of race;
  - 32
  - 33 (c) Asian American: having origins in any of the original peoples of the  
34 Far East, Southeast Asia, the Indian subcontinent, or the Pacific  
35 Islands; or
  - 36
  - 37 (d) American Indian or Alaskan Native: having origins in any of the  
38 original peoples of North America.  
39

40 Minority Business Enterprise, Minority-owned Business Enterprise, or MBE  
41 means a business organized for profit, performing a commercially useful  
42 function, which is owned and controlled by one or more minority individuals or  
43 minority business enterprises. Owned and controlled means a business in  
44 which one or more minorities or MBE's own at least fifty-one percent (51%), or  
45 in the case of a corporation at least fifty-one percent (51%) of the voting stock,  
46 and control at least fifty-one percent (51%) of the management and daily  
47 business operations of the business.  
48

49 M/WBE means a minority owned business enterprise, a women-owned  
50 business enterprise, and/or a combination minority and women's business  
51 enterprise certified by the Office of Minority and Women's Business  
52 Enterprises (OMWBE) of the State of Washington.

1  
2 Women's Business Enterprise, Women-owned Business Enterprise, or WBE  
3 means a business organized for profit, performing a commercially useful  
4 function, which is owned and controlled by one or more women or women's  
5 business enterprises. Owned and controlled means a business in which one  
6 or more women or WBE's own at least fifty-one percent (51%) or in the case of  
7 a corporation at least fifty-one percent (51%) of the voting stock, and control at  
8 least fifty-one percent (51%) of the management and daily business operations  
9 of the business. The women owners must be United States citizens or lawful  
10 permanent residents.

11  
12 Minority/Women's Business Enterprise means a minority owned business  
13 enterprise, a women-owned business enterprise; and/or a combination  
14 minority and women's business enterprise certified by the OMWBE of the State  
15 of Washington.

16  
17 **MBE/WBE Status**

18 A consolidated list of firms accepted as certified by OMWBE is available via the  
19 WSDOT Home Page, ([WWW.WSDOT.WA.GOV](http://WWW.WSDOT.WA.GOV)) and a hard copy is available at  
20 nominal cost from the OMWBE.

21  
22 **MBE/WBE Goals**

23 The Contracting Agency has established a voluntary goal in the amount of:

24  
25 \*\*\* Thirteen percent (13%) of the Contract total for voluntary MWBE goals \*\*\*  
26

27 **Further Information**

28 If further information is desired concerning Minority Business Enterprise/Women's  
29 Business Enterprise participation, inquiry may be directed to:

30  
31 External Civil Rights Branch  
32 Office of Equal Opportunity  
33 Washington State Department of Transportation  
34 Transportation Bldg., PO Box 47314  
35 Olympia, WA 98504-7314  
36 or telephone - (360) 705-7085  
37 Fax (360) 705-6801  
38

39 **Temporary Water Pollution/Erosion Control**

40  
41 ***Spill Prevention, Control, and Countermeasures Plan***

42  
43 Section 1-07.15(1) is supplemented with the following:

44  
45 (OR June 1, 2011)

46 The Contractor shall implement the spill prevention measures identified in the  
47 SPCC Plan before performing any of the following activities:

- 48  
49 1. Placing materials or equipment in staging or storage areas  
50 2. Refueling, washing or maintaining equipment  
51 3. Stockpiling contaminated materials  
52

1 (OR February 22, 2010)

2 Containment and cleanup efforts shall begin immediately and be completed as  
3 soon as possible, taking precedence over normal work. Cleanup shall include  
4 proper disposal of any spilled material and used cleanup materials. No emulsifiers  
5 or dispersants are to be used in waters of the State without written approval from  
6 the Department of Ecology. Concentrated waste or spilled chemicals shall be  
7 transported off the site for disposal at a facility approved by the Department of  
8 Ecology or local County Health Department.

9  
10 (OR March 23, 2011)

11 Disposal

12 Spilled waste, chemicals or petroleum products shall be transported off site for  
13 disposal at a facility approved by the Department of Ecology. The materials shall  
14 not be discharged to any sanitary sewer without approval of the local sewer  
15 authority.

## 16 17 **Utilities and Similar Facilities**

18  
19 The second paragraph of Section 1-07.17 is supplemented with the following:

20  
21 (OR March 22, 2012)

22 The Contractor shall contact the WSDOT Olympic Region Signal Superintendent to  
23 obtain the locations of all Contracting Agency-owned utilities within the project limits. To  
24 request utility locates, call 360-357-2647 during normal business hours (7:30 AM to 4:00  
25 PM).

26  
27 Section 1-07.17 is supplemented with the following:

28  
29 (April 2, 2007)

30 Locations and dimensions shown in the Plans for existing facilities are in accordance  
31 with available information obtained without uncovering, measuring, or other verification.

32  
33 The following addresses and telephone numbers of utility companies known or  
34 suspected of having facilities within the project limits are supplied for the Contractor's  
35 convenience:

36  
37 \*\*\*

38 Puget Sound Energy  
39 3130 South 38<sup>th</sup> St  
40 Tacoma, WA 98409-5615  
41 Attn: Jeff Payne  
42 Phone: 253-476-6267

43  
44 CenturyLink  
45 2510 South 84<sup>th</sup> St, Suite 18  
46 Lakewood, WA 98499  
47 Attn: Scott Slater for the North Side  
48 Phone: 253-597-5289  
49 Attn: Doug Graves for the South Side  
50 Phone: 253-597-4088

51  
52 Comcast of Washington, Inc.

1 410 Valley Ave NW, Suite 12, Bldg. C  
2 Puyallup, WA 98371  
3 Attn: Terry Britton  
4 Phone: 253-864-4293  
5

6 Tacoma Water  
7 3628 South 35<sup>th</sup> St  
8 Tacoma, WA 98409-3192  
9 Attn: Grant Whitley  
10 Phone: 253-502-8746  
11

12 AT&T  
13 11241 Willows Road NE, Suite 130  
14 Redmond, WA 98052  
15 Attn: Dan McGeough  
16 Phone: 425-896-9830\*\*\*  
17

18 (April 2, 2007)

19 Locations and dimensions shown in the Plans for existing facilities are in accordance  
20 with available information obtained without uncovering, measuring, or other verification.  
21

22 Public and private utilities, or their Contractors, will furnish all work necessary to adjust,  
23 relocate, replace, or construct their facilities unless otherwise provided for in the Plans  
24 or these Special Provisions. Such adjustment, relocation, replacement, or construction  
25 will be done during the prosecution of the work for this project. It is anticipated that  
26 utility adjustment, relocation, replacement or construction within the project limits will be  
27 completed as follows:  
28

29 \*\*\*

30 Before work platforms are removed from the bridge and after bridge construction  
31 and approach embankments are complete to a point that allows, the Contractor  
32 shall provide access to Puget Sound Energy (PSE) – Gas for 10 working days to  
33 install their new 8 inch gas line from Station DS 13+80 to Station DS 29+50  
34 including attaching to the bridge as shown in the Hanger Utility Support detail for  
35 Natural Gas Conduit in the Plans. PSE – Gas shall be given a minimum of 3  
36 weeks' notice prior to the date the Contractor will begin allowing their access for the  
37 specified construction activities.  
38

39 Tacoma Water will be sampling water at the sampling stations shown in the plans (2  
40 days), changing water services/meters from the existing water line to the new water  
41 line installed by this Contract once it has been sampled (4 days), adjusting water  
42 meter boxes (1 day), and plugging the pipe at sample stations (1 day). Tacoma  
43 Water shall be given 2 weeks' notice prior to the date the Contractor will begin  
44 allowing their access for the specified construction activities. \*\*\*  
45

46 The Contractor shall attend a mandatory utility preconstruction meeting with the  
47 Engineer, all affected Subcontractors, and all utility owners and their Contractors prior to  
48 beginning onsite work.  
49

50 The following addresses and telephone numbers of utility companies or their  
51 Contractors that will be adjusting, relocating, replacing or constructing utilities within the  
52 project limits are supplied for the Contractor's use:

\*\*\*

Don Smith  
PSE Gas  
(360) 490-7598

Gary Gates  
Tacoma Water Construction Inspection Supervisor  
Office: (253) 502-8742  
Cell: (253) 255-8434

Ryan Flynn  
Tacoma Water Design Project Engineer  
(253) 396-3111\*\*\*

## Public Convenience and Safety

### *Construction Under Traffic*

Section 1-07.23(1) is supplemented with the following:

(\*\*\*\*\*)

There shall be no restrictions or interruptions to traffic on the day prior to a holiday or holiday weekend through the last day of the holiday or holiday weekend.

Lane restrictions shall be held to a minimum time and length needed for each operation. If the Project Engineer determines that the lane restrictions are causing congestion, the Contractor will be required to open all lanes to traffic until the congestion is eliminated.

All work activities that require vehicles 10,000 GVW or greater to enter or exit the work area shall be required to use lane restriction and associated work hours. Traffic control vehicles are excluded from the gross vehicle weight requirement.

### **Lane, Ramp, and Roadway Closures**

Lane restrictions will be permitted during the following hours:

#### **State Route 162**

Alternating one way flagger control:

Mon	8:00pm	to	Tues	4:00am
Tues	8:00pm	to	Wed	4:00am
Wed	9:00pm	to	Thurs	4:00am
Thurs	9:00pm	to	Fri	4:00am
Fri	9:00pm	to	Sat	4:00am

Traffic Stops for Girder setting:

Mon	11:00pm	to	Tues	2:00am
Tues	11:00pm	to	Wed	2:00am
Wed	11:00pm	to	Thurs	2:00am
Thurs	11:00pm	to	Fri	2:00am

Fri 11:00pm to Sat 2:00am

Traffic Stops for Tree Falling:

Mon	10:00am	to	Mon	2:00pm
Tues	10:00am	to	Tues	2:00pm
Wed	10:00am	to	Wed	2:00pm
Thurs	10:00am	to	Thurs	2:00pm
Fri	10:00am	to	Fri	2:00pm

Short term Traffic Stops for Ingress/Egress:

Mon	8:00am	to	Mon	3:00pm
Tues	8:00am	to	Tues	3:00pm
Wed	8:00am	to	Wed	3:00pm
Thurs	8:00am	to	Thurs	3:00pm
Fri	8:00am	to	Fri	3:00pm

Switch Over Weekend - One Weekend Only

Continuous alternating one way flagging will be allowed for the following hours:

Fri 9:00pm to Mon 4:00am

Should high volume hours differ from those specified, as determined by the Project Engineer, the Contractor will be required to adjust the hours of work accordingly. Exceptions to these restrictions may be considered by the Project Engineer on a case by case basis following a written request by the Contractor.

Special events that generate increased traffic volumes through the work area may occur during the life of this project. Lane restrictions may be denied if severe traffic congestion is expected.

Miscellaneous scheduled special events are as follows, and typically occur during the same period each year:

City of Orting

Summerfest first weekend in August

Red Hat Days first weekend in October

Pumpkin Fest second weekend in October

Home for the holidays first weekend in December

Western Washington Fair Grounds

Washington State Fair first weekend after Labor Day for 2 weeks

Spring Fair third weekend in April Thursday – Sunday

Miscellaneous

US Open Golf Tournament at Chambers Bay Golf Course – June 18-21, 2015, with possible higher congestion June 12-23, 2015.

There shall be no delay to medical, fire, police, or other emergency vehicles with flashing lights or sirens. The Contractor shall alert all flaggers and personnel of this requirement.

(January 2, 2012)

### **Work Zone Clear Zone**

The Work Zone Clear Zone (WZCZ) applies during working and nonworking hours. The WZCZ applies only to temporary roadside objects introduced by the Contractor's operations and does not apply to preexisting conditions or permanent Work. Those work operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements.

During nonworking hours equipment or materials shall not be within the WZCZ unless they are protected by permanent guardrail or temporary concrete barrier. The use of temporary concrete barrier shall be permitted only if the Engineer approves the installation and location.

During actual hours of work, unless protected as described above, only materials absolutely necessary to construction shall be within the WZCZ and only construction vehicles absolutely necessary to construction shall be allowed within the WZCZ or allowed to stop or park on the shoulder of the roadway.

The Contractor's nonessential vehicles and employees private vehicles shall not be permitted to park within the WZCZ at any time unless protected as described above.

Deviation from the above requirements shall not occur unless the Contractor has requested the deviation in writing and the Engineer has provided written approval.

Minimum WZCZ distances are measured from the edge of traveled way and will be determined as follows:

<b>Regulatory Posted Speed</b>	<b>Distance From Traveled Way (Feet)</b>
35 mph or less	10 *
40 mph	15
45 to 55 mph	20
60 mph or greater	30

\* or 2-feet beyond the outside edge of sidewalk

### **Minimum Work Zone Clear Zone Distance**

## **Prosecution and Progress**

### **Progress Schedule**

Section 1-08.3 is supplemented with the following:



1 (OR October 7, 2003)

2 **Weekly Meeting**

3 The Contractor shall attend weekly meetings with the Project Engineer's office, at a  
4 mutually agreed upon time and location, to discuss changes in the proposed order of  
5 work, construction delays, or conditions that may affect the progress of Work.

6  
7 The attendees shall include but not be limited to Project Manager(s), Superintendent(s),  
8 key personnel, and when necessary, subcontractor personnel.  
9

10 **Prosecution of Work**

11  
12 Section 1-08.4 is supplemented with the following:

13  
14 (\*\*\*\*\*)

15 There shall be no onsite Work of any noise wall component prior to April 15, 2015.  
16 Removal of trees will be allowed prior to the installation of high visibility silt fence in the  
17 area of the noise walls, Station DS 9+83.15 left to Station DS 15+15.30 left. Work in  
18 this area, including installing high visibility silt fence and any clearing, grubbing and  
19 grading activities, shall not begin more than 10 working days prior to on site noise wall  
20 construction.

21  
22 Removal of trees will be allowed prior to installation of high visibility silt fence in the  
23 "Clearing Only" area detailed in the Plans near Pier 1 and Pier 2.  
24

25 There shall be no Work, including installing high visibility silt fence and any clearing,  
26 grubbing, embankment construction, and grading activities, from Station DS 26+20 to  
27 Station DS 35+40 prior to June 1, 2015.  
28

29 **Switch Over Weekend**

30 One weekend during the Contract will be available allowing the Contractor continuous  
31 one way alternating traffic for the hours specified in the Special Provision **PUBLIC**  
32 **CONVENIENCE AND SAFETY** to switch traffic from the existing roadway and bridge to  
33 the new roadway and bridge.  
34

35 The Contractor shall notify the Engineer of the switch over weekend date six weeks  
36 prior to the switch over weekend.  
37

38 All road approaches shall be maintained before, during, and after the switch over  
39 weekend.  
40

41 Prior to opening the new roadway to two-way traffic, the following shall be complete:

- 42  
43
  - 44 • All HMA preleveling and paving except the final 0.15' lift (final lift is optional)
  - 45 • Induction loop operating (prior to final lift)
  - 46 • All road approaches accessible and at the elevation of the current lift of  
47 HMA on SR 162
  - 48 • Installation of guardrail except Station DS 17+63.8 (61.4' RT) to 18+82.7  
49 (20' RT)
  - 50 • Installation of temporary concrete barrier at DS 18+20.2 (17' RT) to 18+82.7  
51 (20' RT) and temporary impact attenuator at Station DS 18+20.2 (17' RT)
  - All temporary pavement marking

1  
2 **Time for Completion**  
3

4 Section 1-08.5 is supplemented with the following:  
5

6 (March 13, 1995)

7 This project shall be physically completed within \*\*\* 180 \*\*\* working days.  
8

9 **Suspension of Work**  
10

11 Section 1-08.6 is supplemented with the following:  
12

13 (OR August 28, 2012)

14 Contract time may be suspended for the curing period of in-place pavement material  
15 (HMA, fogseal and/or Portland Cement Concrete) prior to Type D Methyl Methacrylate  
16 pavement marking installation; see Section 8-22.3(2).  
17

18 If the approved Progress Schedule indicates any portion of the curing period of the in-  
19 place material is shown to be a critical path activity, the Contractor may be granted a  
20 Suspension at the point the cure becomes critical.  
21

22 Charging of contract time will resume once the in-place material has achieved the  
23 required cure as specified in Section 8-22.3(2).  
24

25 **Liquidated Damages**  
26

27 Section 1-08.9 is supplemented with the following:  
28

29 (\*\*\*\*\*)

30 In addition to the liquidated damages assessed for failure to complete the project within  
31 the contract time set forth in the Special Provision **TIME FOR COMPLETION**, the  
32 Contracting Agency will assess liquidated damages for failure to open all lanes to traffic  
33 as required by the Special Provision **CONSTRUCTION UNDER TRAFFIC** as follows:  
34

35 **\$800** liquidated damages per fifteen minutes for each fifteen-minute period  
36 (prorated to the nearest five minutes) that all lanes of SR 162 are not open by the  
37 specified opening times following a lane closure requiring alternating one way  
38 traffic.  
39

40 **\$1200** liquidated damages per fifteen minutes for each fifteen-minute period  
41 (prorated to the nearest five minutes) that all lanes of SR 162 are not open by the  
42 specified opening times following the switch over weekend.  
43

44 **\$3200** liquidated damages per fifteen minutes for each fifteen-minute period  
45 (prorated to the nearest five minutes) that a daytime traffic stop on SR 162 lasts  
46 more than the maximum amount time specified in the Contract for that type of  
47 daytime traffic stop.  
48

49 The Contractor agrees to pay and authorizes the Project Engineer to deduct from  
50 money due to or coming due to the Contractor the above-liquidated damages for failure  
51 to complete the work as specified.  
52

## **Measurement and Payment**

### **Payment For Material On Hand**

The last paragraph of Section 1-09.8 is revised to read:

(August 3, 2009)

The Contracting Agency will not pay for material on hand when the invoice cost is less than \$2,000. As materials are used in the work, credits equaling the partial payments for them will be taken on future estimates. Each month, no later than the estimate due date, the Contractor shall submit a letter to the Project Engineer that clearly states: 1) the amount originally paid on the invoice (or other record of production cost) for the items on hand, 2) the dollar amount of the material incorporated into each of the various work items for the month, and 3) the amount that should be retained in material on hand items. If work is performed on the items and the Contractor does not submit a letter, all of the previous material on hand payment will be deducted on the estimate. Partial payment for materials on hand shall not constitute acceptance. Any material will be rejected if found to be faulty even if partial payment for it has been made.

### **Payments**

Section 1-09.9 is supplemented with the following:

(March 13, 1995)

The quantity of the following items to be paid for on this project shall be the quantity shown in the Proposal, unless changes are made in accordance with Section 1-04.4 which affect this quantity. The quantity shown in the Proposal will be adjusted by the amount of the change and will be paid for as specified in Section 1-04.4.

\*\*\* "St. Reinf. Bar For Bridge"

"Conc. Class 4000 For Bridge" \*\*\*

The quantities in the Proposal are listed only for the convenience of the Contractor in determining the volume of work involved and are not guaranteed to be accurate. The prospective bidders shall verify these quantities before submitting a bid. No adjustments other than for approved changes will be made in the quantity even though the actual quantities required may deviate from those listed.

The unit contract price for these items shall be full pay to construct and complete this portion of the work.

### **Temporary Traffic Control**

#### **Traffic Control Management**

##### ***General***

Section 1-10.2(1) is supplemented with the following:

(December 1, 2008)

1 Only training with WSDOT TCS card and WSDOT training curriculum is recognized  
2 in the State of Washington. The Traffic Control Supervisor shall be certified by one  
3 of the following:  
4

5 The Northwest Laborers-Employers Training Trust  
6 27055 Ohio Ave.  
7 Kingston, WA 98346  
8 (360) 297-3035  
9

10 Evergreen Safety Council  
11 401 Pontius Ave. N.  
12 Seattle, WA 98109  
13 1-800-521-0778 or  
14 (206) 382-4090  
15

16 The American Traffic Safety Services Association  
17 15 Riverside Parkway, Suite 100  
18 Fredericksburg, Virginia 22406-1022  
19 Training Dept. Toll Free (877) 642-4637  
20 Phone: (540) 368-1701  
21

## 22 **Traffic Control Labor, Procedures and Devices**

### 23 ***Traffic Control Labor***

#### 24 **Flaggers and Spotters**

25  
26 Section 1-10.3(1)A is supplemented with the following:  
27

28  
29  
30 (\*\*\*\*\*)

31 Traffic stops during daytime hours for tree falling shall be five minutes or less.  
32 Short term traffic stops during daytime hours for truck ingress/egress shall be  
33 one minute or less.  
34

35 Traffic stops during nighttime hours for girder setting shall be fifteen minutes or  
36 less.  
37

38 (\*\*\*\*\*)

39 Additional Flaggers shall meet all the requirements of 1-10.3(1)A.  
40

### 41 ***Traffic Control Procedures***

#### 42 **One-Way Traffic Control**

43  
44 Section 1-10.3(2)A is supplemented with the following:  
45

46  
47 (\*\*\*\*\*)

48 The total delay for any vehicle due to alternating one way flagging operations  
49 shall be fifteen minutes or less through the work area.  
50

### 51 ***Traffic Control Devices***

52

Section 1-10.3(3) is supplemented with the following:

(\*\*\*\*\*)

Additional Portable Changeable Message Sign shall meet all the requirements of 1-10.3(3)C.

## Measurement

### ***Reinstating Unit Items With Lump Sum Traffic Control***

Section 1-10.4(3) is supplemented with the following:

(August 2, 2004)

The bid proposal contains the item "Project Temporary Traffic Control," lump sum and the additional temporary traffic control items listed below. The provisions of Section 1-10.4(1), Section 1-10.4(3), and Section 1-10.5(3) shall apply.

\*\*\* Additional Flaggers, force account

Additional Portable Changeable Message Sign, force account \*\*\*

## Payment

### ***Lump Sum Bid for Project (No Unit Items)***

Section 1-10.5(1) is supplemented with the following:

(\*\*\*\*\*)

All traffic control required for all onsite Work to be completed during the Contract by PSE Gas and Tacoma Water personnel as specified in the Special Provision **UTILITIES AND SIMILAR FACILITIES** shall be provided by the Contractor and all costs shall be included in the lump sum price for "Project Temporary Traffic Control".

### ***Item Bids with Lump Sum for Incidentals***

Section 1-10.5(2) is supplemented with the following:

(\*\*\*\*\*)

"Additional Flaggers," by force account.

All costs for additional flagging, equipment and materials not shown in the Plans, as directed by the Project Engineer, and only during the switchover weekend, will be paid for by force account as specified in Section 1-09.6. To provide a common Proposal for all Bidders, the Contracting Agency has entered the amount in the Proposal to become part of the total bid.

"Additional Portable Changeable Message Sign," by force account

All costs for providing personnel and equipment necessary to provide additional portable changeable message signs not shown in the Plans, as directed by the Project Engineer, and only leading up to or during the switchover weekend, will be paid for by force account as specified in Section 1-09.6. To provide a common Proposal for all Bidders, the Contracting Agency has entered the amount in the Proposal to become part of the total bid.

**Division 2  
Earthwork**

**Clearing, Grubbing, and Roadside Cleanup**

**Description**

Section 2-01.1 is supplemented with the following:

(\*\*\*\*\*)

This Work shall consist of limbing specified trees removed during the clearing and grubbing operation and placing the trunks on private property adjacent to the right of way.

**Construction Requirements**

Section 2-01.3 is supplemented with the following:

(\*\*\*\*\*)

Within the Right of Entry area from Station DS 9+83.89 (52.15' LT) to Station DS 15+15.30 ( 52.93' LT), all holes created by tree and stump removal shall be filled and compacted with topsoil and all disturbed ground shall be graded to the elevations of the surrounding ground. Except for trees and stumps designated to be removed, any vegetation disturbed by the Contractor's operation in the right of entry area shall be replaced in kind by the Contractor at no additional expense to the Contracting Agency.

The trunks from the following 46 trees within the clearing and grubbing limits between Station DS 18+00 and Station DS 20+46 shall become the property of the adjacent property owner (to the left of centerline) after they have been cleared by the Contractor during the clearing and grubbing operation:

Approx. Diam.	Quantity
Under 12"	27 Each
12" - 17"	14 Each
18" - 23"	2 Each
24" - 30"	1 Each
Approx 60"	2 Each

All specified trees are marked on the trunk approximately 6 feet up on the back side (away from centerline) with a painted orange dot. The trunks shall be thoroughly limbed, cut into 40 foot sections and placed between 5' and 20' outside and parallel to the right of way line between Station DS 16+50 and Station DS 19+00. All debris from limbing and the stumps/root balls shall remain the property of the Contractor for disposal off the project.

Five of the large fir trees (24" or greater diameter) to be removed from the clearing and grubbing area from Station DS 26+20 to Station DS 35+40 shall be removed with full root wad attached to 30 feet of the trunk. After completion of final backfill/grading of abutment and wingwalls at Pier 1, these five trees with root wads shall be placed as directed by the Engineer between Station DS 19+35 (20' LT to the east right of way line) and Station DS 20+25 (20' LT to the east right of way line). If it is necessary to store

these trees from the time between removal (during clearing and grubbing) and placement in their final location, the Contractor shall store them outside of work zone clear zone until the site is ready for placement.

## Payment

Section 2-01.5 is supplemented with the following:

(\*\*\*\*\*)

The unit Contract price per acre for "Clearing and Grubbing" shall include all costs for backfilling holes created by tree and stump removal and grading of disturbed ground within the Right of Entry area, and limbing, cutting into sections, placing tree trunks on adjacent property as specified, and removing 5 trees with root wads attached, transporting, storing, and placing them in the specified location.

## Removal of Structures and Obstructions

### Construction Requirements

Section 2-02.3 is supplemented with the following:

**(February 17, 1998)**

### **Removal of Obstructions**

\*\*\*

The following items shall be removed and disposed of:

<u>Description</u>	<u>Approx. Location</u>	<u>Approx. Quantity</u>
Guide Post	DS 18+85 to DS 21+79 (25' to 75' Rt)	4
Raised Pavement Marking	All HMA Prelevel Areas	15
Concrete Barricade	DS 18+40 (73' Rt)	2
Yard Lights with Foundations	DS 14+90(36' LT) & 15+07 (34' LT)	2
<u>Description</u>	<u>Approx. Location</u>	<u>Approx. Length</u>
4' Wood Fence	DS 9+81 (41' Lt) to DS 10+71 (47' Lt)	92'
6' Wood Fence	DS 12+50 (43' Lt) to DS 13+09 (38' Lt)	79'
6' Wood Fence	DS 13+22 (37' Lt) to DS 13+57 (46' Lt)	60'
4' Wood Fence	DS 13+57 (46' Lt) to DS 14+88 (44' Lt)	132'
4' Masonry Sign	DS 14+88 (44' Lt) to DS 15+12 (44' Lt)	25'
4"x4" Lumber Curb	DS 14+88 (34' Lt) to DS 15+12 (34' Lt)	23'
5' Chain Link Fence	DS 21+51 (21' Rt) to DS 24+88 (37' Lt)	385'
4"x4" Lumber Under Fence	DS 21+51 (21' Rt) to DS 24+88 (37' Lt)	385'
5' Chain Link Gate	DS 24+88 (37' Lt) to DS 25+04 (36' Lt)	16'
5' Chain Link Fence	DS 25+04 (36' Lt) to DS 25+43 (55.4' Lt)	92'
4"x4" Lumber Under Fence	DS 25+04 (36' Lt) to DS 25+43 (55.4' Lt)	92'
Cable Rail / Wood Posts	DS 21+77 (31' Rt) to DS 25+10 (17' Rt)	330'
5' Chain Link Fence	DS 27+27 (9' Rt) to DS 27+26 (CL)	9'
5' Chain Link Gate	DS 27+26 (Centerline)	16'
5' Chain Link Gate	DS 27+22 (18' Lt)	16'

1 All abutting residential properties that are secured by fence prior to commencement  
2 of any construction work on the project shall remain secured at all times during  
3 construction except as follows:  
4

5 4' & 6' Wood Fence – 5 working days' notice shall be given to the Project  
6 Engineer to allow for notification of the abutting residents of the dates when  
7 tree removal and installation of wire backed silt fence will begin and is  
8 expected to be complete. If gaps are left at existing fences or gates to remain  
9 after wire back silt fence is installed, the Contractor shall provide secure  
10 temporary fencing to fill the gaps/secure the abutting properties at no  
11 additional expense to the Contracting Agency. If temporary fencing is used at  
12 these locations, it shall become the property of the State and removed by the  
13 State after the completion of the project. The existing chain link fence that  
14 encroaches approximately 1.8 feet into the Construction Access and  
15 Maintenance Easement at Station DS 13+56 shall remain in place. If this  
16 chain link fence is damaged as part of the Contractor's operation, it shall be  
17 repaired or replaced at no additional expense to the Contracting Agency.  
18

19 5' Chain Link Fence and Gates – The property abutting the chain link fence  
20 and gate shall remain secure at all times. Prior to removal of the chain link  
21 fence, gate, and 4"x4" lumber under the fence, the new chain link fence and  
22 gate shall be installed.  
23

24 Wood post cable rail removal shall include all posts (25), cable rail, and support  
25 timbers at both ends. The posts and support timbers likely contain creosote.  
26

27 Each concrete barricade is a 12 ½ foot section of concrete traffic barrier. Concrete  
28 barricades shall remain in place until the Contractor's grading/embankment  
29 operation at their pre-construction location necessitates their relocation at which  
30 time they shall be stored on the project outside the work zone clear zone. Upon  
31 completion of final grading/embankment at this location, the concrete barricade  
32 shall be placed back in their approximate pre-construction location as directed by  
33 the Project Engineer.  
34

35 The two yard lights with concrete foundations are approximately 15" diameter and  
36 18" deep. They shall be removed and disposed of off the project site. These have  
37 been tested and determined that electricity to both lights has been disconnected.  
38 Any wiring attached to the lights/foundations shall be cut off at the wire's deepest  
39 point of the resultant hole during the removal operation. The remaining wire shall  
40 remain in the ground and be buried as a result of the required backfilling of the  
41 holes. \*\*\*  
42

### 43 ***Removal of Pavement, Sidewalks, Curbs, and Gutters***

44

45 Section 2-02.3(3) is supplemented with the following:  
46

47 (September 8, 1997)

48 The approximate thickness of the \*\*\* asphalt concrete pavement combined with the  
49 underlying portland cement concrete \*\*\* pavement is \*\*\*1.5 feet \*\*\*.  
50

### 51 **Measurement**

52



1 Section 2-02.4 is supplemented with the following:

2  
3 (September 8, 1997)

4 Pavement removal will be measured by the square yard.

5  
6 **Payment**

7  
8 Section 2-02.5 is supplemented with the following:

9  
10 (September 30, 1996)

11 "Removing \*\*\* Asphalt and Portland Cement Conc. \*\*\* Pavement", per square yard.

12  
13 **Roadway Excavation and Embankment**

14  
15 **Construction Requirements**

16  
17 ***Disposal Of Surplus Material***

18  
19 **General**

20  
21 Section 2-03.3(7)A is supplemented with the following:

22  
23 (OR June 21, 2012)

24 Roadway excavation material is not suitable for constructing embankments.

25 Roadway excavation shall be removed from the project.

26  
27 **Structure Excavation**

28  
29 **Construction Requirements**

30  
31 ***Construction Requirements, Structure Excavation, Class A***

32  
33 **Shoring And Cofferdams**

34  
35 Section 2-09.3(3)D is supplemented with the following:

36  
37 (March 13, 1995)

38 The Contractor shall protect the existing pavement from damage due to the  
39 Contractor's operations and shall shore all excavation adjacent to the existing  
40 pavement.

41  
42 **Division 5**  
43 **Surface Treatments and Pavements**

44  
45 **Hot Mix Asphalt**

46  
47 **Materials**

48  
49 Section 5-04.2 is revised to read:

50  
51 (January 6, 2014)

1 Materials shall meet the requirements of the following sections:

2		
3	Asphalt Binder	9-02.1(4)
4	Cationic Emulsified Asphalt	9-02.1(6)
5	Anti-Stripping Additive	9-02.4
6	Warm Mix Asphalt Additive	9-02.5
7	Aggregates	9-03.8
8	Recycled Asphalt Pavement	9-03.8(3)B
9	Mineral Filler	9-03.8(5)
10	Recycled Material	9-03.21
11		

12 The Contract documents may establish that the various mineral materials required for  
13 the manufacture of HMA will be furnished in whole or in part by the Contracting Agency.  
14 If the documents do not establish the furnishing of any of these mineral materials by the  
15 Contracting Agency, the Contractor shall be required to furnish such materials in the  
16 amounts required for the designated mix. Mineral materials include coarse and fine  
17 aggregates, and mineral filler.

18  
19 The Contractor may choose to utilize recycled asphalt pavement (RAP) or reclaimed  
20 asphalt shingles (RAS) in the production of HMA. The RAP may be from pavements  
21 removed under the Contract, if any, or pavement material from an existing stockpile.  
22 The RAS may be from reclaimed shingles.

23  
24 If greater than 20 percent of the total weight of HMA is RAP or any amount of RAS is  
25 utilized in the production of HMA, the Contractor shall sample and test the RAP and  
26 RAS during stockpile construction in accordance with WSDOT FOP for AASHTO T 308  
27 for the determination of the asphalt binder content and WSDOT FOP for  
28 WAQTC/AASHTO T 27/T 11 for the gradation of the aggregates. The RAP shall be  
29 sampled and tested at a frequency of one sample for every 1,000 tons produced and  
30 not less than ten samples per project. The RAS shall be sampled and tested at a  
31 frequency of one sample for every 100 tons produced and not less than ten samples per  
32 project. The asphalt content and gradation test data shall be reported to the Contracting  
33 Agency prior to or when submitting the mix design. If utilized, the amount of RAS shall  
34 not exceed 5-percent of the total weight of the HMA. The Contractor shall include the  
35 RAP and RAS as part of the mix design as defined in these Specifications.

36  
37 The grade of asphalt binder shall be as required by the Contract. Blending of asphalt  
38 binder from different sources is not permitted. For HMA with either a RAP percentage  
39 greater than 20 percent of the total weight or any amount of RAS the actual grade of the  
40 final blended asphalt binder (after inclusion of RAP, RAS, new asphalt binder and  
41 recycling agent) shall not exceed the grade of asphalt binder required by the Contract  
42 and comply with the requirements of Section 9-02.1(4). The actual grade of the new  
43 binder and the final blended asphalt binder shall be verified in accordance with AASHTO  
44 R 29 and reported to the Contracting Agency when submitting the mix design for  
45 evaluation.

46  
47 The Contractor may use warm mix asphalt (WMA) processes in the production of HMA  
48 with a RAP percentage of 20 percent of the total weight or less. WMA processes shall  
49 not be used in the production of HMA with a RAP percentage greater than 20 percent of  
50 the total weight or any amount of RAS. The Contractor shall submit to the Engineer for  
51 approval the process that is proposed and how it will be used in the manufacture of  
52 HMA.

When the Contracting Agency provides aggregates or provides a source for the production of aggregates, the Contract Provisions will establish the approximate percentage of asphalt binder required in the mixture for each class of HMA.

Production of aggregates shall comply with the requirements of Section 3-01.

Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

Section 5-04.2 is supplemented with the following:

**(January 3, 2011)**

**ESAL's**

The number of ESAL's for the design and acceptance of the HMA shall be \*\*\*  
4.7 \*\*\* million.

**Asphalt Material, General**

Section 9-02.1 is supplemented with the following:

(August 4, 2014)

The recycling agent used to rejuvenate the recovered asphalt binder from recycled asphalt pavement (RAP) and reclaimed asphalt shingles (RAS) shall meet the specifications in Table 1:

Table 1		RA 1		RA 5		RA 25	
Test	Test Methods	Min.	Max.	Min.	Max.	Min.	Max.
Viscosity @ 140°F cSt	ASTM D 2170 or D 2171, AASHTO T 201 or T 202	50	150	200	800	1000	4000
Flashpoint COC, °F	ASTM D 92, AASHTO T 48	400		400		400	
Saturates, Wt. %	ASTM D 2007		30		30		30
Specific Gravity	ASTM D 70 or 1298 AASHTO T 228	Report		Report		Report	
Tests on Residue from RTFO	ASTM D 2872 AASHTO T 240						
Viscosity Ratio <sup>1</sup>			3		3		3
Mass Change ± %			4		4		4
<sup>1</sup> Viscosity Ratio = $\frac{\text{RTFO Viscosity @ 140°F, cSt}}{\text{Original Viscosity @ 140°F, cSt}}$							

**Performance Graded Asphalt Binder (PGAB)**  
Section 9-02.1(4) is supplemented with the following:

(January 6, 2014)

For HMA with either a RAP percentage greater than 20 percent of the total weight or any amount of RAS the following shall apply: 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 PGAB requirements of AASHTO M 320 Table 1 for the grade of asphalt binder specified by the Contract.

**HMA Test Requirements**

Section 9-03.8(2) after the first paragraph is revised to read:

(March 3, 2014)

The mix design shall produce HMA mixtures when combined with RAP, RAS, coarse and fine aggregate within the limits set forth in Section 9-03.8(6) and mixed in the laboratory with the designated grade of asphalt binder, using the Superpave gyratory compactor in accordance with WSDOT FOP for AASHTO T 312, and at the required gyrations for N initial, N design, and N maximum with the following properties:

Mix Criteria	HMA Class							
	¾ inch		½ inch		¾ inch		1 inch	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Voids in Mineral Aggregate (VMA), %	15.0		14.0		13.0		12.0	
Voids Filled With Asphalt (VFA), %								
ESAL's (millions)	VFA							
< 0.3	70	80	70	80	70	80	67	80
0.3 to < 3	65	78	65	78	65	78	65	78
3 to < 10	73	76	65	75	65	75	65	75
10 to < 30	73	76	65	75	65	75	65	75
≥ 30	73	76	65	75	65	75	65	75
Dust/Asphalt Ratio	0.6	1.6	0.6	1.6	0.6	1.6	0.6	1.6
Hamburg Wheel-Track Testing, WSDOT FOP for AASHTO T 324 Rut Depth (mm) @15,000 Passes		10		10		10		10
Hamburg Wheel-Track Testing, WSDOT FOP for AASHTO T324 Number of Passes with no Stripping Inflection Point	15,000		15,000		15,000		15,000	
Indirect Tensile(IDT) Strength (psi) of		175		175		175		175

Bituminous Materials WSDOT FOP for ASTM D 6931								
--	--	--	--	--	--	--	--	--

	ESAL's (millions)	N initial	N design	N Max.
% Gmm	< 0.3	≤ 91.5	96.0	≤ 98.0
	0.3 to < 3	≤ 90.5	96.0	≤ 98.0
	≥ 3	≤ 89.0	96.0	≤ 98.0
Gyratory Compaction (number of gyrations)	< 0.3	6	50	75
	0.3 to < 3	7	75	115
	3 to < 30	8	100	160
	≥ 30	9	125	205

The mix criteria VMA and VFA only apply to HMA accepted by statistical evaluation.

The mix criteria for Hamburg Wheel-Track Testing and Indirect Tensile Strength of Bituminous Materials do not apply to HMA accepted by commercial evaluation.

When material is being produced and stockpiled for use on a specific contract or for a future contract, the uncompacted void content, fracture, and sand equivalent requirements shall apply at the time of stockpiling. When material is used from a stockpile that has not been tested as provided above, the Specifications for uncompacted void content, fracture, and sand equivalent shall apply at the time of its introduction to the cold feed of the mixing plant.

### ***Gradation – Recycled Asphalt Pavement and Mineral Aggregate***

Section 9-03.8(3)B is supplemented with the following:

(August 6, 2012)

For HMA with a RAP percentage greater than 20 percent of the total weight the RAP shall be processed to ensure that 100 percent of the material passes a sieve twice the size of the maximum aggregate size for the class of mix to be produced.

When RAS is used in the production of HMA the RAS shall be milled, crushed or processed to ensure that 100 percent of the material passes the ½ inch sieve. Extraneous materials in RAS such as metals, glass, rubber, soil, brick, tars, paper, wood and plastic shall not exceed 2.0 percent by mass as determined on material retained on the No. 4 sieve.

### ***General Requirements***

Section 9-03.21(1) is supplemented with the following:

(August 2, 2012)

Reclaimed asphalt shingles samples shall contain less than the maximum percentage of asbestos fibers based on testing procedures and frequencies established in conjunction with the specifying jurisdiction and state or federal environmental regulatory agencies.

## **Construction Requirements**

### ***HMA Mixing Plant***

Section 5-04.3(1) is supplemented with the following:

**(November 12, 2012)**

- 6. Equipment for Processing RAP and RAS.** When producing HMA for mix designs with greater than 20 percent of the total weight RAP or any amount of RAS the HMA plant shall be equipped with screens or a lump breaker to eliminate oversize RAP/RAS particles from entering the pug mill or drum mixer.

### ***Hot Mix Asphalt Pavers***

#### **Material Transfer Device/Vehicle**

Section 5-04.3(3)A including title is revised to read:

**(August 1, 2011)**

#### **Material Transfer Vehicle**

Direct transfer of HMA from the hauling equipment to the paving machine will not be allowed in the top 0.30-feet of the pavement section of hot mix asphalt (HMA) used in traffic lanes with a depth of 0.08-feet or greater. A material transfer vehicle (MTV) shall be used to deliver the HMA from the hauling equipment to the paving machine. HMA placed in irregularly shaped and minor areas such as road approaches, tapers, and turn lanes are excluded from this requirement.

The MTV shall mix the HMA after delivery by the hauling equipment and prior to lay down by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture

### ***Preparation of Aggregates***

Section 5-04.3(7) is revised to read:

**(August 6, 2012)**

The aggregates, RAP and RAS shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate, RAP and RAS. The Contractor may uniformly blend fine aggregate or RAP with the RAS as a method of preventing the agglomeration of RAS particles. The aggregates, RAP and RAS shall be removed from stockpile(s) in a manner to ensure a minimum of segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

#### **Mix Design**

##### **General**

Section 5-04.3(7)A1 is supplemented with the following:

(August 4, 2014)

For mix designs with greater than 20 percent of the total weight RAP or any amount of RAS the Contractor shall develop a mix design including RAP, RAS, recycling agent and new asphalt binder. The mix design aggregate structure, RAP, RAS, recycling agent and new asphalt binder content shall be determined in accordance with Materials Manual WSDOT Standard Operating Procedure No. 732 and meet the requirements of Sections 9-03.8(2) and 9-03.8(6). The total quantity of asphalt binder contributed from the RAP and RAS shall not exceed 40 percent of the total asphalt binder content of the HMA. Once the RAP and RAS stockpiles have been constructed the Contractor shall extract, recover and test the asphalt residue from the RAP and RAS stockpiles to determine the percent of recycling agent and/or grade of new asphalt binder needed to meet the grade of asphalt binder required by the contract. The asphalt extraction testing shall be performed in accordance with AASHTO T 164 or ASTM D 2172 using reagent grade trichloroethylene. The asphalt recovery shall be performed in accordance with AASHTO R 59, or ASTM D 1856. The recovered asphalt residue shall be tested in accordance with AASHTO R 29 to determine the asphalt binder grade in accordance with Section 9-02.1(4). Once the recovered asphalt binder grade is determined the percent of recycling agent and/or grade of new asphalt binder shall be determined in accordance with ASTM D 4887. The final blend of recycling agent, recovered and new asphalt shall be tested in accordance with AASHTO R 29 to confirm that it meets the grade of asphalt binder required by the contract in accordance with Section 9-02.1(4). All recovered and blended asphalt binder test data shall be reported to the Contracting Agency prior to or when submitting the mix design for evaluation.

The following two sentences are inserted after the first sentence in Section 5-04.3(7)A1:

(March 3, 2014)

For HMA of the same class, asphalt binder grade and number of gyrations the Contractor may submit a maximum of two mix designs in a calendar year. If the Contracting Agency's evaluation of a mix design does not meet contract requirements, such mix design will not count toward the maximum of two per calendar year.

#### **Statistical or Nonstatistical Evaluation**

Section 5-04.3(7)A2 is revised to read:

(March 3, 2014)

Mix designs shall be submitted to the Project Engineer on WSDOT Form 350-042. For a mix design that was originally developed for another WSDOT contract, the Contractor shall also submit WSDOT Form 350-041 and include all changes to the job mix formula that have been approved on other contracts.

1 The Contractor shall have the option to submit a mix design either with or  
2 without test data for Hamburg Wheel-Track Testing and Indirect Tensile  
3 Strength of Bituminous Materials as follows:  
4

- 5 1. For a mix design that the Contractor provides Hamburg Wheel-  
6 Track Testing and Indirect Tensile Strength of Bituminous  
7 Materials test results the Contractor shall include the test data file  
8 generated by the wheel-tracking device with the mix design  
9 submittal.
- 10 2. For each mix design, including mix designs that are resubmitted,  
11 that does not include the test data for Hamburg Wheel-Track  
12 Testing and Indirect Tensile Strength of Bituminous Materials the  
13 Contracting Agency will deduct \$2,500 from any monies due or  
14 that may come due the Contractor under the Contract.  
15

16 For mix designs with 20 percent or less total weight RAP and no RAS, the  
17 Contractor shall submit representative samples of the mineral materials  
18 that are to be used in the HMA production. The Contracting Agency will  
19 use these samples to evaluate the mix design and determine the anti-strip  
20 requirements, if any, in accordance with Section 9-03.8(2). Evaluation of  
21 HMA mix designs proposed by the Contractor that include 20 percent or  
22 less total weight RAP and no RAS will be completed without the inclusion  
23 of the RAP; therefore, submittal of RAP samples is not required. If the  
24 Contracting Agency's evaluation of a mix does not meet the requirements  
25 of Section 9-03.8(2) for Hamburg Wheel-Track Testing and Indirect Tensile  
26 Strength of Bituminous Materials the Contractor shall develop and submit  
27 a new mix design.  
28

29 Mix designs with greater than 20 percent of the total weight RAP or any  
30 amount of RAS shall be submitted to the Project Engineer for evaluation.  
31 The Contractor shall submit representative samples of the mineral  
32 materials, RAP, RAS and 100 grams of recovered asphalt residue from the  
33 RAP and RAS that are to be used in the HMA production. The Contracting  
34 Agency will use the recovered asphalt residue samples to conduct testing  
35 of the final blended asphalt binder in accordance with Section 9-02.1(4).  
36 The Contracting Agency will use the mineral aggregate, RAP and RAS to  
37 evaluate the mix design and determine the anti-strip requirements, if any,  
38 in accordance with Section 9-03(8)2. The mix design will be rejected if the  
39 results of testing by the Contracting Agency of the final blended asphalt  
40 binder fails to meet the requirements of Section 9-02.1(4) or the mix  
41 design including RAP and/or RAS fails to meet the AASHTO T 324  
42 (Hamburg Wheel-Track Testing) or ASTM D 6931 (Indirect Tensile  
43 Strength) requirements of Section 9-03.8(2) or is not within the tolerances  
44 in Section 9-03.8(7).  
45

46 A mix design evaluation report will be provided within 25 calendar days  
47 after a mix design submittal has been received in the State Materials  
48 Laboratory in Tumwater. No paving shall begin prior to issuance of the mix  
49 design evaluation report or reference mix design evaluation report for that  
50 year.  
51



1                   **Commercial Evaluation**

2  
3                   Section 5-04.3(7)A3 is supplemented with the following:

4  
5                   (January 6, 2014)

6                   Mix designs for HMA with greater than 20 percent of the total weight RAP  
7                   or any amount of RAS may be evaluated for acceptance in accordance  
8                   with Section 5-04.3(7)A2.

9  
10                  **Mixing**

11  
12                 Section 5-04.3(8) is supplemented with the following:

13  
14                 (January 6, 2014)

15                 The following requirements shall apply to mix designs with greater than 20 percent  
16                 of the total weight RAP or any amount of RAS:

17  
18                 After the required amounts of mineral materials, RAP, RAS, new asphalt binder and  
19                 asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed  
20                 until a complete and uniform coating of the particles and a thorough distribution of  
21                 the asphalt binder throughout the mineral materials, RAP and RAS is ensured.

22  
23                 When discharged, the temperature of the HMA shall not exceed the optimum  
24                 mixing temperature by more than 25°F as shown on the mix design evaluation  
25                 report or as approved by the Engineer. Storing or holding of the HMA in approved  
26                 storage facilities will be permitted during the daily operation but in no event shall  
27                 the HMA be held for more than 24 hours. HMA held for more than 24 hours after  
28                 mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no  
29                 expense to the Contracting Agency. The storage facility shall have an accessible  
30                 device located at the top of the cone or about the third point. The device shall  
31                 indicate the amount of material in storage. No HMA shall be accepted from the  
32                 storage facility when the HMA in storage is below the top of the cone of the storage  
33                 facility, except as the storage facility is being emptied at the end of the working  
34                 shift.

35  
36                 Recycled asphalt pavement (RAP) and reclaimed asphalt shingles (RAS) utilized in  
37                 the production of HMA shall be sized prior to entering the mixer so that a uniform  
38                 and thoroughly mixed HMA is produced. If there is evidence of the RAP or RAS not  
39                 breaking down during the heating and mixing of the HMA, the Contractor shall  
40                 immediately suspend production of HMA until changes have been approved by the  
41                 Project Engineer.

42  
43                  **Acceptance Sampling and Testing - HMA Mixture**

44  
45                  **Test Section – HMA Mixtures**

46  
47                 The first sentence of Section 5-04.3(8)A7 is revised to read:

48  
49                 (March 3, 2014)

50                 For each class of HMA accepted by statistical evaluation, the Contractor  
51                 may request a test section to determine whether the mixture meets the  
52                 requirements of Section 9-03.8(2) excluding Hamburg Wheel-Track

1 Testing and Indirect Tensile Strength of Bituminous Materials and Section  
2 9-03.8(6).  
3

4 Section 5-04.3(8)A7 is supplemented with the following:  
5

6 (January 6, 2014)

7 The following requirements shall apply to mix designs with greater than 20  
8 percent RAP by weight or RAS:  
9

10 For each class of HMA accepted by statistical evaluation, the Contractor  
11 shall construct a test section to determine whether the mixture meets the  
12 requirements of Sections 9-03.8(2) and 9-03.8(6). The test section shall  
13 be constructed at the beginning of paving and will be at least 600 tons and  
14 a maximum of 1,000 tons or as approved by the Project Engineer. No  
15 further wearing or leveling HMA will be paved on any of the four calendar  
16 days following the construction of the test section. The mixture in the test  
17 section will be evaluated as a lot with a minimum of three sublots required.  
18 If more than one test section is required, each test section shall be a  
19 separate lot.  
20

21 For a test section to be acceptable the pay factor (PF) for gradation,  
22 asphalt binder and Va shall be 0.95 or greater for each constituent and the  
23 remaining test requirements in Section 9-03.8(2) (dust/asphalt ratio, sand  
24 equivalent, uncompacted void and fracture) shall conform to the  
25 requirements of that section. When the pay factor for any item is less than  
26 0.95 the Contractor shall make adjustments to the mixture in accordance  
27 with Section 9-03.8(7) and construct a new test section. The Project  
28 Engineer may waive the requirement for the construction of a new test  
29 section.  
30

### 31 **Compaction**

#### 32 **General**

33  
34 In Section 5-04.3(10)A, the second sentence of the third paragraph is revised to  
35 read as follows:  
36

37  
38 (OR December 11, 2008)

39 An exception shall be that pneumatic tired rollers shall be used between  
40 September 1<sup>st</sup> of any year and April 1<sup>st</sup> of the following year.  
41

#### 42 **Control**

##### 43 **General**

44  
45 The last sentence in the fourth paragraph in Section 5-04.3(10)B1 is revised to  
46 read:  
47

48  
49 (August 3, 2009)

50 HMA that is used for preleveling shall be compacted with a pneumatic tire  
51 roller unless otherwise approved by the Engineer.  
52

1       **Joints**

2  
3       Section 5-04.3(12) is supplemented with the following:

4  
5           (January 5, 2004)

6           The HMA overlay shall be feathered to produce a smooth riding connection to the  
7           existing pavement.

8  
9           HMA utilized in the construction of the feathered connections shall be modified by  
10          eliminating the coarse aggregate from the mix at the Contractor's plant or the  
11          commercial source or by raking the joint on the roadway, to the satisfaction of the  
12          Engineer.

13  
14       **Payment**

15  
16       Section 5-04.5 is supplemented with the following:

17  
18       **(August 5, 2013)**

19       **Asphalt Cost Price Adjustment**

20       The Contracting Agency will make an Asphalt Cost Price Adjustment, either a credit or a  
21       payment, for qualifying changes in the reference cost of asphalt binder. The adjustment  
22       will be applied to partial payments made according to Section 1-09.9 for the following  
23       bid items when they are included in the proposal:

24  
25           "HMA Cl. \_\_\_\_ PG \_\_\_\_"

26           "HMA for Approach Cl. \_\_\_\_ PG \_\_\_\_"

27           "HMA for Preleveling Cl. \_\_\_\_ PG \_\_\_\_"

28           "HMA for Pavement Repair Cl. \_\_\_\_ PG \_\_\_\_"

29           "Commercial HMA"

30  
31       The adjustment is not a guarantee of full compensation for changes in the cost of  
32       asphalt binder. The Contracting Agency does not guarantee that asphalt binder will be  
33       available at the reference cost.

34  
35       The Contracting Agency will establish the asphalt binder reference cost twice each  
36       month and post the information on the Agency website at:

37  
38       <http://www.wsdot.wa.gov/Business/Construction/EscalationClauses.htm>

39       The reference cost will be determined using posted prices furnished by Poten &  
40       Partners, Inc. If the selected price source ceases to be available for any reason, then  
41       the Contracting Agency will select a substitute price source to establish the reference  
42       cost.

43  
44       The base cost established for this contract is the reference cost posted on the Agency  
45       website for the period immediately preceding the bid opening date.

46  
47       Adjustments will be based on the most current reference cost for Western Washington  
48       or Eastern Washington as posted on the Agency website, depending on where the work  
49       is performed. For work completed after all authorized working days are used, the  
50       adjustment will be based on the posted reference cost during which contract time was  
51       exhausted. The adjustment will be calculated as follows:

1 No adjustment will be made if the reference cost is within 5% of the base cost.

2  
3 If the reference cost is greater than or equal to 105% of the base cost, then  
4 Adjustment = (Current Reference Cost – (1.05 x Base Cost)) x (Q x 0.056).

5  
6 If the reference cost is less than or equal to 95% of the base cost, then  
7 Adjustment = (Current Reference Cost – (0.95 x Base Cost)) x (Q x 0.056).

8  
9 Where Q = total tons of all classes of HMA paid in the current month's progress  
10 payment.

11  
12 "Asphalt Cost Price Adjustment", by calculation.

13  
14 "Asphalt Cost Price Adjustment" will be calculated and paid for as described in this  
15 section. For the purpose of providing a common proposal for all bidders, the  
16 Contracting Agency has entered an amount in the proposal to become a part of the total  
17 bid by the Contractor.

## 18 19 Division 6 20 Structures

### 21 22 Concrete Structures

#### 23 24 Materials

25  
26 Section 6-02.2 is supplemented with the following:

27  
28 *(April 1, 2013)*

#### 29 **Resin Bonded Anchors**

30 The resin bonded anchor system shall include the nut, washer, and threaded anchor rod  
31 which is installed into hardened concrete with a resin bonding material.

32  
33 Resin bonding material used in overhead and horizontal application shall be specifically  
34 recommended by the resin manufacturer for those applications.

35  
36 Resin bonding material used in submerged liquid environment shall be specifically  
37 recommended by the resin manufacturer for this application.

38  
39 The resin bonded anchor system shall conform to the following requirements:

#### 40 41 1. Threaded Anchor Rod and Nuts

42 Threaded anchor rods shall conform to ASTM A 193 Grade B7 or ASTM A 449,  
43 except as otherwise noted, and be fully threaded. Threaded anchor rods for  
44 stainless steel resin bonded anchor systems shall conform to ASTM F 593 and  
45 shall be Type 304 unless otherwise specified.

46  
47 Nuts shall conform to ASTM A 563, Grade DH, except as otherwise noted.  
48 Nuts for stainless steel resin bonded anchor systems shall conform to ASTM F  
49 594 and shall be Type 304 unless otherwise specified.

50  
51 Washers shall conform to ASTM F 436, and shall meet the same requirements  
52 as the supplied anchor rod, except as otherwise noted. Washers for stainless

1 steel resin bonded anchor systems shall conform to ASTM A 240 and the  
2 geometric requirements of ASME B18.21.1 and shall be Type 304 Stainless  
3 Steel unless otherwise specified.  
4

5 Nuts and threaded anchor rods, except those manufactured of stainless steel,  
6 shall be galvanized in accordance with AASHTO M 232. Galvanized threaded  
7 anchor rods shall be tested for embrittlement after galvanizing, in accordance  
8 with Section 9-29.6(5).  
9

10 Threaded anchor rods used with resin capsules shall have the tip of the rod  
11 chiseled in accordance with the resin capsule manufacturer's  
12 recommendations. Galvanized threaded rods shall have the tip chiseled prior  
13 to galvanizing.  
14

15 2. Resin Bonding Material

16 Resin bonding material shall be a two component epoxy resin conforming to  
17 Type IV ASTM C 881 or be one of the following:  
18

- 19 a. Vinyl ester resin.
- 20 b. Polyester resin.
- 21 c. Methacrylate resin.
- 22
- 23
- 24
- 25
- 26

27 3. Ultimate Anchor Tensile Capacity

28 Resin bonded anchors shall be tested in accordance with ASTM E 488 to have  
29 the following minimum ultimate tensile load capacity when installed in concrete  
30 having a maximum compressive strength of 6000 pounds per square inch (psi)  
31 at the embedment specified below:  
32

Anchor Diameter (inch)	Tensile Capacity (lbs.)	Embedment (inch)
3/8	7,800	3-3/8
1/2	12,400	4-1/2
5/8	19,000	5-5/8
3/4	27,200	6-3/4
7/8	32,000	7-7/8
1	41,000	9
1-1/4	70,000	11-1/4

33  
34  
35 The Contractor shall submit items 1 and 2 below to the Engineer for all resin bonded  
36 anchor systems. If the resin bonded anchor system and anchor diameter are not listed  
37 in the current WSDOT Qualified Products List, the Contractor shall also submit item 3  
38 below to the Engineer.  
39

40 For resin bonded anchor systems that are installed in a submerged liquid environment  
41 the Contractor shall submit items 1, 2, and 4 below. If the resin bonded anchor system  
42 and anchor diameter are not listed in the current WSDOT Qualified Products List, the  
43 Contractor shall also submit item 3 below to the Engineer.

- 1 The resin manufacturer's written installation procedure for the anchors.
- 2 The manufacturer's certificate of compliance for the threaded anchor rod certifying that the anchor rod meets these requirements.
- 3 Test results by an independent laboratory certifying that the threaded anchor rod system meets the ultimate anchor tensile load capacity specified in the above table. The tests shall be performed in accordance with ASTM E 488.
- 4 For threaded anchors intended to be installed in submerged liquid environments the Contractor shall submit tests performed by an independent laboratory within the past 24 months which certifies that anchors installed in a submerged environment meet the strength requirements specified in the above table.

**(April 7, 2008)**

***Fractured Fin Finish***

The fractured fin finish shall be accomplished by the use of either a form liner selected from the approved products listed in the WSDOT Qualified Products List (QPL), latest edition, or a form liner approved by the Engineer as an equal product. For approval of form liners not listed in the current WSDOT QPL, the Contractor shall submit four copies of the request, along with catalogue cuts and other descriptive supporting information, as follows:

1. Two sets to the Project Engineer
2. Two sets, accompanied by a 2 foot square physical sample of the form liner, to the State Bridge and Structures Architect, addressed as follows:

If sent via US Postal Service:

Washington State Department of Transportation  
State Bridge and Structures Architect  
P. O. Box 47340  
Olympia, WA 98504-7340

If sent via FedEx:

Washington State Department of Transportation  
State Bridge and Structures Architect  
7345 Linderson Way SW  
Tumwater, WA 98501-6504

The height of the form liner shall be equal to or greater than the height of the formed surface. Only elastomeric form liners are allowed to have horizontal splices.

**(April 7, 2008)**

***Variable Depth Random Board Finish and 3/4 Inch Random Board Finish***

The variable depth random board finish and the 3/4 inch random board finish shall be accomplished by the use of either a form liner selected from the approved products listed in the WSDOT Qualified Products List (QPL), latest edition, or a form liner

approved by the Engineer as an equal product. For approval of form liners not listed in the current WSDOT QPL, the Contractor shall submit four copies of the request, along with catalogue cuts and other descriptive supporting information, as follows:

1. Two sets to the Project Engineer
2. Two sets, accompanied by a 2 foot square physical sample of the form liner, to the State Bridge and Structures Architect, addressed as follows:

If sent via US Postal Service:

Washington State Department of Transportation  
State Bridge and Structures Architect  
P. O. Box 47340  
Olympia, WA 98504-7340

If sent via FedEx:

Washington State Department of Transportation  
State Bridge and Structures Architect  
7345 Linderson Way SW  
Tumwater, WA 98501-6504

The variable depth finish shall utilize an elastomeric form liner, while the ¾ inch depth finish shall use either an elastomeric or a plastic form liner.

The height of the form liner shall be equal to or greater than the height of the formed surface. Only elastomeric form liners are allowed to have horizontal splices.

### ***Bridge Supported Utilities***

(June 26, 2000)

Inserts shall be of the type and model specified in the Plans. Inserts shall be galvanized in accordance with AASHTO M 111.

(April 30, 2001)

Hanger rods, and associated nuts and washers, shall conform to Section 9-06.5(1), and shall be galvanized in accordance with AASHTO M 232.

Steel bars and plates shall conform to ASTM A 36 and shall be galvanized in accordance with AASHTO M 111.

(June 26, 2000)

Horizontal strut bolts, and associated nuts and washers, shall conform to Section 9-06.5(3), and shall be galvanized in accordance with AASHTO M 232.

Pre-formed fabric pads shall be composed of multiple layers of duck, impregnated and bound with high quality oil resistant synthetic rubber, compressed into resilient pads of uniform thickness. The duck shall be of highest quality cotton or cotton-polyester 50-50 blend, and shall weigh a minimum of eight ounces per square yard. The cotton warp and the filling yarn shall be 2-ply. The cotton-polyester warp and fill shall be single yarn, with a minimum breaking strength by grab method of 150 pounds per inch per width

(piw) warp, and 140 piw fill. The filling count of the duck shall be  $40 \pm 2$  threads per inch and the warp count shall be  $50 \pm 1$  threads per inch. The number of plies shall be sufficient to produce the specified thickness, after compression and vulcanizing.

The finished pads shall withstand compression loads perpendicular to the plane of the laminations of not less than 10,000 psi without any sign of failure after the load is removed. Failure is defined as any breakdown of the component materials or laminations.

Pre-formed fabric pads shall have a shore A hardness of  $90 \pm 5$ .

Pre-formed fabric pads for bridge utility supports will be accepted based on the manufacturer's certificate of compliance that the material furnished conforms to these specifications. The Contractor shall submit the manufacturer's certificate of compliance to the Engineer in accordance with Section 1-06.3.

(June 26, 2000)

Pipe rolls or pipe saddles shall be of the type and model specified in the Plans.

### ***Aggregates and Proportioning***

The fifth paragraph of Section 9-19.1 is revised to read:

**(BSP August 4, 2003)**

#### **Prestressed Concrete Girders**

The Contractor shall submit a Contractor-Provided mix design for each design strength of prestressed girder to the Engineer for approval in accordance with Section 6-02.3(2)A, including a Contractor-Provided mix design of high strength concrete for the prestressed girders of \*\*\* Puyallup River Bridge No. 162/6 Replacement Span 2 Girder A \*\*\*.

Approval of the mix design will not preclude any requirements for the concrete placed in the girders.

The Contractor-Provided mix design for high strength concrete shall conform to the following:

Bridge	Minimum Compressive Strength in psi at 56 days in accordance with AASHTO T 22
*** Puyallup River Bridge No. 162/6 Replacement Span 2 Girder A ***	*** 9,700 ***

The Contractor may substitute testing for minimum compressive strength at 28 days, provided that the 28 day compressive strength is equal to or greater than 95 percent of the specified 56 day compressive strength.

The Contractor shall test a minimum of three specimens for each of the tests specified. The test specimens for the compressive strength tests shall be four inch by eight inch cylinders cast in molds supplied by the Contractor in



accordance with Section 6-02.3(5)D. The Contractor shall include the results of all tests in the high strength concrete mix design submittal to the Engineer.

(\*\*\*\*\*)

Additionally, the Contractor-Provided mix design for all prestressed concrete girders for Puyallup River Bridge No. 162/6 Replacement, including the high-strength concrete mix design for Span 2 Girder A, shall also conform to a maximum unit weight of 125 pounds per cubic foot. The mix design in all cases shall conform to the following:

1. The unit weight of the concrete mix shall not exceed 125 pounds per cubic foot when tested in accordance with AASHTO T 121, except that if the concrete is a self-consolidating concrete type of mix, the concrete shall not be consolidated in the test mold.
2. The coarse aggregate used for the mix shall conform to Section 9-03.1(4), except that the grading shall conform to AASHTO M 195.
3. The absorption of the coarse aggregate shall not exceed 10 percent when tested in accordance with AASHTO T 85.

## **Construction Requirements**

Section 6-02.3 is supplemented with the following:

### ***Bridge Supported Utilities***

(June 26, 2000)

The Contractor shall furnish and install inserts for the bridge utility supports as shown in the Plans. The Contractor shall verify that the hanger rods freely hang plumb in their inserts, and shall make adjustments to the inserts as necessary and as approved by the Engineer prior to utility installation.

(June 26, 2000)

The Contractor shall furnish and install the bridge utility supports, and the utility pipe or conduit pipe, as shown in the Plans.

(April 3, 2006)

### ***Submittals***

Prior to beginning any concrete work, the Contractor shall submit a plan, for the Engineer's review and approval, outlining the procedures to be used to prevent high pH stormwater or dewatering water from entering surface waters. The plan shall include how the pH of the water will be maintained between pH 6.5 and pH 8.5 prior to being discharged from the project or entering surface waters. The plan shall conform to the requirements of Section 8-01.

### ***Bridge Decks and Bridge Approach Slabs***

#### **Bridge Approach Slab Orientation and Anchors**

Section 6-02.3(10)F is supplemented with the following:

1 (August 4, 2008)

2 The pavement end of the bridge approach slab shall be constructed normal to  
3 the roadway center line.

4  
5 (August 4, 2008)

6 The compression seal shall be a 2-1/2 inch wide gland selected from the  
7 approved products listed in the WSDOT Qualified Products List, latest edition.  
8

9 ***Finishing Concrete Surfaces***

10  
11 Section 6-02.3(14) is supplemented with the following:

12  
13 (June 26, 2000)

14 **General Requirements for Concrete Surface Finishes Produced by Form**  
15 **Liners**

16 Horizontal and vertical joints shall be spliced in accordance with the manufacturer's  
17 printed instructions. A copy of these printed instructions shall be submitted to the  
18 Engineer prior to placement of the form liners. The Contractor shall not place  
19 concrete against the form liners until receiving the Engineer's approval of the forms  
20 and splices.

21  
22 Horizontal splicing of ABS and plastic form liners to achieve the required height is  
23 not permitted and there shall be no horizontal joints. The concrete formed with  
24 ABS and plastic form liners shall be given a light sandblast to remove the glossy  
25 finish.

26  
27 Side forms, traffic barrier forms, and pedestrian barrier forms using these form  
28 liners may be removed after 24 hours provided a water reducing admixture  
29 approved by the Engineer is used in the concrete, and the concrete reaches 1,400  
30 psi minimum compressive strength before form removal. Concrete in load  
31 supporting forms utilizing these form liners shall be cured in accordance with  
32 Section 6-02.3(17)N. Once the forms are removed, the Contractor shall treat the  
33 joint areas by patching or light sandblasting as required by the Engineer to ensure  
34 that the joints are not visible.

35  
36 Form liners shall be cleaned, reconditioned, and repaired before each use. Form  
37 liners with repairs, patches, or defects which, in the opinion of the Engineer, would  
38 result in adverse effects to the concrete finish shall not be used.

39  
40 Care shall be taken to ensure uniformity of color throughout the textured surface. A  
41 change in form release agent will not be allowed.

42  
43 All surfaces formed by the form liner shall also receive a Class 2 surface finish.  
44 Form ties shall be a type that leaves a clean hole when removed. All spalls and  
45 form tie holes shall be filled as specified for a Class 2 surface finish.

46  
47 (June 26, 2000)

48 **Fractured Fin Finish**

49 Form liners shall be placed with fins and joints normal to grade for barrier  
50 applications and vertical (or as shown in the Plans) for other applications.  
51 Horizontal joints in the elastomeric form liners are permitted on surfaces greater  
52 than 8 feet in height provided that the minimum form liner panel dimension is 8 feet.

(April 7, 2008)

**Variable Depth Random Board Finish and 3/4 Inch Random Board Finish**

Form liners shall be placed with board lines and joints normal to grade for barrier applications and vertical (or as shown in the Plans) for other applications. Horizontal joints in the elastomeric form liners are permitted on surfaces greater than 8 feet in height provided that the minimum form liner panel dimension is 8 feet.

**Pigmented Sealer for Concrete Surfaces**

Section 6-02.3(14)C is supplemented with the following:

(April 6, 2009)

The color of the pigmented sealer shall be Washington Gray.

***Placing Anchor Bolts***

Section 6-02.3(18) is supplemented with the following:

(January 3, 2011)

**Resin Bonded Anchors**

The embedment depth of the anchors shall be as specified in the Plans. If the embedment depth of the anchor is not specified in the Plans then the embedment depth shall be as specified in the table of minimum and maximum torque below.

The anchors shall be installed in accordance with the resin manufacturer's written procedure.

Holes shall be drilled as specified in the Plans. Holes may be drilled with a rotary hammer drill when core drilling is not specified in the Plans. If holes are core drilled, the sides of the holes shall be roughened with a rotary hammer drill after core drilling.

Holes shall be prepared in accordance with the resin manufacturer's recommendations and shall meet the minimum requirements as specified herein. Holes drilled into concrete shall be thoroughly cleaned of debris, dust, and laitance prior to installing the threaded rod and resin bonding material. Holes shall not have any standing liquid at the time of installation of the threaded anchor rod.

The anchor nuts shall be tightened to the following torques when the embedment equals or exceeds the minimum embedment specified.

<b>Anchor Diameter (inch)</b>	<b>Minimum Torque (ft-lbs)</b>	<b>Maximum Torque (ft-lbs)</b>	<b>Minimum Embedment (Inch)</b>
3/8	12	18	3-3/8
1/2	22	35	4-1/2
5/8	55	80	5-5/8
3/4	106	140	6-3/4
7/8	165	190	7-7/8
1	195	225	9
1-1/4	370	525	11-1/4

When the anchor embedment depth is less than the minimum values specified, the anchor nuts shall be tightened to the torque values specified in the Plans, or as recommended by the resin bonded anchor system manufacturer and approved by the Engineer.

### ***Grout for Anchor Bolts and Bridge Bearings***

Section 6-02.3(20) is supplemented with the following:

(June 26, 2000)

Grout placed at the following locations shall conform to the requirements of this section.

\*\*\* Elastomeric bearing pad grout pads \*\*\*

### ***Reinforcement***

#### ***Splicing***

Section 6-02.3(24)D is supplemented with the following:

(BSP January 7, 2013)

#### ***Splicing of Hoop Reinforcement for Columns and Shafts***

When the Plans show steel reinforcement bar hoops as the confinement reinforcement for columns and shafts, the hoops shall be spliced by one of the following methods:

1. Resistance butt weld splice, welded in accordance with Section 6-02.3(24)E as supplemented in these Special Provisions.
2. Welded direct butt splice, welded in accordance with Section 6-02.3(24)E as supplemented in these Special Provisions.
3. Welded lap splice if shown in the Plans, welded in accordance with Section 6-02.3(24)E as supplemented in these Special Provisions.

All welded splices of hoop reinforcement shall be welded in the shop.

#### ***Welding Reinforcing Steel***

Section 6-02.3(24)E is supplemented with the following:

1  
2 (BSP January 7, 2013)

3 **Resistance Butt Weld Splicing of Hoop Reinforcement for Columns and**  
4 **Shafts**

5 **Splicing Quality Control Manager**

6 The Contractor shall designate in writing a Splicing Quality Control  
7 Manager (SQCM). The SQCM shall be responsible for the quality of all  
8 hoop reinforcement splicing, including the inspection of materials and  
9 workmanship, and submitting, receiving, and approving all  
10 correspondence, required submittals, and reports regarding hoop  
11 reinforcement splicing to and from the Engineer.  
12

13 **Splice Sample Test Facilities**

14 Qualification testing and testing of production sample splices shall be  
15 performed at an independent qualified testing laboratory at no additional  
16 expense to the Contracting Agency. The laboratory shall have the  
17 following:  
18

- 19 1. Proper facilities, including a tensile testing machine capable of  
20 breaking full size samples of all steel reinforcing bar splices.  
21
- 22 2. Operators who have received documented training for  
23 performing the testing requirements of ASTM A 370.  
24
- 25 3. A record of annual calibration of testing equipment performed by  
26 an independent third party that has standards that are traceable  
27 to the National Institute of Standards and Technology and a  
28 formal reporting procedure, including published test forms.  
29 Calibration records shall be made available for the Engineer's  
30 review upon request.  
31

32 **Splice Qualification Report**

33 The Contractor shall submit a Splice Qualification Report. This report  
34 shall include, but not be limited to, the following:  
35

- 36 1. Name of the designated Splicing Quality Control Manager  
37 (SQCM).  
38
- 39 2. Splice material information  
40
- 41 3. Names of the operators who will be performing the splicing  
42
- 43 4. Descriptions of the positions, locations, equipment, and  
44 procedures that will be used in the splice work.  
45
- 46 5. Fabricator's Quality Control Manual for the fabrication of hoops  
47 including, but not be limited to, the following:  
48
  - 49 a. The pre-production procedures for the qualification of  
50 material and equipment.  
51

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- b. The methods and frequencies for performing quality control procedures during production.
  - c. The calibration procedures and calibration frequency for all equipment.
  - d. The welding procedure specification for resistance welding.
  - e. The method for identifying and tracking lots.
6. Certifications from the fabricator for qualifications of operators and procedures based on sample qualification tests performed within the past 24 months of the date of the Splice Qualification Report submittal.
- a. Each operator shall be certified by performing two sample splices for each bar size of each splice type that the operator will be performing in the work.
7. Certified test results for all qualification sample splices, tested by an independent qualified testing laboratory and conforming to the specified production test criteria.

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29

The Contractor shall submit the Splice Qualification Report to the Engineer for approval in accordance with Section 1-05.3. The Contractor shall not begin production hoop reinforcement splicing operations until receiving the Engineer's approval of the Splice Qualification Report.

30  
31

**Production Control Splice Test Criteria**

32  
33  
34  
35

For the purpose of hoop reinforcement splice testing: a lot of splices are defined as 200, or a fraction thereof, of the same type of splice for each bar diameter that is used in the work. A production control sample shall consist of four splices removed from each lot of completed splices.

36  
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The Contractor shall select the splices comprising the lot. The Engineer will select the product control sample of four splices to be tested from each lot.

40  
41  
42  
43

Production control testing shall be performed for all hoop reinforcement splices used in the work. Production control samples shall be tested in accordance with ASTM A 370.

44  
45

**Sample Test Criteria**

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47  
48

After the splices in a lot have been completed, the SQCM shall notify the Engineer in writing that the splices in this lot conform to the specifications and are ready for testing.

49  
50  
51

At least one week before sample testing, the Contractor shall notify the Engineer in writing of the date and location of the testing.

Samples shall achieve at least 125 percent of the specified yield strength of the bar. In addition, either necking of the bar or a plateau of the stress-strain curve shall be evident at rupture regardless of whether the bar breaks inside or outside the splice.

#### **Sample Acceptance Criteria**

If three or more sample splices from a lot conform to the requirements of the **Sample Test Criteria** subsection of this Special Provision, all splices in the lot represented by the test will be considered acceptable.

If only two of the four sample splices from a lot conform to the requirements of the **Splice Test Criteria** subsection of this Special Provision, the Engineer shall select an additional set of four samples for re-test from the same lot of splices. Should any of the four sample splices from this additional test fail to conform to these requirements; all splices in the lot will be rejected.

Should only one sample splice from a lot conform to the requirements of the **Splice Test Criteria** subsection of this Special Provision, all splices in the lot will be rejected.

Whenever a lot of splices are rejected, the rejected lot and subsequent lots of splices shall not be used in the work until the following requirements are met:

1. The SQCM performs a complete review of the Contractor's quality control process for these splices.
2. A written report is submitted to the Engineer describing the cause of the failure of the splices in this lot and provisions for preventing similar failures in future lots.
3. The Engineer has provided the Contractor with written notification that the report and any corrective action is acceptable.

All bars within a lot shall be visually inspected to verify all splices are aligned to minimize eccentricities. Resistance butt welded splices shall not be offset at the joint by more than what is permitted in ANSI/AWS D1.4/D1.4M:2011 Section 4.2.1. Any splice with offsets exceeding those as specified in ANSI/AWS D1.4/D1.4M:2011 Section 4.2.1 will be rejected.

#### **Reporting Test Results**

A Production Control Test Report for all testing performed on each lot shall be prepared by the independent testing laboratory performing the testing and submitted to the SQCM for review and approval. The report shall include, as a minimum, the following information for each test:

1. Contract number.
2. Dates received and tested.

3. Lot number.
4. Bar diameter, hoop diameter, and bar length.
5. Type of splice.
6. Length of test specimen.
7. Physical condition of the test sample splice and description of break and location in relation to splice.
8. Any noticeable defects.
9. Ultimate tensile strength of each splice.

The SQCM shall review, approve with a signature, and forward each Production Control Test Report to the Engineer for review. The Engineer will have five working days to review each complete Test Report and respond in writing. The Contractor shall not encase the splices represented by the report in concrete until receiving the Engineer's written approval of the report.

#### **Welded Direct Butt Splicing of Hoop Reinforcement for Columns and Shafts**

##### **Welded Direct Butt Splices**

Welded direct butt splices shall be complete joint penetration butt welds conforming to ANSI/AWS D1.4/D1.4M figure 3.2. Split pipe backing shall not be used.

Thermite welding is not allowed.

##### **Nondestructive Splice Tests**

Radiographic examinations shall be performed on 25 percent of all complete joint penetration butt welded splices from a lot defined as 200, or a fraction thereof, of the same type of splice for each bar diameter that is used in the work.

All splices shall be 100 percent visually inspected.

All required radiographic examinations shall be performed by the Contractor in accordance with ANSI/AWS D1.4/D1.4M and as specified below.

Before radiographic examination, welds shall conform to ANSI/AWS D1.4/D1.4M Section 4.4. Radiographic acceptance shall be in accordance with ANSI/AWS D1.4/D1.4M Table 4.1. Acceptance criteria for bar size #7 shall be the same as for bar size #8.

Should more than 12 percent of the splices which have been radiographically examined in any lot be defective, an additional 25 percent of the splices, selected by the Engineer from the same lot, shall be radiographically examined. Should more than 12 percent of the



1 cumulative total of splices tested from the same lot be defective, all  
2 remaining splices in the lot shall be radiographically examined.

3  
4 Additional radiographic examinations performed due to the identification of  
5 defective splices shall be performed at no additional expense to the  
6 Contracting Agency.

7  
8 All defects shall be repaired in accordance with ANSI/AWS D1.4/D1.4M,  
9 latest edition.

10  
11 The Contractor shall notify the Engineer in writing a minimum of 48 hours  
12 before performing any radiographic examinations.

13  
14 The radiographic procedure used shall conform to ANSI/AWS D1.1,  
15 ANSI/AWS D1.4/D1.4M Section 7.9, and the following:

- 16  
17 1. Two exposures shall be made for each splice. For each of the  
18 two exposures, the radiation source shall be centered on each  
19 bar to be radiographed. The first exposure shall be made with  
20 the radiation source placed at zero degrees from the top of the  
21 weld and perpendicular to the weld root and identified with a  
22 station mark of "0". The second exposure shall be at 90 degrees  
23 to the "0" station mark and shall be identified with a station mark  
24 of "90". When obstructions prevent a 90 degree placement of  
25 the radiation source for the second exposure, and when  
26 approved in writing by the Engineer, the source may be rotated,  
27 around the centerline of the steel reinforcing bar, a maximum of  
28 25 degrees.
  - 29  
30 2. If more than one weld is to be radiographed during one  
31 exposure, the angle between the root line of each weld and the  
32 direction to the radiation source shall not be less than 65  
33 degrees.
  - 34  
35 3. Radiographs shall be made by either X-ray or gamma ray.  
36 Radiographs made by X-ray or gamma rays shall have densities  
37 of not less than 2.3 nor more than 3.5 in the area of interest. A  
38 tolerance of 0.05 in density is allowed for densitometer  
39 variations. Gamma rays shall be from the iridium 192 isotope  
40 and the emitting specimen shall not exceed 0.18 inches in the  
41 greatest diagonal dimension.
  - 42  
43 4. The radiographic film shall be placed perpendicular to the  
44 radiation source at all times; parallel to the root line of the weld  
45 unless source placement determines that the film shall be turned;  
46 and as close to the root of the weld as possible.
  - 47  
48 5. The minimum source to film distance shall be maintained so as  
49 to ensure that all radiographs maintain a maximum geometric  
50 unsharpness of 0.020 at all times, regardless of the size of the  
51 steel reinforcing bars.
- 52

6. Penetrameters shall be placed on the source side of the bar and perpendicular to the radiation source at all times. One penetrometer shall be placed in the center of each bar to be radiographed, perpendicular to the weld root, and adjacent to the weld. Penetrometer images shall not appear in the weld area.
7. When radiography of more than one weld is being performed per exposure, each exposure shall have a minimum of one penetrometer per bar, or three penetrameters per exposure. When three penetrameters per exposure are used, one penetrometer shall be placed on each of the two outermost bars of the exposure, and the remaining penetrometer shall be placed on a centrally located bar.
8. An allowable weld buildup of 0.16 inch may be added to the total material thickness when determining the proper penetrometer selection. No image quality indicator equivalency will be accepted. Wire penetrameters or penetrometer blocks shall not be used.
9. Penetrameters shall be sufficiently shimmed using a radiographically identical material. Penetrometer image densities shall be a minimum of 2.0 and a maximum of 3.6.
10. Radiographic film shall be Class 1, regardless of the size of the steel reinforcing bars.
11. Radiographs shall be free of film artifacts and processing defects, including, but not limited to, streaks, scratches, pressure marks or marks made for the purpose of identifying film or welding indications.
12. Each splice shall be clearly identified on each radiograph and the radiograph identification and marking system shall be established between the Contractor and the Engineer before radiographic inspection begins. Film shall be identified by lead numbers only; etching, flashing or writing in identifications of any kind will not be permitted. Each piece of film identification information shall be legible and shall include, as a minimum, the following information:
  - a. The Contractor's name.
  - b. The name of the nondestructive testing firm.
  - c. Contract number.
  - d. Date of the test.
  - e. Initials of the radiographer.
  - f. Part number.

g. Weld number.

The letter "R" and repair number shall be placed directly after the weld number to designate a radiograph of a repaired weld.

13. Radiographic film shall be developed within a time range of one minute less to one minute more than the film manufacturer's recommended maximum development time. Sight development will not be allowed.

14. Processing chemistry shall be done with a consistent mixture and quality, and processing rinses and tanks shall be clean to ensure proper results. Records of all developing processes and any chemical changes to the developing processes shall be kept and furnished to the Engineer upon request. The Engineer may request, at any time, that a sheet of unexposed film be processed in the presence of the Engineer to verify processing chemical and rinse quality.

15. The results of all radiographic interpretations shall be recorded on a signed certification and a copy kept with the film packet.

Technique sheets prepared in accordance with ASME Boiler and Pressure Vessels Code Section V Article 2 Section T-291 shall also contain the developer temperature, developing time, fixing duration and all rinse times.

The Contractor shall maintain the radiographs and the radiographic inspection report(s) in the shop until the Engineer reviews them or request them to be sent to the Materials Engineer, Department of Transportation, PO Box 47365, Olympia, WA 98504-7365, within two working days following this request. The Contractor shall mail the film and two copies of the radiographic inspection report. If the Engineer reviews them in the shop then the film and reports shall be released to the Engineer for permanent record keeping at that time. Adequate facilities and equipment shall be provided the Engineer for examining film, if performed in the shop.

If the Engineer does not review the film and reports in the shop, within ten working days of completion of the lot, all reports and film shall be sent to the Materials Engineer, Department of Transportation, PO Box 47365, Olympia, WA 98504-7365. The Contractor shall mail the film and two copies of the radiographic inspection report.

#### **Welded Lap Splicing of Hoop Reinforcement for Shafts**

All production splices shall be 100 percent visually inspected for weld quality, size and length.

### ***Prestressed Concrete Girders***

#### **Casting**

1 The second paragraph of Section 6-02.3(25)B is revised to read:

2  
3 (BSP August 4, 2003)

4 The Contractor shall fabricate all prestressed concrete girders using the  
5 Contractor-Provided mix design appropriate for the design strength specified  
6 for each girder in accordance with Sections 6-02.3(2)A and 9-19.1 as  
7 supplemented in these Special Provisions, and as approved by the Engineer.  
8 The temperature of the concrete when placed shall be between 50F and 90F.  
9

10 Section 6-02.3(25)B is supplemented with the following:

11  
12 (\*\*\*\*\*)

13 Coarse aggregate for the prestressed concrete girders of Puyallup River  
14 Bridge No. 162/6 Replacement shall be uniformly pre-saturated by sprinkling  
15 with water and allowed to drain. At time of use, the coarse aggregate shall be  
16 in a saturated surface dry condition.  
17

### 18 **Contractors Control Strength**

19  
20 Section 6-02.3(25)E is supplemented with the following:

21  
22 (BSP August 4, 2003)

23 For the prestressed girders of \*\*\* Puyallup River Bridge No. 162/6  
24 Replacement Span 2 Girder A \*\*\*, the Contractor may substitute compressive  
25 strength testing at 28 days provided that the 28 day compressive strength is  
26 equal to or greater than 95 percent of the required 56 day compressive  
27 strength.  
28

### 29 **Shipping**

30  
31 The first paragraph of Section 6-02.3(25)M is revised to read as follows:

32  
33 (BSP August 4, 2003)

34 After the girder has reached its 28-day design strength, or 95 percent of the 56  
35 day design strength for the girders of \*\*\* Puyallup River Bridge No. 162/6  
36 Replacement Span 2 Girder A \*\*\*, and the fabricator believes it to comply with  
37 the specification, the girder and a completed Certification of Compliance,  
38 signed by a Precast/Prestressed Concrete Institute Technician or a  
39 professional engineer, acceptable to the Contracting Agency, shall be  
40 submitted to the Engineer for inspection. If the Engineer finds the certification  
41 and the girder to be acceptable, the Engineer will stamp the girder "Approved  
42 for Shipment".  
43

44 The third paragraph of Section 6-02.3(25)M is supplemented with the following:

45  
46 (BSP August 4, 2003)

47 The Contractor is advised that, because of the higher compressive design  
48 strengths required for the production prestressed concrete girders of \*\*\*  
49 Puyallup River Bridge No. 162/6 Replacement Span 2 Girder A \*\*\*, it will take  
50 longer than the usual time for these girders to reach sufficient strength for  
51 shipping. The Contractor shall take this into account when preparing  
52 schedules for this portion of the work.

1  
2 **Measurement**  
3

4 Section 6-02.4 is supplemented with the following:  
5

6 (August 2, 2010)

7 \*\*\* "Superstructure - Bridge No. 162/6 Replacement" \*\*\* contains the following  
8 approximate quantities of materials and work:  
9

10	*** Bridge Deck Test Slab	100 S.F.
11	Epoxy Coated St. Reinf. Bar	103,600 LB.
12	St. Reinf. Bar	13,100 LB.
13	Conc. Class 4000D	367 C.Y.
14	Conc. Class 4000	78 C.Y.
15	Elastomeric Bearing Pad	12 EACH
16	Elastomeric Girder Stop Pad	24 EACH
17	Bridge Supported Utility Insert	150 LB. ***

18  
19 The quantities are listed only for the convenience of the Contractor in determining the  
20 volume of work involved and are not guaranteed to be accurate. The prospective  
21 bidders shall verify these quantities before submitting a bid. No adjustments other than  
22 for approved changes will be made in the lump sum contract price for \*\*\*  
23 "Superstructure - Bridge No. 162/6 Replacement" \*\*\* even though the actual quantities  
24 required may deviate from those listed.  
25

26 (BSP December 5, 2005)

27 Prestressed concrete girder will be measured by the linear foot of girder specified in the  
28 Proposal, including adjustments to the Plan quantity made in accordance with Section  
29 1-04.4.  
30

31 **Payment**  
32

33 The first bid item under Section 6-02.5 is supplemented with the following:  
34

35 (June 26, 2000)

36 All costs in connection with producing \*\*\* fractured fin finish and variable depth random  
37 board \*\*\* finish on concrete surfaces as specified shall be included in the unit contract  
38 price per cubic yard for "Conc. Class \_\_\_\_". If the concrete is to be paid for other than  
39 by class of concrete then the costs shall be included in the applicable adjacent item of  
40 work.  
41

42 (April 3, 2006)

43 All costs in connection with the treatment of high pH stormwater or dewatering water as  
44 specified shall be included in the unit contract price per cubic yard for "Conc. Class  
45 \_\_\_\_". If the concrete is to be paid for other than by class of concrete then the costs  
46 shall be included in the applicable adjacent item of work.  
47

48 The third bid item under Section 6-02.5 is supplemented with the following:  
49

50 (June 26, 2000)

51 All costs in connection with \*\*\* constructing the bridge deck test slab, and furnishing and  
52 installing elastomeric bearing pads, elastomeric girder stop pads, and bridge supported

1 utility inserts \*\*\* shall be included in the lump sum contract price for "Superstructure -  
2 \_\_\_\_\_".  
3

4 Section 6-02.5 is supplemented with the following:  
5

6 (BSP November 5, 2006)

7 "Prestressed Conc. Girder \_\_\_\_\_", per linear foot.

8 The unit contract price per linear foot for "Prestressed Conc. Girder \_\_\_\_\_" shall be full  
9 pay for performing the work as specified, including shop drawing submittals, fabrication,  
10 storage, handling, shipping, erection (including all site preparation and restoration  
11 activities necessary for erection equipment access and support), furnishing and  
12 removing oak block wedges, furnishing and removing temporary bracing, and furnishing  
13 and cutting temporary strands. For deck bulb tee girders and PCPS members, all work  
14 related to equalizing girder camber, connecting weld-ties, and grouting keyways, shall  
15 also be included. For spliced prestressed concrete girders, all work related to cast-in-  
16 place concrete closures and post-tensioning shall be included. Payment will be made  
17 based on the quantity specified in the Proposal, unless changes are made to this  
18 quantity in accordance with Section 1-04.4, in which case the quantity specified in the  
19 Proposal will be adjusted by the amount of the change and will be paid for in  
20 accordance with Section 1-04.4.  
21

22 *(June 26, 2000)*

23 ***Bridge and Structures Minor Items***

24 For the purpose of payment, such bridge and structures items as \*\*\* adhesive, butyl  
25 rubber sheeting, concrete nails, diaphragm anchors, epoxy bonding agent, geofoam,  
26 grout, mortar, premolded joint filler, polyethylene or silicone sealant, \*\*\* etc., for which  
27 there is no pay item included in the proposal, are considered as bridge and structures  
28 minor items. All costs in connection with furnishing and installing these bridge and  
29 structures minor items as shown and noted in the Plans and as outlined in these  
30 specifications and in the Standard Specifications shall be included in the \*\*\* applicable  
31 adjacent item of work. \*\*\*  
32

33 *(June 26, 2000)*

34 ***Bridge Supported Utilities***

35 All costs in connection with placing \*\*\* the 12 inch diameter water line beneath the  
36 bridge approach slab and \*\*\* through the superstructure of \*\*\* Puyallup River Bridge  
37 No. 162/6 Replacement \*\*\* as shown in the Plans, including all \*\*\* pipe, casing, steel  
38 plates, threaded rods, pipe rolls, braces, and associated nuts and washers, but  
39 excluding inserts cast into the bridge deck, \*\*\*, shall be included in the \*\*\* unit contract  
40 prices per each for "Butterfly Valve 12 In." and per linear foot for "Ductile Iron Pipe For  
41 Water Main 12 In. Diam.", HDPE Casing 4 In. Diam.", and "Steel Casing 20 In. Diam."  
42 \*\*\*  
43

44 *(June 26, 2000)*

45 No additional compensation will be made by reason of any delay or other expense to  
46 the Contractor caused by coordination with the utility company or by installing utility  
47 company furnished items. However, any unavoidable delays to the Contractor caused  
48 by coordination with the utility company or resulting from installing utility company  
49 furnished items will be adjusted in accordance with Section 1-08.8.  
50

51 **Concrete Barrier**  
52

1 **Materials**

2  
3 Section 6-10.2 is supplemented with the following:

4  
5 (\*\*\*\*\*)

6 Materials for Temporary Barrier Connection Type 1 shall be in accordance with Section  
7 8-11.2.

8  
9 **Construction Requirements**

10  
11 Section 6-10.3 is supplemented with the following:

12  
13 (\*\*\*\*\*)

14 ***Concrete Barrier Connections***

15 Where temporary barriers are to connect to fixed barriers, the Contractor shall make the  
16 connection using Temporary Barrier Connection Type 1 as detailed on Sheet TC9 in the  
17 Plans.

18  
19 ***Temporary Concrete Barrier***

20  
21 Section 6-10.3(5) is supplemented with the following:

22  
23 (\*\*\*\*\*)

24 Delineators shall be placed on the traffic face of the barrier 6 inches from the top  
25 and spaced a maximum of 10 feet.

26  
27 Reflector color shall be white on the right of traffic.

28  
29 The Contractor shall maintain, replace, and clean the delineators when ordered by  
30 the Engineer.

31  
32 **Payment**

33  
34 Section 6-10.5 is supplemented with the following:

35  
36 (April 28, 1997)

37 The following paragraph is added immediately following the bid item, "Temporary Conc.  
38 Barrier":

39  
40 The unit contract price per linear foot for "Temporary Conc. Barrier" shall include all  
41 costs for furnishing, placing, maintaining, replacing, and cleaning barrier  
42 delineation.

43  
44 **Noise Barrier Walls**

45  
46 **Materials**

47  
48 Section 6-12.2 is supplemented with the following:

1 **(April 1, 2013)**

2 **Precast Concrete Noise Barrier Walls**

3 Grout for encapsulating dowel bars shall conform to Section 6-02.3(26)H.

4  
5 Grout pads at the bases of precast concrete panels shall conform to Section 6-02.3(20).

6  
7 Base plates and anchor bolt templates shall conform to ASTM A 36. Base plates shall  
8 be corrosion protected by one of the following methods:

- 9  
10 1. One coat of paint conforming to Section 9-08.1(2)F.  
11  
12 2. Galvanized after fabrication in accordance with AASHTO M 111.  
13  
14 3. Galvanized after fabrication in accordance with ASTM B 695, Class 5, Type 1.

15  
16 Anchor rods shall conform to ASTM F 1554 Grade 55. Nuts shall conform to ASTM A  
17 563. Washers shall conform to ASTM F 436, except that plate washers conforming to  
18 ASTM A 36 may be used. Nuts and washers, and a minimum of 1'-0" of the exposed  
19 end of the anchor rod, shall be corrosion protected by one of the following methods:

- 20  
21 1. One coat of paint conforming to Section 9-08.1(2)F.  
22  
23 2. Galvanized after fabrication in accordance with AASHTO M 232.  
24  
25 3. Galvanized after fabrication in accordance with ASTM B 695, Class 5, Type 1.

26  
27 The cone head end, 1'-0" minimum, of steel reinforcing Bar B, as identified in the  
28 Standard Plans, shall be painted with one coat paint conforming to Section 9-08.1(2)F.

29  
30 The sealant system for the vertical joint between precast concrete panels shall consist of a  
31 polyurethane sealant conforming to ASTM C 920 Type S Grade NS Class 25 Use M and a  
32 closed cell foam backer rod conforming to ASTM C 1330 Type C. The polyurethane sealant  
33 shall be tested for compatibility with the closed cell foam backer rod in accordance with  
34 ASTM C 1087.

35  
36 **Construction Requirements**

37  
38 ***Precast Concrete Panel Fabrication and Erection***

39  
40 **(\*\*\*\*\*)**

41 The last two sentences of Section 6-12.3(6) are deleted.

42  
43 Section 6-12.3(6) is supplemented with the following:

44  
45 **(April 5, 2004)**

46 The Contractor shall form a \*\*\*Variable Depth Random Board\*\*\* finish, as specified  
47 in the Plans and Section 6-02.3(14) as supplemented in these Special Provisions,  
48 on the surface of the precast concrete panel facing the traffic side.

49  
50 The Contractor shall form a \*\*\*Variable Depth Random Board\*\*\* finish, as specified  
51 in the Plans and Section 6-02.3(14) as supplemented in these Special Provisions,  
52 on the surface of the precast concrete panel facing the residential area, except as



otherwise noted. The surfaces of the pilaster shall receive either a Class 2 surface finish in accordance with Section 6-02.3(14)B, if pigmented sealer is being applied, or a Class 1 surface finish in accordance with Section 6-02.3(14)A, if pigmented sealer is not being applied.

## Shafts

### Construction Requirements

#### *Shaft Excavation*

#### Temporary and Permanent Shaft Casing

Section 6-19.3(3)B is supplemented with the following:

(January 2, 2012)

The Contractor shall furnish and install casings as follows:

Bridge No. and Pier number or Wall name and Station Limits	Casing Type	Elev. Of Bottom of Required Casing (feet)	Upper and Lower Elevation Limits for Concurrent Casing Placement with Excavation
*** Puyallup River Br. No. 162/6 Replacement			
Pier 1	Temporary	84.0	Exist. groundline to Elev. 84.0
Pier 2	Permanent	99.8	Exist. groundline to Elev 99.8
Pier 2	Temporary	84.0	Elev. 99.8 to Elev. 84.0
Pier 3	Temporary	84.0	Exist groundline to Elev. 84.0 ***

When installing required temporary or required permanent casings between the upper and lower elevation limits specified above, the casing shall be advanced prior to or concurrently with the excavation. Excavation in advance of the casing tip shall not exceed \*\*\* three \*\*\* feet, except that in no case shall shaft excavation and casing placement extend below the bottom of shaft excavation as shown in the Plans.

#### *Casing Removal*

#### Requirements for Leaving Temporary Casing in Place

Section 6-19.3(8)C is supplemented with the following:

(\*\*\*\*\*)

The portion of casing shoring at Puyallup River Bridge No. 162/6 Replacement Pier 2 below the existing groundline (from existing groundline to Elevation 99.8) shall remain in place and shall not be removed.

## **Division 7 Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains, and Conduits**

### **General Pipe Installation Requirements**

#### **Description**

Section 7-08.1 is supplemented with the following:

(\*\*\*\*\*)

This Work consists of installing casings for water service lines and water mains.

#### **Materials**

Section 7-08.2 is supplemented with the following:

(\*\*\*\*\*)

HDPE Casings shall be PE3408, DR9 HDPE pipe.

Steel casings shall have a minimum wall thickness of 0.4375 inch, minimum yield strength of 35,000 psi, and meet the requirements of ASTM 252 Grade 2 or 3.

Casing spacers shall have a minimum of 14-gauge Steel bands and where required, 10 gauge steel risers. Casing spacers shall have a minimum 10 mil. epoxy coating, 90-mil PVC, or neoprene liner, and shall be a minimum of 12-inches in width, with a minimum of 2" wide runner

Casing end seals shall be a minimum of 1/8-inch thick Styrene Butadiene Rubber (SBR) with two stainless steel straps and clamps,.

### **Construction Requirements**

Section 7-08.3 is supplemented with the following:

(\*\*\*\*\*)

#### ***HDPE Casings***

HDPE casings shall be installed as specified and detailed in the Plans. Following installation of the HDPE casings, Tacoma Water will be responsible for installing water services within the HDPE casings. Installation of HDPE casing end seals will be completed by Tacoma Water following installation of water services within HDPE casings.

## **Steel Casings**

Steel casings shall be installed encasing the water main pipes specified and detailed in the Plans. Casing spacers shall be equally spaced within the casing and have a minimum of 3 spacers for each section of pipe up to 20 feet in length. Casing spacers shall be sized to center the water main pipes within its respective casing pipe. Sand shall be placed in all voids of the casing, between the casing and the pipe, prior to installing the end seals.

## **Measurement**

Section 7-08.4 is supplemented with the following:

(\*\*\*\*\*)

HDPE and steel casing will be measured by the linear foot, for the length of the casing, as staked by the Engineer.

## **Payment**

Section 7-08.5 is supplemented with the following:

(\*\*\*\*\*)

"HDPE Casing \_\_\_\_\_ In. Diam.", per linear foot

The unit contract price per linear foot for "HDPE Casing \_\_\_\_\_ In. Diam." shall include all costs for the installation of the \_\_\_\_\_ inch diameter HDPE casing, including but not limited to the excavation, backfill, bedding, HDPE casing, and all labor, materials and equipment required to install the casing as specified.

"Steel Casing \_\_\_\_\_ In. Diam.", per linear foot

The unit contract price per linear foot for "Steel Casing \_\_\_\_\_ In. Diam." shall include all costs for the installation of the \_\_\_\_\_ inch diameter steel casing, including but not limited to the steel casing, casing spacers, sand placement, end seals, and all labor, materials and equipment required to install the casing as specified.

All material, labor and equipment costs for excavating, backfilling and bedding for the steel casing shall be included in the water main bid item that the steel casing is encasing.

## **Water Mains**

### **Description**

Section 7-09.1 is supplemented with the following:

(\*\*\*\*\*)

The Contractor shall manage and dispose of water resulting from draining water mains in preparation to making connections to existing water mains.

Any part of work not specifically covered by these specifications shall be in accordance with the American Water Works Association (AWWA) Standard Specifications and the Ductile Iron Pipe Research Association (DIPRA).

1       **Definitions**

2  
3       Section 7-09.1(1) is supplemented with the following:

4  
5       (\*\*\*\*\*)

6       **Excavation for Removing Sample Stations**

7       The Contractor shall excavate for the removal of sampling stations as directed by  
8       the Engineer.  
9

10      **Materials**

11  
12      Section 7-09.2 is revised to read:

13  
14      (\*\*\*\*\*)

15      The following requirements shall apply for the Tacoma Water water main:

16  
17      **Aggregates:**

18      Gravel Backfill for Pipe Zone Bedding	9-03.9(3)
19      Pipe Zone Backfill	9-03.9(3)
20      Trench Backfill	9-03.9(3)

21  
22      Gravel Backfill for Pipe Bedding, Pipe Zone Backfill, and Trench Backfill shall meet  
23      the requirements of Section 9-03.9(3) for Crushed Surfacing Top Course. No  
24      recycled material shall be used for water main backfill.  
25

26      **Ductile Iron Pipe**

27      Ductile iron pipe shall be centrifugally cast and meet the requirements of AWWA  
28      C151. Ductile iron pipe shall have a cement mortar lining meeting the requirements  
29      of AWWA C104. Ductile iron pipe shall be a minimum of Special Class 52 and  
30      manufactured by one of the following:

31  
32      A.   for Tyton Joint:

- 33          1.   Griffin Pipe Company  
34          2.   Pacific States Cast Iron Pipe Company  
35          3.   U.S. Pipe and Foundry Company  
36

37      B.   for Fastite Joint:

- 38          1.   American Cast Iron Pipe Company  
39

40      C.   for Mechanical Joint:

- 41          1.   American Cast Iron Pipe Company  
42          2.   Griffin Pipe Company  
43          3.   Pacific States Cast Iron Pipe Company  
44          4.   U.S. Pipe and Foundry Company  
45

46      All gaskets furnished with pipe shall be styrene butadiene rubber (SBR) and shall  
47      conform to ANSI/AWWA C111.  
48

49      **Fittings**

50      Ductile iron flanges and flanged ductile iron spool pieces shall be in accordance  
51      with ANSI/AWWA C115.  
52

1 All T-head bolts and nuts supplied for mechanical joint fittings, valves, sleeves,  
2 couplings, etc., shall be made of high-strength, low alloy steel conforming to  
3 ANSI/AWWA C111 unless specified otherwise. All other bolts and nuts shall be hot  
4 dipped galvanized or electroplated and conform to ASTM A 307, Grade B.  
5

6 All ductile iron fittings shall conform to the latest ANSI/AWWA C110 Specifications  
7 or ANSI/AWWA C153 for Mechanical Joint Compact Ductile Iron Class 350 fittings.  
8 All fittings shall have either cement-mortar lining conforming to ANSI/AWWA C104  
9 or fusion bonded epoxy internal lining in accordance with ANSI/AWWA C153.  
10 Mechanical joint glands supplied with the above fittings shall be ductile iron in  
11 accordance with the above specifications. The mechanical joint fittings/pipe shall be  
12 installed and the bolts tightened in the sequence and to the torque specified by the  
13 Ductile Iron Pipe Research Association. Types of joints or other special items shall  
14 be as specified in Section 7-10 or in the Plans.  
15

### 16 **Restrained Joints**

17 Mechanical joint restraint shall be incorporated in the design of the follower gland  
18 and shall include a restraining mechanism which, when actuated, imparts multiple  
19 wedging action against the pipe, increasing its resistance as the pressure  
20 increases. Joint flexibility shall be maintained after burial. Glands shall be  
21 manufactured of ductile iron conforming to ASTM A 536-80. Dimensions of the  
22 gland shall be such that it can be used with the standardized mechanical joint bell  
23 and tee-head bolts conforming to ANSI/AWWA C111/A21.11 and ANSI/AWWA  
24 C153/A21.53. Twist-off nuts, sized same as tee-head bolts, shall be used to ensure  
25 proper actuating of restraint devices. The mechanical joint restraint device shall  
26 have a working pressure of at least 250 pounds per square inch with a minimum  
27 safety factor 2:1 and shall be manufactured by one of the following:  
28

- 29 A. EBAA Iron, Inc. MEGALUG
- 30 B. Romac "RomaGrip"
- 31 C. Uniflange Series 1400
- 32 D. Or approved equal  
33

34 Restrained push on joint pipe shall be a boltless design approved for above ground  
35 use and shall be as manufactured by one of the following:  
36

- 37 A. U.S. Pipe, TR FLEX® Restrained Joint, Ductile Iron Pipe
- 38 B. McWayne Cast Iron Pipe Co., THRUST-LOCK™ Restrained Joint, Ductile  
39 Iron Pipe
- 40 C. McWayne Cast Iron Pipe Co., TR FLEX® Restrained Joint, Ductile Iron  
41 Pipe
- 42 D. AMERICAN Ductile Iron Pipe Co., Flex-Ring® Restrained Joint, Ductile  
43 Iron Pipe
- 44 E. Or approved equal  
45

### 46 **Bolted, Sleeve Type Couplings for Plain End Pipe**

47 Bolted, sleeve-type couplings, reducing or transition couplings shall be mechanical  
48 style flexible coupling meeting AWWA C219 with minimum 7 inch center ring, epoxy  
49 coating, and stainless steel bolts. End Cap Couplings shall be mechanical style  
50 flexible coupling meeting AWWA C219 with minimum 7 inch center ring, stainless  
51 steel nuts and bolts, epoxy coating, and tapped 2 inch.  
52

### **Flexible Expansion Joint Fitting for Ductile Iron Pipe**

Flexible expansion joint fittings shall be installed in the locations indicated on the drawings and shall be manufactured of ductile iron conforming to the material requirements of ASTM A536 and ANSI/AWWA C153/A21.53. Foundry certification of material shall be readily available upon request.

Each flexible expansion joint fitting shall be pressure tested prior to shipment against its own restraint to a minimum of 250 PSI. A minimum 2:1 safety factor, determined from the published pressure rating, shall apply.

Each flexible expansion joint fitting shall consist of an expansion joint designed and cast as an integral part of a ball and socket type flexible joint, having a minimum per ball deflection of: 25 degrees, 4"-8"; 20 degrees, 10"-12"; 15 degrees, 14"+ and 6 inches minimum expansion. The flexible expansion joint fitting shall not expand or exert an axial imparting thrust under internal water pressure. The flexible expansion fitting shall not increase or decrease the internal water volume as the unit expands or contracts.

All internal surfaces (wetted parts) shall be lined with a minimum of 15 mils of fusion bonded epoxy conforming to the applicable requirements of ANSI/AWWA C213. Sealing gaskets shall be constructed of EPDM. The coating and gaskets shall meet ANSI/NSF-61.

Exterior surfaces shall be coated with a minimum of 6 mils of fusion bonded epoxy conforming to the applicable requirements of ANSI/AWWA C116/A21.16.

Polyethylene sleeves, meeting ANSI/AWWA C105/A21.5, shall be included for direct buried applications.

Manufacturer's certification of compliance to the above standards and requirements shall be readily available upon request.

### **Mechanical Pipe Penetration Seals**

The Contractor shall use a modular, mechanical seal, consisting of rubber links shaped to continuously fill the annular space between the pipe and the wall opening. Hardware shall be stainless steel with a 85,000 psi average tensile strength in accordance with ASTM F593-95. Each link shall have permanent identification of the size and manufacturer's name molded into the pressure plate and sealing element.

All materials shall conform to American Water Works Association (AWWA) and the Ductile Iron Pipe Research Association (DIPRA).

## **Construction Requirements**

Section 7-09.3 is supplemented with the following:

(\*\*\*\*\*)

1 Trench Excavation shall be loaded directly onto trucks and removed from the project  
2 site. Trench Excavation shall not be stockpiled along the trench or on paved streets,  
3 driveways, or sidewalks. Trench Excavation material will not be used as backfill material  
4 for the water main trench.

5  
6 In laying pipe, care shall be taken to insure that the interior of the pipe is kept free of  
7 foreign matter or trench water.

### 8 9 ***Tacoma Water Preconstruction Conference***

10 A preconstruction conference shall be held prior to beginning water main Work. Those  
11 attending representing the Contractor shall at a minimum include all foremen and  
12 subcontractor representatives responsible for water main Work. Those attending  
13 representing the Contracting Agency will be determined by the Contracting Agency at  
14 the time of the conference. Those attending representing Tacoma Water will be  
15 determined by Tacoma Water at the time of the conference. The meeting agenda will  
16 cover contract compliance, safety, and construction.

17  
18 The Contractor shall propose a date and time for the conference to Tacoma Water and  
19 to the Engineer. The conference will not be held until the Contractor has received  
20 approval from Tacoma Water and the Engineer.

21  
22 The contact person at Tacoma Water for scheduling the conference is:

23  
24 Gary Gates  
25 Tacoma Water Construction Inspection Supervisor  
26 Office: (253) 502-8742  
27 Cell: (253) 255-8434  
28

### 29 ***Grade and Alignment***

30  
31 First sentence of the third paragraph of Section 7-09.3(5) is revised to read:

32  
33 (\*\*\*\*\*)  
34 The depth of trenching for water mains shall be such as to give a minimum cover of  
35 42 inches over the top of pipe unless otherwise specified on the plans, within these  
36 Special Provisions, or approved by the Engineer.

### 37 38 ***Trench Excavation***

39  
40 Third sentence of the second paragraph of Section 7-09.3(7) is revised to read:

41  
42 (\*\*\*\*\*)  
43 The minimum trench width shall be the outside pipe diameter plus 16 inches. The  
44 maximum trench width shall not exceed 48 inches unless otherwise approved by  
45 the Engineer.

46  
47 All excavated material shall be removed from the project and disposed of in  
48 accordance with Section 2-03.3(7)C. All backfill shall be imported and shall meet  
49 the requirements of Section 9-03.9(3).

### 50 51 ***Backfilling Trenches***

52

1 Section 7-09.3(10) is supplemented with the following:  
2

3 (\*\*\*\*\*)

4 No recycled material shall be used for water main trench backfill. Unless otherwise  
5 specified, Tacoma Water will require full depth Crushed Surfacing Top Course for  
6 trench backfill.  
7

### 8 ***General Pipe Installation*** 9

10 First sentence of the first paragraph of Section 7-09.3(12) is revised to read:  
11

12 (\*\*\*\*\*)

13 Pipe shall be installed in accordance with the manufacturer's printed specifications  
14 and instructions and to the standards of the AWWA and DIPRA for installing the  
15 type of pipe used.  
16

### 17 ***Cutting Pipe*** 18

19 Section 7-09.3(14) is supplemented with the following:  
20

21 (\*\*\*\*\*)

22 Pipe ends used for bell and spigot joints shall have a bevel of 30 degrees from  
23 center and 1/4 inch from the end.  
24

### 25 ***Cleaning and Assembling Joint*** 26

27 Section 7-09.3(16) is supplemented with the following:  
28

29 (\*\*\*\*\*)

30 Only the lubricant specified by the pipe manufacturer and approved by AWWA  
31 C111/A21.11-95 paragraph 4.4.4, and NSF/ANSI Standard 61, latest edition, shall  
32 be used for all rubber gaskets. It shall be delivered to the Project in closed  
33 containers and shall be kept clean.  
34

### 35 ***Connections*** 36

#### 37 ***Connections to Existing Mains*** 38

39 Fifth paragraph of Section 7-09.3(19)A is revised to read:  
40

41 (\*\*\*\*\*)

42 Tacoma Water will be responsible for notifying customers affected by  
43 shutdowns.  
44

45 Section 7-09.3(19)A is supplemented with the following:  
46

47 (\*\*\*\*\*)

48 When connecting new mains to existing mains, the Contractor shall clean out  
49 all new material that will go into immediate service with a chlorine solution prior  
50 to installation.  
51



When shutdowns for connection are required, the Contractor will coordinate and schedule with the Engineer a minimum of 5 working days prior to the scheduled time of shutdown. No shutdowns will be allowed without the approval of the Engineer and Tacoma Water. The Contractor shall pay a \$300.00 fee to Tacoma Water for each shutdown canceled by the Contractor after customer notification is made by Tacoma Water.

Existing valves used to shut down mains for connections are subject to leakage due to age and condition.

Only Tacoma Water crews will be allowed to operate system valves.

The existing pipe shall be kept clean and free of debris.

The Contractor shall manage and dispose of water resulting from leaking existing valves and draining water mains in preparation to making connections to existing water mains. Disposal shall be in accordance with the TESC Plan.

### **Maintaining Service**

Section 7-09.3(19)B is supplemented with the following:

(\*\*\*\*\*)

Tacoma Water will furnish all labor and materials necessary to provide temporary (hi-line) mains and services when necessary or as determined by the Engineer.

The Contractor shall notify the Project Engineer a minimum 10 working days in advance of abandonment of the existing water main. The Contractor shall provide access for Tacoma Water personnel to perform service connections and retirements. The Contractor may have some down time waiting for services to be hi-lined.

### **Blowoff Assemblies**

Section 7-09.3(22) is supplemented with the following:

(\*\*\*\*\*)

#### **Temporary Blowoff Assemblies**

Temporary Blowoff Assemblies shall be constructed at the locations shown in the Plans and in accordance with sheet Tacoma Water drawing 17-56-1.

### **Hydrostatic Pressure Test**

Section 7-09.3(23) is supplemented with the following:

(\*\*\*\*\*)

Hydrostatic pressure testing shall be conducted in the presence of the Engineer and the City of Tacoma Engineer. The Tacoma Water Construction Inspector will provide a set of pressure gauges. Testing shall conform to DIPRA standards.

1 The Contractor shall provide 10 working days notice to the following Tacoma Water  
2 personnel prior to testing. Notification shall be made to:

3  
4 Gary Gates  
5 Tacoma Water Construction Inspection Supervisor  
6 Office: (253) 502-8742  
7 Cell: (253) 255-8434  
8

9 Ryan Flynn  
10 Tacoma Water Design Project Engineer  
11 (253) 396-3111  
12

### 13 **Testing Extensions From Existing Mains**

14  
15 Section 7-09.3(23)A is supplemented with the following:

16  
17 (\*\*\*\*\*)

18 Testing shall be conducted in the presence of the Engineer and the City of  
19 Tacoma Engineer. The Tacoma Water Construction Inspector will provide a set  
20 of pressure gauges. Testing shall conform to DIPRA standards.  
21

22 The Contractor shall provide 10 working days notice to the following Tacoma  
23 Water personnel prior to testing. Notification shall be made to:

24  
25 Gary Gates  
26 Tacoma Water Construction Inspection Supervisor  
27 Office: (253) 502-8742  
28 Cell: (253) 255-8434  
29

30 Ryan Flynn  
31 Tacoma Water Design Project Engineer  
32 (253) 396-3111  
33

### 34 ***Disinfection of Water Mains***

#### 35 **Flushing**

36  
37  
38 Section 7-09.3(24)A is supplemented with the following:

39  
40 (\*\*\*\*\*)

41 Only Tacoma Water crews will be allowed to flush, sample, and de-chlorinate  
42 newly installed water mains. Only Tacoma Water crews will be allowed to  
43 operate Tacoma Water system valves.  
44

45 Water for filling and flushing will be furnished without charge at such points as  
46 may be designated by the Engineer, in such quantities and at such times as it  
47 will not interfere with service.  
48

49 The Contractor shall provide 5 working days notice to the following Tacoma  
50 Water personnel prior to flushing. Notification shall be made to:

51  
52 Gary Gates

Tacoma Water Construction Inspection Supervisor  
Office: (253) 502-8742  
Cell: (253) 255-8434

Ryan Flynn  
Tacoma Water Design Project Engineer  
(253) 396-3111

### **Retention Period**

Section 7-09.3(24)K is revised to read:

(\*\*\*\*\*)

The chlorinated water resulting from the initial filling shall be retained in the line for a period of not less than 24 hours. After this period the chlorine residual at the pipe extremities and at other representative points shall be at least 25 p.p.m. Tacoma Water will then remove the chlorinated water and thoroughly flush the line. Tacoma Water will take initial bacterial test samples of water flowing in the line upon completion of the flushing.

A second set of bacterial test samples will be taken after a 24-hour retention period of the water remaining in the pipe after the initial flushing. Should the samples not test free of E coli and zero coli-form bacteria, the line shall be re-disinfected and re-flushed, at no additional expense to the Contracting Agency, until two successive satisfactory samples are obtained.

Two working days is the minimum time required by the bacteriological laboratory to process samples.

The Contractor shall provide ten working days notice to the following Tacoma Water personnel prior to final flushing and testing. Notification shall be made to:

Gary Gates  
Tacoma Water Construction Inspection Supervisor  
Office: (253) 502-8742  
Cell: (253) 255-8434

Ryan Flynn  
Tacoma Water Design Project Engineer  
(253) 396-3111

### **Final Flushing and Testing**

First paragraph of Section 7-09.3(24)N is supplemented with the following:

(\*\*\*\*\*)

Tacoma Water will be responsible for flushing the newly-laid pipe.

Second paragraph of Section 7-09.3(24)N is revised to read:

(\*\*\*\*\*)

1 Corporation stops with copper pipe stubs will be installed by Tacoma Water  
2 crews at selected points along the pipeline for use as sampling stations and  
3 points to apply test pressure. The sampling stations will be removed by  
4 Tacoma Water crews after successful bacteriological tests and pressure tests  
5 are completed.  
6

7 Tacoma Water will take initial bacteriological test samples of water flowing in  
8 the line upon completion of the flushing.  
9

10 A second set of bacteriological test samples will be taken by Tacoma Water  
11 after a 24 hour retention period of the water remaining in the pipe after the  
12 initial flushing.  
13

14 Third paragraph of Section 7-09.3(24)N is revised to read:  
15

16 (\*\*\*\*\*)

17 The line shall not be placed in service until two successive sets of  
18 bacteriological test samples are shown to be free of E. coli and total coli-form  
19 bacteria.  
20

21 Two working days is the minimum time required by the bacteriological  
22 laboratory to process samples.  
23

24 Section 7-09.3(24)N is supplemented with the following:  
25

26 (\*\*\*\*\*)

27 Removal of sample stations will be coordinated with the Contractor. The water  
28 main Contractor shall complete all excavation required for removal of the  
29 sample stations.  
30

31 The Contractor shall perform all excavation necessary to facilitate removal of  
32 the sample stations by Tacoma Water.  
33

34 The Contractor shall provide ten working days notice to the following Tacoma  
35 Water personnel prior to final flushing and testing. Notification shall be made  
36 to:  
37

38 Gary Gates  
39 Tacoma Water Construction Inspection Supervisor  
40 Office: (253) 502-8742  
41 Cell: (253) 255-8434  
42

43 Ryan Flynn  
44 Tacoma Water Design Project Engineer  
45 (253) 396-3111  
46

## 47 **Measurement**

48  
49 Section 7-09.4 is supplemented with the following:  
50

51 (\*\*\*\*\*)

Excavation for removing sample stations will be measured by the cubic yard. The horizontal limits will be the sides of the excavation. The vertical limit will be measured from the ground surface to the top of the main.

## Payment

The third paragraph of Section 7-09.5 is revised to read:

(\*\*\*\*\*)

The unit Contract price per linear foot for each size and kind of "\_\_\_\_Pipe for Water Main \_\_\_\_\_ In. Diam." shall be full pay for all Work to complete the installation of the water main including but not limited to trench excavation, bedding, laying and jointing pipe and fittings, backfilling, temporary and permanent concrete thrust blocking, temporary blow-off assembly, testing, flushing, disinfecting the pipeline, cleanup, time spent waiting for sample processing, and time spent waiting for work to be complete by Tacoma Water.

Section 7-09.5 is supplemented with the following:

(\*\*\*\*\*)

"Excavation for Removing Sample Stations", by cubic yard.

The unit Contract price Bid per cubic yard for "Excavation for Removing Sample Stations" shall be full pay for all labor, equipment, and material for all excavation necessary for Tacoma Water personnel to remove sample stations including but not limited to removal and replacement of temporary pavement, excavation, and backfilling.

"Management of Water During Connections", by force account as provided in Section 1-09.6.

Payment for "Management of Water During Connections" will be by force account in accordance with Section 1-09.6, including removal and disposal of water drained from water mains in preparation to making connections, managing water leaking from valves while connecting to existing water mains, and disposing of water in accordance with the TESC plan. For the purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount for the item "Management of Water During Connections" in the bid proposal to become a part of the total bid by the Contractor.

## Valves for Water Mains

### Materials

"Gate Valves (3 to 16 inches) 9-30.3(1)" of Section 7-12.2 is revised to read:

(\*\*\*\*\*)

#### **Gate Valves (3 inches to 16 inches)**

All gate valves shall be resilient seat and shall comply with the ANSI/AWWA standard as listed below:

- A. All resilient seat gate valves shall conform to the latest revision of AWWA Standard C-509/515 and be UL listed, FM approved. They shall be manufactured by one of the following:

1. American Flow "Series 500"
2. AVK-series 25
3. Clow model "RS"
4. East Jordan Iron Works, "Flowmaster"
5. Kennedy model "RWGV-96"
6. M&H: Style "4067"
7. M&H: Style "7000 series"
8. Mueller Style "2360"
9. NIBCO 619-RW Series
10. U.S. Pipe "Metroseal 250"
11. Or approved equal

B. All resilient seat gate valves shall meet the following requirements:

1. The body and bonnet shall be coated with a fusion bonded epoxy coating meeting all the application and performance requirements of AWWA C-550.
2. All gate valve ends shall be as shown in the Plans and conform to the applicable ANSI/AWWA standard. Flanged ends shall conform to ANSI B16.1 class 125 or C110 A21.10. Mechanical joint and push-on joint shall conform to ANSI/AWWA C111, A21.11
3. All gate valves, 16 inch and larger, shall be horizontal stem, equipped with machine cut cast steel bevel gears, enclosed type grease case, position indicators and bypass, all in accordance with AWWA Specifications.

"Butterfly Valves 9-30.3(3)" of Section 7-12.2 is revised to read:

(\*\*\*\*\*)

**Butterfly Valves**

All butterfly valves shall conform to ANSI/AWWA C504 for Rubber Seated Butterfly Valves, Class 150B.

A. All butterfly valves shall be manufactured by one of the following:

1. Henry Pratt "Groundhog"
2. M&H/Clow "4500"
3. Mueller "Linesal III"
4. Or approved equal

"Valve Boxes 9-30.3(4)" of Section 7-12.2 is revised to read:

(\*\*\*\*\*)

**Valve Boxes**

Cast iron valve boxes and lids shall be as indicated on Tacoma Water Drawing No. 17-56-1. All buried valves shall be provided with a valve box and lid with an extension of cast iron soil pipe as necessary. The Contractor shall maintain the location and provide access to all valves within the Project. No valve box shall remain buried during construction.

**Payment**

1 Last paragraph of Section 7-12.5 is revised to read:

2  
3 (\*\*\*\*\*)

4 The unit Contract price per each for the valve specified shall be full pay for all Work to  
5 furnish and install the valve complete in place on the water main, including trenching,  
6 jointing, blocking of valve, painting, disinfecting, hydrostatic testing, valve box, and  
7 raising the valve box to finished grade in accordance with Tacoma Water drawing 17-56-  
8 1 including the concrete ring and asphalt patch at valve box.  
9

## 10 **Service Connections**

## 11 12 **Construction Requirements**

13  
14 Section 7-15.3 is revised to read as follows:

15  
16 (\*\*\*\*\*)

17 Tacoma Water will be responsible for making service connections to the new water main  
18 and transferring services from the existing water main. The transfer of services will  
19 include inserting water services within the HDPE casing pipe installed by the Contractor.  
20

21 The Contractor shall notify the Project Engineer a minimum 10 working days in advance  
22 of abandonment of the existing water main. The Contractor shall provide access for  
23 Tacoma Water personnel to perform service connections and retirements.  
24

## 25 **Division 8** 26 **Miscellaneous Construction**

## 27 28 **Erosion Control and Water Pollution Control**

### 29 30 **Description**

31  
32 Section 8-01.1 is supplemented with the following:

33  
34 (\*\*\*\*\*)

35 This Work consists of constructing temporary access roads and work pads for wet  
36 weather construction of Puyallup River Bridge No. 162 / 006 as construction of the  
37 bridge shall continue in wet weather. This work shall also consist of constructing a flow  
38 spreader to evenly disperse storm water entering a biofiltration swale from a storm  
39 sewer pipe.  
40

### 41 **Materials**

42  
43 Section 8-01.2 is supplemented with the following:

44  
45 (\*\*\*\*\*)

46 Timber and lumber for flow spreader shall conform to the species and grades listed  
47 below.  
48

49 Douglas Fir	No. 2, or better
50 Hem-Fir	No. 2, or better

1 All timber and lumber for flow spreaders shall be treated in accordance with Section 9-  
2 09.3.

3  
4 Lag screws and washers shall be as specified in the Contract Plans. Acceptance will be  
5 by visual inspection.

6  
7 (\*\*\*\*\*)

8 Quarry spalls, crushed surfacing, construction geotextile for separation, and other  
9 materials used for the wet weather surfacing will be visually accepted.

## 10 11 **Construction Requirements**

12  
13 Section 8-01.3 is supplemented with the following:

14  
15 (\*\*\*\*\*)

16 The flow spreader area shall be excavated to the dimensions shown in the plans. The  
17 treated wood 4x4 anchor posts and treated wood 4x12 spreader plate shall be installed  
18 as shown in the plans prior to backfilling excavated area with quarry spalls.

### 19 20 **General**

#### 21 22 **Submittals**

23  
24 Section 8-01.3(1)A is supplemented with the following:

25  
26 (April 3, 2006)

27 Prior to beginning any concrete or grinding work, the Contractor shall submit a  
28 plan, for the Engineer's review and approval, outlining the procedures to be  
29 used to prevent high pH stormwater or dewatering water from entering surface  
30 waters. The plan shall include how the pH of the water will be maintained  
31 between pH 6.5 and pH 8.5 prior to being discharged from the project or  
32 entering surface waters.

33  
34 (OR February 1, 2011)

35 A temporary erosion and sediment control (TESC) narrative is included in the  
36 Appendix of these provisions and is made part of the contract.

#### 37 38 **Erosion and Sediment Control (ESC) Lead**

39  
40 In Section 8-01.3(1)B, the second paragraph is supplemented with the following:

41  
42 (OR February 1, 2011)

43 3. Updating and maintaining a TESC file on site that includes, but is not  
44 limited to:

- 45  
46 a. Erosion and Sediment Control Inspection Forms.
- 47  
48 b. Temporary Erosion and Sediment Control (TESC) Plan and narrative.
- 49  
50 c. Other applicable permits.
- 51



- d. Contracting Agency-supplied stormwater monitoring reports, if applicable.
- e. National Pollutant Discharge Elimination System construction permit (Notice of Intent).
- f. Contracting Agency-supplied NPDES permit coverage letter.

Upon request, the file shall be provided to the Engineer for review.

Section 8-01.3(1)B is supplemented with the following:

(OR March 16, 2011)

In addition to those outlined in Section 8-01.3(1)B, the duties of the ESC Lead shall also include the inspection of all stormwater discharge points at least once every calendar week and within 24 hours of runoff events in which stormwater discharges from the site. The discharge points are identified in the Plans.

### ***Seeding, Fertilizing and Mulching***

#### **Seeding and Fertilizing**

Section 8-01.3(2)B is supplemented with the following:

(August 4, 2014)

Seed of the following mix, rate, and analysis shall be applied at the rates shown below on all areas requiring \*\*\* Levee Seed Mix, within the Puyallup River levee impact areas \*\*\* seeding within the project:

<u>Seed by Common Name, (Botanical Name), and "Source Identification"</u>	<u>Pounds Pure Live Seed (PLS) Per Acre</u>
***	
California brome ( <i>Bromus carinatus</i> )	39
Alaska brome ( <i>Bromus sitchensis</i> )	13
California oatgrass ( <i>Danthonia californica</i> )	9
Common wild oats ( <i>Danthonia spicata</i> )	4
Blue wildrye ( <i>Elymus glaucus</i> )	29
<u>Western fescue (<i>Festuca occidentalis</i>)</u>	<u>6</u>
Total	100 ***

Source Identified seed shall be generation four or less. Non-Source Identified seed shall meet or exceed Washington State Department of Agriculture Certified Seed Standards and be from within the appropriate genetic zones of

the \*\*\* Puget Lowland \*\*\* Ecoregion(s) as defined by the US Environmental Protection Agency (EPA).

The seed certification class shall be Certified (blue tag) in accordance with WAC 16-302 and meet the following requirements:

Prohibited Weed	0% max.
Noxious Weed	0% max.
Other Weed	0.20% max.
Other Crop	0.40% max.

The Contractor shall document all Source Identified seed by providing the Association of Official Seed Certifying Agents (AOSCA) yellow seed label for each species in the mix. Site Identification Logs can be supplied for collections where the AOSCA yellow label is not available.

### **Mulching**

Section 8-01.3(2)D is supplemented with the following:

(January 3, 2006)

\*\*\* Long term \*\*\* mulch shall be applied at a rate of \*\*\* 3500 \*\*\* pounds per acre.

### ***Stabilized Construction Entrance***

Section 8-01.3(7) is supplemented with the following:

(\*\*\*\*\*)

For areas outside stabilized construction entrance limits, temporary construction access roads and work pads necessary for the construction of Puyallup River Bridge No. 162 / 006 shall be constructed by means and methods chosen by the Contractor. The temporary construction access roads and work pads shall be stable and usable in wet weather conditions. Construction of Puyallup River Bridge No. 162 / 006 shall continue in wet weather. No unworkable days will be granted due to wet weather impeding the construction of the bridge due to the temporary construction access roads and work pads being unusable

The access roads, work pads, and surfacing shall be maintained so that they remain functional for the duration of the Puyallup River Bridge No. 162 / 006 construction and during inclement weather.

All materials used for temporary wet weather access roads and work pads shall be removed by the Contractor and disposed off right of way unless otherwise approved by the Engineer.

All disturbed ground outside the roadway prism shall be restored to original contours.

### **Measurement**

Section 8-01.4 is supplemented with the following:

(\*\*\*\*\*)

Flow spreader will be measured per each for each flow spreader installed.

## Payment

Section 8-01.5 is supplemented with the following:

(April 3, 2006)

All costs associated with the treatment of pH in high pH stormwater or dewatering water shall be included in the applicable concrete, grinding or sawcutting items of work.

(\*\*\*\*\*)

"Flow Spreader", per each.

The unit contract price per each for "Flow Spreader" shall be full pay for all costs for excavation below the bottom of the adjacent bioswale and for providing and installing treated wood 4x4 anchor posts, treated wood 4x12 spreader plate, and all hardware .

(\*\*\*\*\*)

All costs for materials, grading, constructing, maintaining, and removing wet weather temporary access roads and or work pads outside the stabilized construction entrance limits shall be included in other items of work.

## Roadside Restoration

### Description

Section 8-02.1 is supplemented with the following:

(\*\*\*\*\*)

This work consists of excavating and removing side slopes and placing compost amended vegetative filter strip (CAVFS).

### Materials

Section 8-02.2 is supplemented with the following:

(\*\*\*\*\*)

CAVFS soils shall consist of the following:

CSTC	50%	9-03.9(3):
Medium Compost	50%	9-14 .4(8):
	pH 5-7	

Seed mixture	8-01.3(2)B as supplemented in the Seeding and Fertilizing section of these Contract Provisions
--------------	--

Mulching	8-01.3(2)D
----------	------------

### Construction Requirements

Section 8-02.3 is supplemented with the following:

(\*\*\*\*\*)

**Compost Amended Vegetated Filter Strip  
Soil amendment**

The compost amended vegetated filter strip (CAVFS) soil shall be uniformly mixed, at a location other than the shoulder or roadway surface, prior to being placed in the excavation.

**Vegetation**

After the CAVFS soils have been placed, that area shall be prepared in accordance with Section 8-01.3(2)A. The CAVFS soil shall be seeded as specified in Section 8-01.3(2)B and as supplemented in the Seeding and Fertilizing section of these Contract Provisions. Seeding of the CAVFS shall occur on the same day that the CAVFS soils are installed.

Mulching shall be in accordance with Section 8.01.3(2)D and these Contract Provisions.

**Planting Area Preparation**

Section 8-02.3(5) is supplemented with the following:

(\*\*\*\*\*)

Areas requiring planting which are or become compacted due to, construction use, such as staging areas and access roads, and in areas that existing pavement is being removed shall be loosened and cultivated to a minimum depth of 12 inches prior to compost, bark placement, or as directed by the Engineer.

No cultivation shall occur in within the drip line of existing vegetation scheduled to remain.

(\*\*\*\*\*)

After final grading is completed, all designated seeding, fertilizing, and mulching, and all designated planting areas shall be covered with fine compost.

The Contractor shall notify the Engineer a minimum of five working days prior to the start of compost work.

Fine compost shall not be placed when a condition exists, such as frozen soil or water saturated soil that may be detrimental to successful application, incorporation, or soil structure.

After placement of the compost, the Contractor shall incorporate the layer uniformly into the existing soil to a depth of 2 inches.

**Measurement**

Section 8-02.4 is supplemented with the following:

(\*\*\*\*\*)

Compost amended vegetated filter strip will be measured by the square yard by ground slope measurement.

1 **Payment**

2  
3 Section 8-02.5 is supplemented with the following:

4  
5 (\*\*\*\*\*)

6 "Compost Amended Vegetated Filter Strip" per square yard.

7 The unit contract price per square yard for "Compost Amended Vegetated Filter Strip"  
8 shall be full pay for all Work to complete the construction of the Compost Amended  
9 Vegetated Filter Strip including obtaining and placing CAVFS material as specified.

10  
11 Seeding, Fertilizing and Mulching will be measured and paid in accordance with Section  
12 8-01.

13  
14 Any roadway excavation or placement of borrow required prior to placement of CAVFS  
15 material will be measured and paid in accordance with the contract bid items for  
16 roadway excavation and borrow, respectively.

17  
18 (\*\*\*\*\*)

19 "Fine Compost \_\_\_\_ In. Blanket", per acre.

20 The unit Contract price per acre for "Fine Compost \_\_\_\_ In. Blanket" shall be full pay for  
21 furnishing and spreading the compost onto the exiting soil to the depth specified.

22  
23 **Guide Posts**

24  
25 **Materials**

26  
27 Section 8-10.2 is supplemented with the following:

28  
29 (OR April 7, 2009)

30 Ground mounted guide posts with metal anchors will not be allowed.

31  
32 **Guardrail**

33  
34 **Description**

35  
36 Section 8-11.1 is supplemented with the following:

37  
38 (\*\*\*\*\*)

39 This work consists of furnishing and installing permanent and temporary guardrail  
40 connections, including removing temporary guardrail connections.

41  
42 **Construction Requirements**

43  
44 Section 8-11.3 is supplemented with the following:

45  
46 (\*\*\*\*\*)

47 ***Temporary Guardrail Connection***

48 Temporary concrete barrier shall be connected to fixed concrete barrier or other precast  
49 barrier by using a temporary guardrail connection type 1 as shown in the Plans. When  
50 the temporary concrete barrier is removed the guardrail and anchor bolts shall be  
51 removed in accordance with Section 8-11.3(1)D.

1  
2 **Beam Guardrail**  
3

4 Section 8-11.3(1) is supplemented with the following:  
5

6 (April 5, 2010)

7 This project may contain a mixture of steel and wood posts. The bidder is advised  
8 that post selection will be as detailed in the plans and these specifications.  
9

10 **Measurement**  
11

12 Section 8-11.4 is supplemented with the following:  
13

14 (\*\*\*\*\*)

15 Temporary Guardrail Connection will be measured per each. End sections will be  
16 considered part of the guardrail connection and will be included in the measurement of  
17 the temporary guardrail connection.  
18

19 **Payment**  
20

21 Section 8-11.5 is supplemented with the following:  
22

23 (\*\*\*\*\*)

24 "Temporary Guardrail Connection Type \_\_\_\_", per each.

25 The unit contract price per each for "Temporary Guardrail Connection Type \_\_\_\_" shall be  
26 full pay for all costs to perform the Work as specified.  
27

28 **Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and**  
29 **Electrical**  
30

31 **Materials**  
32

33 Section 8-20.2 is supplemented with the following:  
34

35 ***Fiber Optic Cable, Electrical Conductors, and Cable***  
36

37 **Electrical Conductors and Cable**  
38

39 **Detector Loop Wire**  
40

41 Section 9-29.3(2)F is supplemented with the following:  
42

43 (\*\*\*\*\*)

44 Detector loop conductors shall be No. 14 AWG stranded copper  
45 conductors, class B, with Type XLP/USE insulation or shall be No. 14  
46 stranded copper conductors conforming to IMSA 51-3 or IMSA 51-5  
47 requirements.  
48

49 **Induction Loop Detectors**  
50

51 Section 9-29.18(1) is supplemented with the following:

(\*\*\*\*\*)

### **Induction Loop Sealant**

Induction loop sealant shall be installed per the manufacturer's recommendations and shall be one of the following:

1. 3M – Detector Loop Sealant 5000. Color: Black.
2. Crafc0, Inc. – Loop Detector Sealant 271
3. QCM Industrial – EAS-14 Epoxy Adhesive System Loop
4. Detector Sealant Type 1 – High Viscosity.
5. Thoroc, Degussa Building Systems – Gold Label Flex 1P (one-part sealant).
6. Henry – HE760 Duraflex Detector Loop Sealant.

### **Induction Loop Vehicle Detectors**

Section 8-20.3(14)C is supplemented with the following:

(\*\*\*\*\*)

13. All sawcuts shall be smooth – the depth of each sawcut shall be uniform to prevent forming edges in the bottom of the sawcut. All sawcut corners shall be rounded to a minimum of 1.5 inches in diameter.
14. Sawcut widths shall be adjusted from Standard Plan J-50.15 as follows:
  - The width of the sawcut in Section A shall be a minimum of 1/16 inch wider than the diameter of the loop wire, up to a maximum of 3/8 inch wide.
  - The width of the sawcut in Section B shall be at least 1/16 inch wider than twice the diameter of the loop wire, up to a maximum of 5/8 inch wide.
15. Round loops shall be constructed with equipment specifically designed for cutting round loops, including a concave, diamond-segmented blade. Other methods of constructing round loops, such as anchoring a router or flat blade saw, shall not be used
16. 6 foot diameter Type 3 induction loops (Standard Plan J-50.12) may be substituted for 6' x 6' square Type 2 induction loops (Standard Plan J-50.11).
17. For loops designated in the Contract Plans to be removed from service and replaced (with either new loops or alternate detection equipment), the Contractor shall notify the Project Engineer a minimum of five working days prior to removing the loops from service.

18. Existing loops must be restored to service or replaced with new, operational loops, within two calendar days of removing the existing loop from service. Where stop bar loops are to be replaced with video detectors, the associated video detector must be operational prior to removing any stop bar loop from service. Failure to restore detection as described here will result in the assessment of liquidated damages in accordance with the Special Provision **TRAFFIC SIGNAL OPERATION IMPACTS**.

## **Measurement**

Section 8-20.4 is supplemented with the following:

(\*\*\*\*\*)

Induction loop will be measured per each complete loop installed.

## **Payment**

Section 8-20.5 is supplemented with the following:

(\*\*\*\*\*)

"Induction Loop Type 2", per each.

The unit contract price per each for "Induction Loop Type 2", shall be full pay for furnishing, installing, and testing vehicle detection loops, lead-in conduit, adjusting junction box, and all costs associated with abandoning or removing existing vehicle detection loops.

## **Permanent Signing**

### **Materials**

#### ***Roadside Sign Structures***

Section 9-06.16 is supplemented with the following:

**(January 3, 2011)**

#### **Perforated Steel Square Sign Post System**

Where noted in the Plans, steel sign post systems shall be square, pre-punched galvanized steel tubing, that are NCHRP 350 Test Level 3 Certified and FHWA approved. The steel sign post system shall include all anchor sleeves, and other hardware required for a complete sign installation.

#### **System Acceptance**

Systems listed in the current QPL will be accepted per the QPL approval code. Systems not listed in the QPL will be accepted based on a Supplier's Certificate of Compliance. The Supplier's Certificate of Compliance will be a contract specific letter from the supplier stating the system is NCHRP 350 Test Level 3 compliant.

#### ***Sign Support Structures***

Section 9-28.14 is supplemented with the following:



(January 3, 2011)

### Manufacturers for Steel Roadside Sign Supports

The Standard Plans lists several steel sign support types. These supports are patented devices and many are sole-source. All of the sign support types listed below are acceptable when shown in the Plans.

<u>Steel Sign Support Type</u>	<u>Manufacturer</u>
Type TP-A & TP-B	Transpo Industries, Inc.
Type PL, PL-T & PL-U	Northwest Pipe Co.
Type AS	Transpo Industries, Inc.
Type AP	Transpo Industries, Inc.
Type ST 1, ST 2, ST 3, & ST 4	Ultimate Highway Products, Allied Tube & Conduit, Inc., Northwest Pipe, Inc.
Type SB-1, SB-2, & SB-3	Ultimate Highway Products, Xcessories Squared Development and Manufacturing Incorporated, Northwest Pipe, Inc.

## Construction Requirements

### *Location of Signs*

The last sentence of Section 8-21.3(1) is deleted and replaced by the following:

(\*\*\*\*\*)

Final lengths of 2.5" and 3" square steel posts will be determined or verified by the Project Engineer at the request of the Contractor prior to fabrication. Final lengths of steel W-beam post will be determined by the Project Engineer prior to fabrication.

## Pavement Marking

### Description

Section 8-22.1 is supplemented with the following:

***(OR September 1, 2005)***

### ***Double Yellow Center Line***

Double yellow center line used as center line delineation on multilane, two-way highways shall be two SOLID YELLOW lines, each 4 inches wide, separated by a 12 inch space.

Double yellow center line used for channelization shall be two SOLID YELLOW lines, each 4 inches wide, separated by a 4 inch space.

1    **Temporary Pavement Markings**

2  
3    **Description**

4  
5    (OR February 25, 2009)

6    The second paragraph of Section 8-23.1 is deleted.

7  
8    Section 8-23.1 is supplemented with the following:

9  
10     (OR February 7, 2012)

11     Temporary pavement marking installations shall be placed in accordance with Standard  
12     Plan M-20.10.

13  
14     Paint shall be used for temporary pavement markings on all planed surfaces opened to  
15     traffic.

16  
17    **April 4, 2011**

18    **BOLLARDS**

19    **Description**

20    This work shall consist of furnishing and installing steel bollards in accordance with the  
21    Plans, Standard Plans, and these Specifications, at the locations shown in the Plans or as  
22    staked by the Engineer.

23  
24    **Materials**

25     ***Posts and Hardware***

26     Type 1 and Type 2 bollard posts shall be ASTM A 53, NPS 3 (3" Nom.) schedule 80  
27     steel pipe. Post sleeves shall be ASTM A 53, NPS 4 (4" Nom.) schedule 40 steel pipe.

28  
29     Type 3 bollard posts shall be steel structural tubing per ASTM A 500 Gr B.

30  
31     Steel plate shall be per ASTM A 36.

32  
33     All steel parts shall be hot-dip galvanized after fabrication in accordance with AASHTO  
34     M 111.

35  
36     ***Reflective Tape***

37     Reflective tape shall be one of the following or an approved equal:

38  
39         Scotchlite High Intensity Grade Series 2870

40         Reflexite AP-1000

41         Scotchlite Diamond Grade LDP Series 3970

42         T-6500 High Intensity (Type IV)

43  
44     ***Concrete***

45     Footings shall be constructed using concrete Class 3000.

46  
47    **Construction Requirements**

48    Bollards shall be constructed in accordance with the Standard Plans.

49  
50    Bollards shall not vary more than 1/2 inch in 30 inches from a vertical plane.

Bollard posts and the exposed parts of the base assembly shall be painted in accordance with Section 6-07.3(11) for galvanized surfaces. The top coat shall match Federal Standard 595, Color No. 33538 Traffic Signal Yellow.

#### **Measurement**

Measurement for bollards will be by the unit for each type of bollard furnished and installed.

#### **Payment**

Payment will be made in accordance with Section 1-04.1, for the following bid items:

"Bollard Type \_\_\_\_", per each.

#### **Appendices**

**(January 2, 2012)**

The following appendices are attached and made a part of this contract:

\*\*\*

##### **APPENDIX A:**

Summary of Geotechnical Conditions

##### **APPENDIX B:**

Log of Test Borings

##### **APPENDIX C:**

Temporary Erosion Sediment Control Plan Narrative

##### **APPENDIX D:**

Compliance Implementing Agreement between the Washington State Department of Ecology and the Washington State Department of Transportation Regarding Compliance with the State of Washington Surface Water Conditions.\*\*\*

**(October 23, 2014)**

#### **Standard Plans**

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 14-046, effective August 4, 2014 is made a part of this contract.

The Standard Plans are revised as follows:

##### A-50.10

Sheet 2 of 2, Plan, with Single Slope Barrier, reference C-14a is revised to C-70.10

##### A-50.20

Sheet 2 of 2, Plan, with Anchored Barrier, reference C-14a is revised to C-70.10

##### A-50.30

Sheet 2 of 2, Plan (top), reference C-14a is revised to C-70.10

##### A-60.10

Sheet 2, Section B, callout, WAS-"New Tie Bar ~ #5 x 30" (IN) Epoxy Coated Reinforcing Bar" is revised to read: "New Tie Bar ~ #5 x 30" (IN)"

B-10.20 and B-10.40

Substitute "step" in lieu of "handhold" on plan

B-15.60

Table, Maximum Knockout Size column, 120" Diam., 42" is revised to read; 96"

B-25.20

Add Note 7. See Standard Specification Section 8-04 for Curb and Gutter requirements

B-55.20

Metal Pipe elevation, title is revised to read; "Metal Pipe and Steel Rib Reinforced Polyethylene Pipe"

B-90.40

Offset & Bend details, add the subtitle, "Plan View" above titles

C-16a

Note 1, reference C-28.40 is revised to C-20.10

C-16b

Note 3, reference C-28.40 is revised to C-20.10

F-10.12

Section Title, was – "Depressed Curb Section" is revised to read: "Depressed Curb and Gutter Section"

G-50.10

Delete – Plan View (bottom center of sheet)

Delete – Mounting Bracket and Steel Strap Detail

G-60.10

Sheet 4, Screen Detail, callout – "drill and Tap for 1/4" diameter Cap Screw – Spacing approx. 9" o.c. ASTM F593, w/S.S. washer Liberally coat the threads with Anti-seize compound (TYP.)" is revised to read: "\*Drill and Tap 1/4" (IN) Diam. x 1" (IN) Cap Screw with washer ~ space approx.. 9" o.c. ~ Liberally coat threads with Anti-seize compound (TYP.)"

Add Boxed note: \* Bolts, Nuts, and washers ~ ASTM F593 or A193 Type 304 or Type 316 Stainless Steel (S.S.)

G-60.20

Side View, callout, "Anchor Rod ~ 1-3/4" Diam. x 4'-4" Threaded 8" Min. Each End; W/ 2 Washers & 4 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1'-0" Min." is revised to read; "Anchor Rod ~ 1-3/4" Diam. x 4'-4" Threaded 8" Min. Each End; W/ 2 Washers & 6 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1'-0" Min."

G-60.30

End View, callout, "Anchor Rod ~ 1-3/4" Diam. x 4'-4" Threaded 8" Min. Each End; W/ 2 Washers & 4 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1'-0" Min." is

revised to read; "Anchor Rod ~ 1-3/4" Diam. x 4'-4" Threaded 8" Min. Each End; W/2 Washers & 6 Heavy Hex Nuts ~ Galvanize Exposed Anchor Rod End for 1'-0" Min."

#### G-70.10

Sheet 4, Screen Detail, callout – "drill and Tap for 1/4" diameter Cap Screw – Spacing approx. 9" o.c. ASTM F593, w/S.S. washer Liberally coat the threads with Anti-seize compound (TYP.)" is revised to read: "\*\*Drill and Tap 1/4" (IN) Diam. x 1" (IN) Cap Screw with washer ~ space approx.. 9" o.c. ~ Liberally coat threads with Anti-seize compound (TYP.)"

Add Boxed note: \* Bolts, Nuts, and washers ~ ASTM F593 or A193 Type 304 or Type 316 Stainless Steel (S.S.)

#### H-70.20

Sheet 2, Spacing Detail, Mailbox Support Type 1, reference to Standard Plan I-70.10 is revised to H-70.10

#### J-3b

Sheet 2 of 2, Plan View of Service Cabinet, Boxed Note, "SEE STANDARD PLAN J-6C..." is revised to read: "SEE STANDARD PLAN J-10.10..."

Sheet 2 of 2, Plan View of Service Cabinet Notes, references to Std. Plan J-9a are revised to J-60.05 (3 instances).

Sheet 2 of 2, "Right Side of Service Cabinet" detail, callout, "1 5/8" x 2 7/16" 12 GA. SLOTTED STEEL CHANNEL BRACKETS (3 REQ'D), EMBED 12" MIN. IN FOUNDATION."

Is revised to read: "1-5/8" x 3-1/4", 12 GA. BACK TO BACK SLOTTED STEEL CHANNEL BRACKETS (3 REQ'D), EMBED 12" MIN. IN FOUNDATION"

#### J-10.22

Key Note 4, "Test with (SPDT Snap Action, Positive close 15 Amp – 120/277 volt "T" rated). Is revised to read: "Test Switch (SPDT snap action, positive close 15 amp – 120/277 volt "T" rated)."

#### J-22.15

Ramp Meter Signal Standard, elevation, dimension 4' - 6" is revised to read; 6'-0"

#### J-28.70

Detail C, dimension, 2" MAX. is revised to read: 1" MAX.

Detail D, dimension, 2" MAX. is revised to read: 1" MAX.

#### J-29.10

Galvanized Welded Wire Mesh detail, callout – "Drill and Tap for 1/4" Diam. Cap Screw, 3 Places, @ 9" center, all 4 edges S.S. Screw, ASTM F593 and washer"

Is revised to read;

"\*\*Drill and Tap 1/4" (IN) Diam. x 1" (IN) Cap Screw with washer ~ space approx.. 9" o.c. ~ Liberally coat threads with Anti-seize compound (TYP.)"

Add Boxed note: \* Bolts, Nuts, and washers ~ ASTM F593 or A193 Type 304 or Type 316 Stainless Steel (S.S.)

#### J-29.15

1 Title, "Camera Pole Standard" is revised to read; "Camera Pole Standard Details"

2

3 J-29.16

4 Title, "Camera Pole Standard Details" is revised to read; "Camera Pole Details"

5

6 J-60.14

7 All references to J-16b (6x) are revised to read; J-60.11

8

9 J-90.10

10 Section B, callout, "Hardware Mounting Rack ~ S. S. 1-5/8" Slotted Channel" is revised

11 to read: "Hardware Mounting Rack (Typ.) ~ Type 304 S. S. 1-5/8" Slotted Channel"

12

13 J-90.20

14 Section B, callout, "Hardware Mounting Rack (Typ.) ~ S. S. 1-5/8" Slotted Channel" is

15 revised to read: "Hardware Mounting Rack (Typ.) ~ Type 304 S. S. 1-5/8" Slotted

16 Channel"

17

18 K-80.10

19 Sign Installation (Fill Section), dimension, 6' TO 12' MIN. is revised to read: 12' MIN.

20 Sign Installation (Sidewalk and Curb Section), dimension, 6' TO 12' MIN. is revised to

21 read: 12' MIN.

22 Sign Installation (Behind Traffic Barrier Section), Delete dimensions - 6' TO 12' MIN. and

23 6' MIN.

24 Sign with Supplemental Plaque Installation (Fill Section), dimension, 6' TO 12' MIN. is

25 revised to read: 12' MIN.

26 Sign Installation (Ditch Section), dimension, 6' TO 12' MIN. is revised to read: 12' MIN.

27 Delete dimension – 6' MIN.

28

29 K-80.30

30 In the NARROW BASE, END view, the reference to Std. Plan C-8e is revised to Std.

31 Plan K-80.35

32

33 The following are the Standard Plan numbers applicable at the time this project was

34 advertised. The date shown with each plan number is the publication approval date

35 shown in the lower right-hand corner of that plan. Standard Plans showing different

36 dates shall not be used in this contract.

37

A-10.10-00.....8/7/07	A-30.35-00.....10/12/07	A-50.20-01.....9/22/09
A-10.20-00.....10/5/07	A-40.00-00.....8/11/09	A-50.30-00.....11/17/08
A-10.30-00.....10/5/07	A-40.10-02.....6/2/11	A-50.40-00.....11/17/08
A-20.10-00.....8/31/07	A-40.15-00.....8/11/09	A-60.10-02.....6/17/14
A-30.10-00.....11/8/07	A-40.20-02.....5/29/13	A-60.20-02.....6/2/11
A-30.15-00.....11/8/07	A-40.50-01.....6/2/11	A-60.30-00.....11/8/07
A-30.30-01.....6/16/11	A-50.10-00.....11/17/08	A-60.40-00.....8/31/07
B-5.20-01.....6/16/11	B-30.50-01.....4/26/12	B-75.20-01.....6/10/08
B-5.40-01.....6/16/11	B-30.70-03.....4/26/12	B-75.50-01.....6/10/08
B-5.60-01.....6/16/11	B-30.80-00.....6/8/06	B-75.60-00.....6/8/06
B-10.20-01.....2/7/12	B-30.90-01.....9/20/07	B-80.20-00.....6/8/06
B-10.40-00.....6/1/06	B-35.20-00.....6/8/06	B-80.40-00.....6/1/06
B-10.60-00.....6/8/06	B-35.40-00.....6/8/06	B-82.20-00.....6/1/06
B-15.20-01.....2/7/12	B-40.20-00.....6/1/06	B-85.10-01.....6/10/08

B-15.40-01.....2/7/12	B-40.40-01.....6/16/10	B-85.20-00.....6/1/06
B-15.60-01.....2/7/12	B-45.20-00.....6/1/06	B-85.30-00.....6/1/06
B-20.20-02.....3/16/12	B-45.40-00.....6/1/06	B-85.40-00.....6/8/06
B-20.40-03.....3/16/12	B-50.20-00.....6/1/06	B-85.50-01.....6/10/08
B-20.60-03.....3/15/12	B-55.20-00.....6/1/06	B-90.10-00.....6/8/06
B-25.20-01.....3/15/12	B-60.20-00.....6/8/06	B-90.20-00.....6/8/06
B-25.60-00.....6/1/06	B-60.40-00.....6/1/06	B-90.30-00.....6/8/06
B-30.10-01.....4/26/12	B-65.20-01.....4/26/12	B-90.40-00.....6/8/06
B-30.20-02.....4/26/12	B-65.40-00.....6/1/06	B-90.50-00.....6/8/06
B-30.30-01.....4/26/12	B-70.20-00.....6/1/06	B-95.20-01.....2/3/09
B-30.40-01.....4/26/12	B-70.60-00.....6/1/06	B-95.40-00.....6/8/06

1

C-1.....6/16/11	C-6.....5/30/97	C-23.60-03.....6/11/14
C-1a.....10/14/09	C-6a.....10/14/09	C-24.10-01.....6/11/14
C-1b.....6/16/11	C-6c.....1/6/00	C-25.18-04.....6/11/14
C-1c.....5/30/97	C-6d.....5/30/97	C-25.20-05.....7/2/12
C-1d.....10/31/03	C-6f.....7/25/97	C-25.22-04.....7/2/12
C-2.....1/6/00	C-7.....6/16/11	C-25.26-02.....7/2/12
C-2a.....6/21/06	C-7a.....6/16/11	C-25.80-03.....6/11/14
C-2b.....6/21/06	C-8.....2/10/09	C-40.14-02.....7/2/12
C-2c.....6/21/06	C-8a.....7/25/97	C-40.16-02.....7/2/12
C-2d.....6/21/06	C-8b.....6/27/11	C-40.18-02.....7/2/12
C-2e.....6/21/06	C-8e.....2/21/07	C-70.10-01.....6/17/14
C-2f.....3/14/97	C-8f.....6/30/04	C-75.10-01.....6/11/14
C-2g.....7/27/01	C-10.....6/3/10	C-75.20-01.....6/11/14
C-2h.....3/28/97	C-16a.....6/3/10	C-75.30-01.....6/11/14
C-2i.....3/28/97	C-16b.....6/3/10	C-80.10-01.....6/11/14
C-2j.....6/12/98	C-20.10-02.....6/11/14	C-80.20-01.....6/11/14
C-2k.....7/27/01	C-20.14-03.....6/11/14	C-80.30-01.....6/11/14
C-2n.....7/27/01	C-20.15-02.....6/11/14	C-80.40-01.....6/11/14
C-2o.....7/13/01	C-20.18-02.....6/11/14	C-80.50-00.....4/8/12
C-2p.....10/31/03	C-20.19-02.....6/11/14	C-85.10-00.....4/8/12
C-3.....7/2/12	C-20.40-04.....6/11/14	C-85.11-00.....4/8/12
	C-20.41-00.....6/30/14	
C-3a.....10/4/05	C-20.42-04.....6/11/14	C-85.14-01.....6/11/14
C-3b.....6/27/11	C-20.45.01.....7/2/12	C-85.15-01.....6/30/14
C-3c.....6/27/11	C-22.14-03.....6/11/14	C-85.16-01.....6/17/14
C-4b.....6/8/06	C-22.16-04.....6/11/14	C-85.18-01.....6/11/14
C-4e.....10/23/14	C-22.40-04.....10/23/14	C-85.20-01.....6/11/14
	C-22.41-01.....10/23/14	
C-4f.....7/2/12	C-22.45-01.....10/23/14	C-90.10-00.....7/3/08

2

D-2.04-00.....11/10/05	D-2.48-00.....11/10/05	D-3.17-01.....5/17/12
D-2.06-01.....1/6/09	D-2.64-01.....1/6/09	D-4.....12/11/98
D-2.08-00.....11/10/05	D-2.66-00.....11/10/05	D-6.....6/19/98
D-2.14-00.....11/10/05	D-2.68-00.....11/10/05	D-10.10-01.....12/2/08
D-2.16-00.....11/10/05	D-2.80-00.....11/10/05	D-10.15-01.....12/2/08
D-2.18-00.....11/10/05	D-2.82-00.....11/10/05	D-10.20-00.....7/8/08
D-2.20-00.....11/10/05	D-2.84-00.....11/10/05	D-10.25-00.....7/8/08
D-2.32-00.....11/10/05	D-2.86-00.....11/10/05	D-10.30-00.....7/8/08

	D-2.34-01.....1/6/09	D-2.88-00.....11/10/05	D-10.35-00.....7/8/08
	D-2.36-03.....6/11/14	D-2.92-00.....11/10/05	D-10.40-01.....12/2/08
	D-2.42-00.....11/10/05	D-3.09-00.....5/17/12	D-10.45-01.....12/2/08
	D-2.44-00.....11/10/05	D-3.10-01.....5/29/13	D-15.10-01.....12/2/08
	D-2.60-00.....11/10/05	D-3.11-03.....6/11/14	D-15.20-02.....6/2/11
	D-2.62-00.....11/10/05	D-3.15-02.....6/10/13	D-15.30-01.....12/02/08
	D-2.46-01.....6/11/14	D-3.16-02.....5/29/13	
1	E-1.....2/21/07	E-4.....8/27/03	
	E-2.....5/29/98	E-4a.....8/27/03	
2			
	F-10.12-03.....6/11/14	F-10.62-02.....4/22/14	F-40.15-02.....6/20/13
	F-10.16-00.....12/20/06	F-10.64-03.....4/22/14	F-40.16-02.....6/20/13
	F-10.18-00.....6/27/11	F-30.10-03.....6/11/14	F-45.10-01.....6/21/12
	F-10.40-02.....6/21/12	F-40.12-02.....6/20/13	F-80.10-03.....6/11/14
	F-10.42-00.....1/23/07	F-40.14-02.....6/20/13	
3			
	G-10.10-00.....9/20/07	G-24.60-03.....6/17/14	G-70.20-02.....6/10/13
	G-20.10-01.....6/11/14	G-25.10-04.....6/10/13	G-70.30-02.....6/10/13
	G-22.10-02.....6/17/14	G-30.10-03.....6/17/14	G-90.10-01.....5/11/11
	G-24.10-00.....11/8/07	G-50.10-01.....6/20/13	G-90.20-02.....3/22/13
	G-24.20-01.....2/7/12	G-60.10-02.....6/10/13	G-90.30-02.....3/22/13
	G-24.30-01.....2/7/12	G-60.20-01.....6/27/11	G-90.40-01.....10/14/09
	G-24.40-04.....6/17/14	G-60.30-01.....6/27/11	G-95.10-01.....6/2/11
	G-24.50-03.....6/17/14	G-70.10-02.....6/10/13	G-95.20-02.....6/2/11
			G-95.30-02.....6/2/11
4			
	H-10.10-00.....7/3/08	H-32.10-00.....9/20/07	H-70.10-01.....2/7/12
	H-10.15-00.....7/3/08	H-60.10-01.....7/3/08	H-70.20-01.....2/16/12
	H-30.10-00.....10/12/07	H-60.20-01.....7/3/08	H-70.30-02.....2/7/12
5			
	I-10.10-01.....8/11/09	I-30.20-00.....9/20/07	I-40.20-00.....9/20/07
	I-30.10-02.....3/22/13	I-30.30-01.....6/10/13	I-50.20-01.....6/10/13
	I-30.15-02.....3/22/13	I-30.40-01.....6/10/13	I-60.10-01.....6/10/13
	I-30.16-00.....3/22/13	I-30.60-00.....5/29/13	I-60.20-01.....6/10/13
	I-30.17-00.....3/22/13	I-40.10-00.....9/20/07	I-80.10-01.....8/11/09
6			
	J-3.....8/1/97	J-26.15-01.....5/17/12	J-40.40-00.....5/20/13
		J-26.20-00.....6/11/14	
	J-3b.....3/4/05	J-27.10-00.....3/15/12	J-50.10-00.....6/3/11
	J-3c.....6/24/02	J-27.15-00.....3/15/12	J-50.11-00.....6/3/11
	J-10.....7/18/97	J-28.10-01.....5/11/11	J-50.12-00.....6/3/11
	J-10.10-02.....6/11/14	J-28.22-00.....8/07/07	J-50.15-00.....6/3/11
	J-10.15-01.....6/11/14	J-28.24-00.....8/07/07	J-50.16-01.....3/22/13
	J-10.22-00.....5/29/13	J-28.26-01.....12/02/08	J-50.20-00.....6/3/11
	J-15.10-01.....6/11/14	J-28.30-03.....6/11/14	J-50.25-00.....6/3/11
	J-15.15-01.....6/11/14	J-28.40-02.....6/11/14	J-50.30-00.....6/3/11
		J-28.42-01.....6/11/14	J-60.05-00.....6/16/11
		J-28.43-00.....6/11/14	
		J-28.45-02.....6/11/14	J-60.11-00.....5/20/13
	J-20.10-03.....6/30/14	J-28.50-02.....6/2/11	J-60.12-00.....5/20/13
	J-20.11-02.....6/30/14	J-28.60-01.....6/2/11	J-60.13-00.....6/16/10



J-20.15-03.....6/30/14	J-28.70-01.....5/11/11	J-60.14-00.....6/16/10
J-20.16-02.....6/30/14	J-29.10-00.....6/27/11	J-75.10-01.....5/11/11
J-20.20-02.....5/20/13	J-29.15-00.....6/27/11	J-75.20-00.....2/10/09
J-20.26-01.....7/12/12	J-29.16-01.....6/20/13	J-75.30-01.....5/11/11
J-21.10-04.....6/30/14	J-40.10-03.....5/20/13	J-75.40-01.....6/11/14
		J-75.41-00.....6/11/14
J-21.15-01.....6/10/13	J-40.20-02.....6/11/14	J-75.45-01.....6/11/14
J-21.16-01.....6/10/13	J-40.30-03.....5/20/13	J-90.10-01.....6/27/11
J-21.17-01.....6/10/13	J-40.35-01.....5/29/13	J-90.20-01.....6/27/11
J-21.20-01.....6/10/13	J-40.36-01.....5/20/13	J-90.21-00.....6/30/14
J-22.15-01.....6/10/13	J-40.37-01.....5/20/13	
J-22.16-02.....6/10/13	J-40.38-01.....5/20/13	
J-26.10-02.....3/15/12	J-40.39-00.....5/20/13	

1

K-70.20-00.....2/15/07  
K-80.10-00.....2/21/07  
K-80.20-00.....12/20/06  
K-80.30-00.....2/21/07  
K-80.35-00.....2/21/07  
K-80.37-00.....2/21/07

2

L-10.10-02.....6/21/12	L-40.10-02.....6/21/12	L-70.10-01.....5/21/08
L-20.10-02.....6/21/12	L-40.15-01.....6/16/11	L-70.20-01.....5/21/08
L-30.10-02.....6/11/14	L-40.20-02.....6/21/12	

3

M-1.20-03.....6/24/14	M-9.60-00.....2/10/09	M-40.10-03.....6/24/14
M-1.40-02.....6/3/11	M-11.10-01.....1/30/07	M-40.20-00.....10/12/07
M-1.60-02.....6/3/11	M-15.10-01.....2/6/07	M-40.30-00.....9/20/07
M-1.80-03.....6/3/11	M-17.10-02.....7/3/08	M-40.40-00.....9/20/07
M-2.20-02.....6/3/11	M-20.10-02.....6/3/11	M-40.50-00.....9/20/07
M-3.10-03.....6/3/11	M-20.20-01.....1/30/07	M-40.60-00.....9/20/07
M-3.20-02.....6/3/11	M-20.30-02.....10/14/09	M-60.10-01.....6/3/11
M-3.30-03.....6/3/11	M-20.40-03.....6/24/14	M-60.20-02.....6/27/11
M-3.40-03.....6/3/11	M-20.50-02.....6/3/11	M-65.10-02.....5/11/11
M-3.50-02.....6/3/11	M-24.20-01.....5/31/06	M-80.10-01.....6/3/11
M-5.10-02.....6/3/11	M-24.40-01.....5/31/06	M-80.20-00.....6/10/08
M-7.50-01.....1/30/07	M-24.50-00.....6/16/11	M-80.30-00.....6/10/08
M-9.50-02.....6/24/14	M-24.60-04.....6/24/14	

4

5

**SR 162  
Puyallup River Bridge  
Bridge Replacement**

**APPENDIX A**

**SUMMARY OF GEOTECHNICAL CONDITIONS**

# **Summary of Geotechnical Conditions**

## **SR 162 PUYALLUP RIVER BRIDGE REPLACEMENT – NOISE WALLS**

### **SUBSURFACE CONDITIONS**

#### ***Noise Wall Foundations***

At all noise wall locations subsurface soils generally consist of medium dense to dense poorly graded sand with gravel grading to a well graded gravel with sand in the upper 16 feet.

### **GROUND WATER CONDITIONS**

Borings NW-01-10, NW-02-10 and NW-03-10 that were advanced in October, 2010, show that perched and/or ground water was encountered at a depth of approximately 9 feet beneath the existing ground surface. Due to variations in rainfall and other seasonal factors fluctuations in the ground water table will occur.

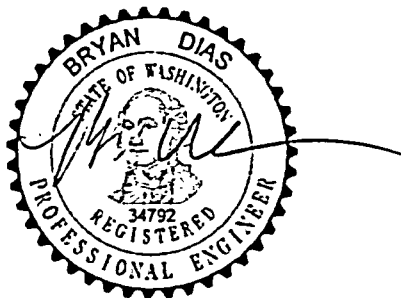
### **CONSTRUCTION CONSIDERATIONS**

Due to the presence of clean sandy gravelly soils with little to no silt, caving and/or oversized excavations should be expected at the noise wall foundation locations.

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Prepared By:  
Bryan Dias, P.E.  
Olympic Region Materials Engineer

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**Summary of Geotechnical Conditions**  
**SR 162 PUYALLUP RIVER BRIDGE REPLACEMENT – NOISE WALLS**

Bryan Dias, *Geotechnical Memorandum*, Puyallup River Bridge Replacement:  
Geotechnical Design Recommendations for Noise Wall Foundations DS 1, 2 and 3,  
Pierce County, Washington, November 8, 2010.

# Summary of Geotechnical Conditions

## SR 162 Puyallup River Bridge (162/6) Replace Bridge

### 1 SUBSURFACE SOIL AND ROCK CONDITIONS

#### 2 Soil Conditions

3 Four Engineering Stratigraphic Units (ESUs) have been defined for the site. In the vicinity of the  
4 bridge the subsurface conditions are characterized by alternating layers of alluvium and laharic  
5 sediments, which are from the Electron mudflow, underlain by glacial drift. In some geotechnical  
6 memorandums for the project the ESU's were referred to as simply "Units". The ESU numbers  
7 correspond to the unit numbers used in the earlier memorandums.

8 The individual boring logs and available geotechnical memorandums and reports should be referred to for  
9 more detailed information regarding the elevations at which specific ESU's occur. The descriptions below  
10 generally discuss the occurrence of the ESUs in terms of their stratigraphic relationship to one another.  
11 The units are listed from youngest (ESU 1) to the oldest (ESU 4).

12 **ESU 1: Silty Sand with Gravel and Silt (Alluvium).** This ESU consists of very loose to medium dense  
13 silty sand and silt, and some poorly graded sand (BH-1-08), with occasional organic materials. Typical  
14 Unified Soil Classification System (USCS) designations in this ESU include SM, SP-SM, and ML. The  
15 organic materials were generally roots. No cobbles, boulders or logs were observed or indicated in the  
16 borings. However, the presence of these materials is possible as due to the depositional environment of  
17 alluvial soils they are typically expected to contain a broad range of grain sizes and debris. Fines  
18 contents in ESU 1 ranged from 4 to 69 percent. This ESU was encountered in all of the borings except  
19 BH-3p-08, and it extends from the ground surface to elevations of about 111 and 120 ft at the north and  
20 south banks, respectively.

21 **ESU 2: Well Graded Gravel and Silty Gravel (Lahar).** This ESU consists of loose to very dense well  
22 graded gravel to silty gravel. Typical USCS designations in this ESU include GM, GW-GM, GW, and GP.  
23 Cobbles up to 5 to 6 inches were recovered in BH-7scp-11 throughout this ESU. The gravel and cobbles  
24 are generally sub-angular to sub-rounded. No logs were observed or indicated in this ESU in the borings.  
25 However, logs are known to be present in the lahar deposits, and they are typically expected to contain a  
26 broad range of grain sizes and debris. Fines contents in ESU 2 ranged from 4 to 46 percent. This ESU  
27 was encountered in all of the borings. It generally underlies ESU 1, except at boring BH-3p-08 where it  
28 occurs at the ground surface (El. ~129 ft). The bottom of this ESU occurs at about elevation 90 ft across  
29 the site.

30 **ESU 3: Silty Sand and Clayey Sand (Alluvium).** This ESU consists of loose to medium dense silty  
31 sand to clayey sand with occasional organic materials including wood debris. Typical USCS designations  
32 in ESU 3 include SM, SC-SM, and SP-SM. The wood debris was generally observed to occur near the  
33 interface with the lahar deposits (ESU 2) at about elevation 90 ft and between elevations 60 and 70 ft in  
34 BH-1-08, BH-2-08 and BH-4p-08. Cobbles up to 6 to 7 inches were recovered in BH-7scp-11 throughout  
35 this ESU. No boulders or logs were observed or indicated in the borings. However, the presence of  
36 these materials is possible because due to the depositional environment of alluvial soils they are typically  
37 expected to contain a broad range of grain sizes and debris. Boulders are defined by WSDOT as  
38 material over 12 inches in diameter. Since the sonic drill was recovering material up to 7 inches in  
39 diameter, it should be anticipated that boulders will occur within ESU 3. Fines contents in ESU 3 ranged  
40 from 6 to 100 percent. This ESU was encountered in all of the borings. It generally occurred between  
41 elevations 55 and 95 feet. In BH-4p-08 the base of ESU 3 was about 15 ft higher than observed in the  
42 other borings, i.e., at about elevation 70 feet.

43 **ESU 4: Well Graded Gravel with Sand and Silt (Glacial Drift).** This ESU consists of dense to very  
44 dense, generally well graded gravel with sand and silt. Typical USCS designations in ESU 4 are GW-GM,  
45 and GW. However, there are some poorly graded gravel (GP-GM and GP) zones in BH-5-12 and BH-6p-  
46 12. The gravel is generally rounded to sub-rounded. Cobbles from 3 to 6 inches were recovered in BH-  
47 7scp-14 and in the core runs in BH-6p-12 from elevation 12 to 5 feet.

48 The top of ESU 4 occurs between elevations 55 and 60 ft in the vicinity of Piers 1, 2 and 3 and at an  
49 elevation of approximately 70 ft in boring BH-4p-08, which is about 80 ft south of Pier 3.

50 Near the top of ESU 4 there are some high fines content sediments indicating that these materials may  
51 be till. Examples include gravelly silt with a fines content of 64% in BH-7scp-11, silty sand with fines  
52 contents of 27 to 47% in BH-1-08 and up to 25% in BH-4p-08, and a silty, clayey sand with a fines  
53 content of 29% in BH-5-12. The high fines content of the gravelly silt is evident in the photographs of the

## Summary of Geotechnical Conditions

### SR 162 Puyallup River Bridge (162/6) Replace Bridge

sonic core samples from depths of 75 to 80 feet. Fines contents in the well graded gravel (GW and GW-GM) portions of ESU 4 generally ranged from 1 to 16% with the silty gravel (GM) zones in BH-7scp-11 and BH-4p-08 having fines contents that ranged from 16 to 29 percent.

#### Ground Water Conditions

Open standpipe piezometers were installed in borings BH-3p-08, BH-4p-08, BH-6p-12, BH-7scp-11, P-1-08, P-2-08 and P-3-08. Although the latter 3 borings were for proposed pond locations that are no longer part of the project, they have been included due to their proximity to the site and the relatively long period of their data record (2008 to 2012, and 8 months in 2014). For the 2011 and 2012 borings the ground water readings were available only for 7 months (March to September) of 2014. The piezometers in BH-3p-08, BH-4p-08 and BH-6p-12 were screened either wholly within the lahar (ESU 2) deposits or across the interface of ESU 1 and ESU 2. The piezometer in BH-7scp-11 was screen in ESU 4. The three pond piezometers were screened at elevations above 100 feet. Hence these were likely within the lahar deposits (ESU 2). There were no artesian conditions detected in any of the piezometers; therefore it is assumed that the ground water levels are representative of an unconfined/shallow aquifer. The recorded maximum and minimum ground water elevations are summarized in Table 1.

**Table 1: Minimum and Maximum Recorded Ground Water Elevations**

Boring	Ground El. (ft)	High Reading		Low Reading	
		Elev. (ft)	Date	Elev. (ft)	Date
BH-3p-08	128.6	122.6	Mar. 25, 2014	113.1	July 9, 2012
BH-4p-08	135.9	120.4	May 16, 2011	114.2	Aug. 10, 2009
BH-6p-12	124.9	117.0	Mar. 25, 2014	113.7	Aug. 7, 2014
BH-7scp-11	135	118.3	Mar. 27, 2014	115.5	Aug. 7, 2014
P-1-08	121 <sup>1</sup>	119.0	Mar. 25, 2014	109.6	Nov. 16, 2011
P-2-08	118 <sup>1</sup>	111.5	May 16, 2011	104.3	Sept. 12, 2011
P-3-08	125 <sup>1</sup>	117.5	Mar. 25, 2014	108.9	July 9, 2012

Notes: 1. Not surveyed; estimated from topographic contours.

#### POTENTIAL IMPACTS OF SUBSURFACE CONDITIONS ON CONSTRUCTION

##### Temporary Slopes and Structural Shoring

There is the potential for ground water to occur within temporary cut slopes, particularly at the Piers 1 and 2 where the ground water elevation is above the top of the drilled shafts. Ground water within the cut slopes could cause stability problems.

Potential obstructions in the alluvium and the cobbly nature of ESU 2 may make the installation of driven shoring and casings difficult. Shoring systems using drilled vertical elements may be required. Ground water will be encountered during installation of any shoring system that involves drilled-in vertical support elements or anchors. Loose silty sand with gravel and silt (ESU 1) and medium dense to very dense well graded gravel and silty gravel (ESU 2) will be encountered during installation of vertical supports. The use of temporary casing and/or slurry methods should be anticipated for maintaining the stability of shafts for vertical support elements. Casing may be required to maintain the stability of borings for anchors. The loss of drilling slurry into ESU 2 should be anticipated. For soldier pile type shoring systems, ESU 1 will likely create stability problems when exposed during excavation of the walls and installation of lagging.

Difficult access conditions will likely exist in the excavation for the shaft caps as the near surface soils are generally silty sand with high fines contents and silt. These soils range from very loose at Pier 3 to medium dense at Pier 2. These soils will be moisture sensitive; hence when exposed they will be easily disturbed and will be subject to rutting.

##### Dewatering

The contractor should expect to encounter ground water in the excavations for the shaft cap at Piers 1 and 2. The excavations to reach the bottom elevations of the shaft cap at Piers 1 and 2 will be at least 3

## Summary of Geotechnical Conditions

### SR 162 Puyallup River Bridge (162/6) Replace Bridge

to 5 ft, respectively, below the recorded high ground water elevations at these piers. Recorded high ground water elevations at Pier 3 are above the planned bottom elevation of the shaft cap.

Various dewatering techniques may be required. If cofferdams are used, seals will be required to dewater and maintain a dry cofferdam. If open excavation techniques are used, a dewatering system may be required as sumps and pumps may not be effective at controlling the ground water in the excavations.

#### Drilled Shaft Construction

The subsurface profile at the bridge consists primarily of cohesionless soils. The surficial layer of very loose to medium dense silty sand and silt (ESU 1) will be susceptible to caving conditions during installation of uncased drilled shafts. Two relatively clean gravel layers, ESU 2 and 4, were encountered throughout the entire bridge alignment. Clean gravels have a large potential to slough into unsupported shaft excavations, especially when they are wet or saturated. In ESU 4 the fines content varies considerably. Zones of cleaner sand and gravel do occur within the glacial deposit, and they, will tend to slough into the shaft excavation. The saturated loose to medium dense silty sand to clayey sand of ESU 3 also has the potential to slough during the shaft excavation if it is not supported. Measured ground water surface elevations indicate that the contractor should expect to encounter ground water in all of the shaft excavations.

Where casings are required in the plans and provisions, they have been required because of loose soil conditions (ESU 1) or loose soil conditions combined with clean gravels and cobbles (ESU 2 and ESU 3). Installation and extraction of temporary casing may be difficult due to the presence of gravel and cobble layers.

Drilling slurries are less effective at maintaining borehole stability when granular soils are poorly graded, relatively clean, possess large void spaces and as their relative density decreases. There is the potential to lose drilling slurry into clean gravelly and or cobbly layers, e.g., ESU 2 and ESU 4. In order to prevent slurry loss into these types of layers special slurry additives or mineral slurries may be required.

The contractor should be prepared to use a combination of casing and slurry to stabilize the shaft excavations. Due to the cohesionless nature of the soils through which the drilled shafts will be constructed and the fact that ground water will be encountered, shaft excavation beyond the bottom of the temporary casing has been limited. Slurry levels must be maintained high enough within the casing to prevent bottom heave. Once the excavation advances beyond the bottom of the temporary casing, the slurry levels must be high enough to maintain side wall stability.

The contractor should be prepared to excavate dense gravels and cobbles, as encountered in the borings, particularly in ESU 2 and ESU 4, and through medium dense silty sand with gravel and cobbles (ESU 3). As shown by BH-7scp-11, there are abundant cobbles in ESU 2, 3 and 4. Boulders are expected, although no boulders or logs were encountered during the explorations. However given the nature of alluvial (ESU 1 and 3), lahatic (ESU 2) and glacially deposited (ESU 4) soils, the contractor should be prepared to drill through these sorts of materials.

No in-water work is permitted for the project. Therefore, at Pier 2 shaft installation will require the construction of either a pile supported work platform that is out of the river or a working bench constructed entirely on the river terrace. The centerline of the Pier 2 shaft is about 5 ft from the crest of the slope. Therefore, access to this shaft may be particularly difficult.

#### POTENTIAL IMPACTS OF CONSTRUCTION ON DESIGN ASSUMPTIONS

A key design assumption is that there is no permanent casing below the elevations shown in the plans. Therefore, if use of permanent casing becomes necessary in order to maintain shaft stability or because casing cannot be removed from the shaft, the axial resistance of the shafts will have to be verified.

## Summary of Geotechnical Conditions

### SR 162 Puyallup River Bridge (162/6) Replace Bridge

#### AVAILABLE GEOTECHNICAL REPORTS AND INFORMATION

The following geotechnical reports are available at the Project Engineer's Office or online at:

<http://www.wsdot.wa.gov/biz/contaa/wsdotpro/GEO-TECH%20Reports/DEFAULT.HTM>

WSDOT Memorandum, SR 162, MP 6.57 to 7.10, XL-2760, Puyallup River Bridge Replacement 162/6, Preliminary Bridge Recommendations, prepared by Geotechnical Division, December 23, 2008.

WSDOT Memorandum, SR 162, MP 6.57 to 7.10, XL-2760, Puyallup River Bridge Replacement (162/6), Preliminary Geotechnical Recommendations for Drilled Shaft Axial Resistance and Lateral Loading Analyses, prepared by Geotechnical Division, May 14, 2010.

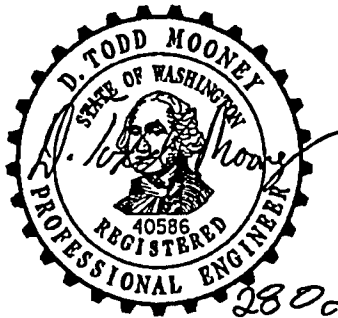
WSDOT Memorandum, SR 162, MP 6.57 to 7.10, XL-2760, Puyallup River Bridge Replacement (162/6), Geotechnical Recommendations for Abutment Walls, prepared by Geotechnical Division, June 1, 2010.

WSDOT Memorandum, SR 162, XL-2760, Puyallup River Bridge Replacement, Noise Wall DS 1, 2 and 3 Recommendations, prepared by Olympic Region Materials Engineer's Office, November 8, 2010.

WSDOT Memorandum, SR 162, MP 6.57 to 7.10, XL-2760, Puyallup River Bridge Replacement (162/6), Revised Geotechnical Recommendations for Lateral Spread and L-Pile Parameters, prepared by Geotechnical Office, January 20, 2011.

WSDOT Memorandum, SR 162, MP 6.63 to 7.06, XL-2760, Puyallup River Bridge (Br. 162/6) Replace Bridge, Supplemental Geotechnical Recommendations for Drilled Shafts, prepared by Geotechnical Office, August 1, 2014.

WSDOT Memorandum, SR 162, MP 6.63 to 7.06, XL-2760, Puyallup River Bridge (Br. 162/6) Replace Bridge, Supplemental Geotechnical Recommendations for Axial Resistances for Pier 2 Drilled Shaft for Scoured Conditions, prepared by Geotechnical Office, November 2014.



Prepared by:

D. Todd Mooney, P.E.  
Senior Foundation Engineer



**SR 162  
Puyallup River Bridge  
Bridge Replacement**

**APPENDIX B**

**LOG OF TEST BORINGS**



# Boring and Test Pit Legend

Sampler Symbols	
	Standard Penetration Test
	Non-Standard Sized Penetration Test
	Shelby Tube
	Piston Sample
	Washington Undisturbed
	Vane Shear Test
	Core
	Becker Hammer
	Bag Sample

Well Symbols	
	Cement Surface Seal
	Piezometer Pipe in Granular Bentonite Seal
	Piezometer Pipe in Sand
	Well Screen in Sand
	Granular Bentonite Seal
	Inclinometer Casing or PVC Pipe in Cement Bentonite Grout
	Sand
	Vibe Wire in Grout
	Miscellaneous, noted on boring log

Laboratory Testing Codes	
AL	Atterberg Limits
CD	Consolidated Drained Triaxial
CN	Consolidation Test
CSS	Cyclic Simple Shear
CU	Consolidated Undrained Triaxial
DG	Degradation
DN	Density
DS	Direct Shear Test
DSS	Direct Simple Shear
GS	Grain Size Distribution
HT	Hydrometer Test
LA	LA Abrasion
LOI	Loss on Ignition
MC	Moisture Content
PT	Point Load Compressive Test
RM	Resilient Modulus
RS	Ring Shear Test
SG	Specific Gravity
SL	Slake Test
UC	Unconfined Compression Test
UU	Unconsolidated Undrained Triaxial

Soil Density Modifiers			
Gravel, Sand & Non-plastic Silt		Elastic Silts and Clay	
SPT Blows/ft	Density	SPT Blows/ft	Consistency
0-4	Very Loose	0-1	Very Soft
5-10	Loose	2-4	Soft
11-24	Medium Dense	5-8	Medium Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
(REF)	Refusal	31-60	Hard
		>60	Very Hard

Angularity of Gravel & Cobbles	
Angular	Coarse particles have sharp edges and relatively plane sides with unpolished surfaces.
Subangular	Coarse grained particles are similar to angular but have rounded edges.
Subrounded	Coarse grained particles have nearly plane sides but have well rounded corners and edges.
Rounded	Coarse grained particles have smoothly curved sides and no edges.

Soil Moisture Modifiers	
Dry	Absence of moisture; dusty, dry to touch
Moist	Damp but no visible water
Wet	Visible free water

Soil Structure	
Stratified	Alternating layers of varying material or color at least 6mm thick; note thickness and inclination.
Laminated	Alternating layers of varying material or color less than 6mm thick; note thickness and inclination.
Fissured	Breaks along definite planes of fracture with little resistance to fracturing.
Slickensided	Fracture planes appear polished or glossy, sometimes striated.
Blocky	Cohesive soil that can be broken down into smaller angular lumps which resist further breakdown.
Disrupted	Soil structure is broken and mixed. Infers that material has moved substantially - landslide debris.
Homogeneous	Same color and appearance throughout.

HCl Reaction	
No HCl Reaction	No visible reaction.
Weak HCl Reaction	Some reaction with bubbles forming slowly.
Strong HCl Reaction	Violent reaction with bubbles forming immediately.

Degree of Vesicularity of Pyroclastic Rocks	
Slightly Vesicular	5 to 10 percent of total
Moderately Vesicular	10 to 25 percent of total
Highly Vesicular	25 to 50 percent of total
Scoriaceous	Greater than 50 percent of total

# Boring and Test Pit Legend

## Grain Size

Fine Grained	< 0.04 in	Few crystal boundaries/grains are distinguishable in the field or with hand lens.
Medium Grained	0.04 to 0.2 in	Most crystal boundaries/grains are distinguishable with the aid of a hand lens.
Coarse Grained	> 0.2 in	Most crystal boundaries/grains are distinguishable with the naked eye.

## Weathered State

Term	Description	Grade
Fresh	No visible sign of rock material weathering; perhaps slight discoloration in major discontinuity surfaces.	I
Slightly Weathered	Discoloration indicates weathering of rock material and discontinuity surfaces. All the rock material may be discolored by weathering and may be somewhat weaker externally than its fresh condition.	II
Moderately Weathered	Less than half of the rock material is decomposed and/or disintegrated to soil. Fresh or discolored rock is present either as a continuous framework or as core stones.	III
Highly Weathered	More than half of the rock material is decomposed and/or disintegrated to soil. Fresh or discolored rock is present either as discontinuous framework or as core stone.	IV
Completely Weathered	All rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.	V
Residual Soil	All rock material is converted to soil. The mass structure and material fabric is destroyed. There is a large change in volume, but the soil has not been significantly transported.	VI

## Relative Rock Strength

Grade	Description	Field Identification	Uniaxial Compressive Strength approx
R1	Very Weak	Specimen crumbles under sharp blow from point of geological hammer, and can be cut with a pocket knife.	0.15 to 3.6 ksi
R2	Moderately Weak	Shallow cuts or scrapes can be made in a specimen with a pocket knife. Geological hammer point indents deeply with firm blow.	3.6 to 7.3 ksi
R3	Moderately Strong	Specimen cannot be scraped or cut with a pocket knife, shallow indentation can be made under firm blows from a hammer.	7.3 to 15 ksi
R4	Strong	Specimen breaks with one firm blow from the hammer end of a geological hammer.	15 to 29 ksi
R5	Very Strong	Specimen requires many blows of a geological hammer to break intact sample.	Greater than 29 ksi

## Discontinuities

Spacing		Condition	
Very Widely	Greater than 10 ft	Excellent	Very rough surfaces, no separation, hard discontinuity wall
Widely	3 ft to 10 ft	Good	Slightly rough surfaces, separation less than 0.05 in, hard discontinuity wall.
Moderately	1 ft to 3 ft	Fair	Slightly rough surfaces, separation greater than 0.05 in, soft discontinuity wall.
Closely	2 inches to 12 inches	Poor	Slickensided surfaces, or soft gouge less than 0.2 in thick, or open discontinuities 0.05 to 0.2 in.
Very Closely	Less than 2 inches	Very Poor	Soft gouge greater than 0.2 in thick, or open discontinuities greater than 0.2 in.

### RQD (%)

$$\frac{100(\text{length of core in pieces} > 100\text{mm})}{\text{Length of core run}}$$

Fracture Frequency (FF) is the average number of fractures per 1 ft of core. This does not include mechanical breaks caused by drilling or handling.

Datum:

NAD 83/91 HARN = North American Datum of 1983/1991  
High Accuracy Reference Network  
NAVD88 = North American Vertical Datum of 1988  
SPN (ft) = State Plane North (ft)  
SPS (ft) = State Plane South (ft)



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760 SR 162 Elevation 124.5 ft

HOLE No. BH-1-08

Sheet 1 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969T

Site Address Vic. of 136 Street East and SR-162

Inspector Cleo Andrews 1677

Start September 11, 2008 Completion September 17, 2008 Well ID# \_\_\_\_\_ Equipment CME 55 with Autohammer

Station DS 19+91.86 Offset 7.5 ft Rt. Hole Dia 4 (inches) Method Wet Rotary

Northing 659942.07 Easting 1208385.8 Collected by \_\_\_\_\_ Datum State Plane South

County Pierce Subsection NE-SE-1/4 Section 13 Range 4 EWM Township 19 N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
5	120.0		◆	◆			1 2 3 (5)	▲	D-1	GS MC	0.0' to 5.0' Sandy SILT as indicated by drilling and wash returns.  ML, M.C. = 17% Sandy SILT, root hairs and root twigs, loose, brown, moist, stratified, HCl not tested. Length Recovered: 1.0 ft. Length Retained: 1.0 ft.		
10	115.0		◆	◆			6 6 7 (13)	▲	D-2	GS MC	SP, M.C. = 9% Poorly graded SAND with gravel, sub-rounded, medium dense, brown, moist, homogenous, HCl not tested. Length Recovered: 1.0 ft. Length Retained: 1.0 ft.		
15	110.0		◆	◆			10 12 12 (24)	▲	D-3	GS MC	GW-GM, M.C. = 9% Well graded GRAVEL with silt and sand, sub-rounded, medium dense, brown, wet, homogenous, HCl not tested. Length Recovered: 0.8 ft. Length Retained: 0.8 ft.		
20	105.0		◆				15 18	▲	D-4	GS MC	GW-GM, M.C. = 9% Well graded GRAVEL with silt and sand, sub-angular,		

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE CPJ SOIL GDT 10/27/14

09/11/2008



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760

SR 162

Elevation 124.5 ft

HOLE No. BH-1-08

Sheet 2 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
				12 (30)			dense, dark brown, wet, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
25	100			40 28 28 (56)	D-5	GS MC	GW, M.C. = 7% Well graded GRAVEL with sand, sub-angular, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.5 ft. Length Retained:0.5 ft.		
30	95			12 12 17 (29)	D-6	GS MC	GW, M.C. = 7% Well graded GRAVEL with sand, sub-rounded, dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft.		
35	90			5 7 7 (14)	D-7	GS MC AL	SM, M.C. = 20%, LL = 24, PL = NP Silty SAND with gravel and wood twigs in sample, sub-rounded, medium dense, dark gray, moist, homogenous, HCl not tested, (Took moisture can sample MC-7a from same depth. Retained 4). Length Recovered:1.5 ft. Length Retained:1.5 ft.		
40	85			2 3 3 (6)	D-8	GS MC	SM, M.C. = 18%, Silty SAND with gravel, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft.		
45	80								



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760

SR 162

Elevation 124.5 ft

HOLE No. BH-1-08

Sheet 3 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
				12 3 4 (7)	D-9		Silty SAND with gravel, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
50	75			2 3 3 (6)	D-10	GS MC	SM, M.C. = 17%, LL = 24, PL = NP Silty SAND with gravel, sub-rounded, traces of wood fibers and iron oxidized stain, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
55	70			2 4 7 (11)	D-11	GS MC	SM, M.C. = 19%, PI = 3 Silty SAND with gravel and wood twigs in sample, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested, (Took moisture can sample MC-11a from same depth. Retained 4). Length Recovered:1.5 ft. Length Retained:1.5 ft.		
60	65			3 5 11 (16)	D-12	GS MC AL	SM, M.C. = 16%, LL = 24, PL = NP Silty SAND with gravel, sub-rounded, medium dense, dark gray, moist, homogenous, HCl not tested, (Over night water table depth is 13.0', hole depth 60.0' 9-16-08). Length Recovered:1.5 ft. Length Retained:1.5 ft.		
65	60			12 14 14 (28)	D-13	GS MC	SM, M.C. = 27% Silty SAND, trace organic lens, brown in color, dense, dark gray, moist, stratified, HCl not tested, (Took moisture can sample MC-13a from same depth. Retained 4). Length Recovered:1.5 ft. Length Retained:1.5 ft.		
70	55								

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760

SR 162

Elevation 124.5 ft

HOLE No. BH-1-08

Sheet 4 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80							
				>>		93/6" (REF)	D-14			
				>>		48 60/6" (REF)	D-15	GS MC		
						12 19 29 (48)	D-16	GS MC		
				>>		100/6" (REF)	D-17	GS MC		
						55 45 55 (98)	D-18	GS MC		



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760

SR 162

Elevation 124.5 ft

HOLE No. BH-1-08

Sheet 5 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	◆ Field SPT (N) + Moisture Content ▨ RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80							
				100/6" (REF)		D-19		Poorly graded GRAVEL with sand, sub-rounded to sub-angular, very dense, dark gray, wet, homogenous, HCl not tested, Trace of non-plastic Silt. Est. Gravel 80-90%, est. fine to coarse Sand 15-20%. (Glacial Till). Length Recovered:0.4 ft. Length Retained:0.4 ft. 2" ID x 2 1/2" OD oversize sampler		
100	25			100/3" (REF)		D-20		No Recovery 2" ID x 2 1/2" OD oversize sampler		
105	20							The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.		
110	15							End of test hole boring at 101.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
115	10									
120	5									

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL\_GDT 10/27/14





Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760 SR 162 Elevation 135.4 ft

HOLE No. BH-2-08

Sheet 1 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969T

Site Address Vic. of 136 Street East and SR-162

Inspector Cleo Andrews 1677

Start September 22, 2008 Completion September 25, 2008 Well ID# \_\_\_\_\_ Equipment CME 55 with Autohammer

Station DS 21+83.65 Offset 0.4ft Rt. Hole Dia 4 (inches) Method Wet Rotary

Northing 659770.85 Easting 1208461.7 Collected by \_\_\_\_\_ Datum State Plane South

County Pierce Subsection NE-SE-1/4 Section 13 Range 4 EWM Township 19 N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
135.0							Silty SAND as indicated by drilling and wash returns.		
5	130.0			3 4 6 (10)	D-1	GS MC	SM, M.C. = 12% Silty SAND, root twigs, medium dense, brown, moist, stratified, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft. Traces of small sub-rounded Gravel.		
10	125.0			1 1 1 (2)	D-2	GS MC AL	SM, M.C. = 16%, LL = 25, PL = NP Silty SAND with gravel, sub-rounded, very loose, medium dark gray, wet, homogenous, HCl not tested. Length Recovered:0.5 ft. Length Retained:0.5 ft.		
15	120.0			3 3 47 (50)	D-3	GS MC	GW-GM, M.C. = 8% Well graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.5 ft. Length Retained:0.5 ft.		
20									



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760

SR 162

Elevation 135.4 ft

HOLE No. BH-2-08

Sheet 2 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	<div> <div>◆</div> Field SPT (N) <div>+</div> Moisture Content <div>▨</div> RQD </div>	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80							
	115			15 28 24 (52)	D-4			Well graded GRAVEL with silt and sand, sub-rounded, very dense, brown, wet, homogenous, HCl not tested. Length Recovered:0.5 ft. Length Retained:0.5 ft. Est. Gravel 50-60%, est. fine to coarse Sand 40-50%, trace of non-plastic Silt, est. less than 5%.		
								09/23/2008 09/25/2008		
25	110			9 9 8 (17)	D-5			Well graded GRAVEL with silt and sand, sub-angular, medium dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.4 ft. Length Retained:0.4 ft. Est. Gravel 70-80%, est. fine to coarse Sand 20-30%. (Note some cutting mixed in with sample recovery).		
30	105			32 27 18 (45)	D-6			Well graded GRAVEL with silt and sand, sub-angular, dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.9 ft. Length Retained:0.9 ft. Est. Gravel 70-80%, est. fine to coarse Sand 20-30%, trace of none plastic Silt, est 5-10%.		
35	100			25 30 25 (55)	D-7			Well graded GRAVEL with silt and sand, sub-angular, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.7 ft. Length Retained:0.7 ft. Est. gravel 70-80%, est. fine to coarse Sand 20-30%, trace of none plastic Silt, est. less than 10%.		
40	95			34 32 25 (57)	D-8		GS MC	GW-GM, M.C. = 7% Well graded GRAVEL with silt and sand, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.8 ft. Length Retained:0.8 ft. 2"IDx2 1/2"OD Oversize sampler		
45										

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760

SR 162

Elevation 135.4 ft

HOLE No. BH-2-08

Sheet 3 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
90			20 40 60 80	4 4 12 (16)		D-9	GS MC	SM, M.C. = 18%, LL = 24, PL = NP Silty SAND with GRAVEL, sub-angular, wood particles, medium dense, dark gray, moist, stratified, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. Took moisture can sample MC-9a from same depth. Retained 4. Changed at 44.5' to Clayey Sand with Gravel as indicated by driller. Drilling easier.		
50	85			3 3 4 (7)		D-10		Silty SAND with GRAVEL, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
55	80			2 3 3 (6)		D-11	MC	M.C. = 20% Silty SAND with GRAVEL, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. Took moisture can sample MC-11a, same depth. Retained 4.		
60	75			2 3 3 (6)		D-12	MC AL	M.C. = 18%, LL = 25, PL = NP Silty SAND with GRAVEL, sub-angular, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. (Note started drilling harder from 62.0' to 63.0').		
65	70			3 4 5 (9)		D-13	GS MC	M.C. = 18% Silty SAND with GRAVEL, sub-angular, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. Took moisture can sample MC-13a, same depth. Retained 4.		
70										



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760

SR 162

Elevation 135.4 ft

HOLE No. BH-2-08

Sheet 4 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
65			◆ 20 40 60 80	3 3 5 (8)		D-14	GS MC AL	SM, M.C. = 20%, LL = 23, PL = NP Silty SAND with GRAVEL, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. Traces of wood particles. (Note possible 6" cobble from 72.0' to 72.5' as indicated by driller).		
75	60		◆ 20 40 60 80	12 25 31 (56)		D-15	MC	M.C. = 22% Silty SAND, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. Traces of non-plastic Silt and red specks. (Took moisture can sample MC-15a at same depth. Retained 4).		
80	55		◆ 20 40 60 80	16 20 50/2" (REF)		D-16	GS MC	SM, M.C. = 21% Silty SAND, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.1 ft. Length Retained:1.1 ft. Traces of some coarser grains and red specks. One piece of sub-angular Gravel in end of sample.		
85	50		◆ 20 40 60 80	52 40 40 (80)		D-17	GS MC	GW-GM, M.C. = 8% Well graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.2 ft. Length Retained:1.2 ft. (Changed at 81.1' to Glacial Till as indicated by drilling). Note approximately 5-10% drilling fluid lost at times.		
90	45		◆ 20 40 60 80	100/6" (REF)		D-18 C-19		Well graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.5 ft. Length Retained:0.5 ft. Trace of non-plastic Silt. Est. Gravel 70-80%, est. fine to coarse sand 20-30%. (Glacial Till). Well graded GRAVEL, sub-rounded, dark gray, wet, homogenous, HCl not tested. Length Recovered:2.5 ft. Length Retained:2.5 ft. Note all fines washed away while coring. Some gravel are 2x2 in size. Approximately 10-15% drilling fluid loss at times. (Glacial Till). Pictures taken of core return.		
95										

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card S-32651

Job No. XL-2760 SR 162

Elevation 135.4 ft

HOLE No. BH-2-08

Sheet 5 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
40			20 40 60 80	16 21 50 (71)	D-20 C-21		Well graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. Trace of non-plastic Silt, est. 5-10%, est. Gravel 70-80%, est. fine to coarse sand 20-30%. (Glacial Till). Well graded GRAVEL, sub-rounded, dark gray, wet, homogenous, HCl not tested. Length Recovered:2.0 ft. Length Retained:2.0 ft. Note all fines washed away while coring. Some gravel are 2x2 in size. (Glacial Till). Pictures taken of core return.		
100	35			>> 26 38 50/2" (REF)	D-22		Well graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft. Trace of non-plastic Silt, est. 5-10%, est. Gravel 70-80%, est. fine to coarse sand 20-30%. (Glacial Till). Note pictures taken of drill site and surrounding area.		
105	30						The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.		
110	25						End of test hole boring at 101.1 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal, Oversized sampler blow counts are corrected to Standard SPT values per AASHTO		
115	20								
120									



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760 SR 162 Elevation 128.6 ft

HOLE No. BH-3p-08

Sheet 1 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969T

Site Address Vic. of 136 Street East and SR-162

Inspector Cleo Andrews 1677

Start September 9, 2008 Completion September 11, 2008 Well ID# APJ-625 (1" OD Piezo Well) Equipment CME 55 with Autohammer

Station DS 19+00.28 Offset 0.44ft Rt. Hole Dia 4 (inches) Method Wet Rotary

Northing 660023.4 Easting 1208344.15 Collected by  Datum State Plane South

County Pierce Subsection NE-SE-1/4 Section 13 Range 4 EWM Township 19 N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
5	125.0			5 4 4 (8)	D-1		0.0' to 4.0' Silty GRAVEL with Sand as indicated by drilling and wash returns. Occasional boulders and cobbles.		
10	120.0			6 13 13 (26)	D-2	GS MC	GP-GM, M.C. = 9% Poorly graded GRAVEL with silt and sand, sub-rounded, dense, dark brown, moist, homogenous, HCl not tested, Trace of reddish brown oxidized staining. Length Recovered:1.0 ft. Length Retained:1.0 ft.	3/25/14	
15	115.0			9 6 4 (10)	D-3		Poorly graded GRAVEL with silt and sand, sub-rounded, medium dense, brown, moist, homogenous, HCl not tested, Trace of Silt. Est. Gravel 70-80%, est. fine to coarse Sand 20-30%. Length Recovered:0.5 ft. Length Retained:0.5 ft.	7/9/12	
20	110.0			18 16	D-4	GS MC	GW, M.C. = 8% Well graded GRAVEL with sand, sub-rounded, dense,		

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 128.6 ft

HOLE No. BH-3p-08

Sheet 2 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
				28 (44)			dark gray, wet, homogenous, HCl not tested. Length Recovered:0.8 ft. Length Retained:0.8 ft.		
25	105			17 15 24 (39)	D-5		Well graded GRAVEL with sand, sub-rounded, dense, dark gray, wet, homogenous, HCl not tested, Trace of non-plastic Silt 5-10%, est. Gravel 70-80%, est. fine to coarse Sand 20-30%. Length Recovered:0.6 ft. Length Retained:0.6 ft.		
30	100			32 25 25 (50)	D-6	GS MC	GW-GM, M.C. = 9% Well graded GRAVEL with silt and sand, sub-angular, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
35	95			7 7 54 (61)	D-7	GS MC	SP-SM, M.C. = 16% Poorly graded SAND with silt and gravel, wood particles, Silt lenses and red specks of sand, very dense, dark gray, moist, stratified, HCl not tested. Length Recovered:0.6 ft. Length Retained:0.6 ft.		
40	90			5 5 7 (12)	D-8	GS MC AL	SP-SM, M.C. = 18%, LL = 24 Poorly graded SAND with silt and gravel, sub-rounded, medium dense, dark gray with trace of brownish-orange mottled staining, moist, homogenous, HCl not tested, (Took moisture can sample MC-8a from same depth. Retained 4"). Length Recovered:1.5 ft. Length Retained:1.5 ft.		
45	85			2 2	D-9	GS MC	SM, MC=18%, LL=24 Silty SAND with gravel, loose, dark gray, moist,		



# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 128.6 ft

HOLE No. BH-3p-08

Sheet 3 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
				4 (6)		AL HT	homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
80				5 5 7 (12)	D-10	MC	M.C. = 19% Silty SAND with GRAVEL, sub-rounded, medium dense, dark gray, moist, homogenous, HCl not tested, (Took moisture can sample MC-10a from same depth. Retained 6").  Length Recovered:1.5 ft. Length Retained:1.5 ft.		
50				5 4 4 (8)	D-11		Encountered cobble from 53.0' to 53.5' as indicated by drilling.  Silty SAND with GRAVEL, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested, (Water table reading over night was at -12.0'. 9-10-08). Length Recovered:1.5 ft. Length Retained:1.5 ft.		
75				4 5 5 (10)	D-12	GS MC	SM, M.C. = 19% Silty SAND with gravel, sub-rounded, medium dense, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft.		
55				13 6 6 (12)	D-13	MC	M.C. = 20% Silty SAND with GRAVEL, sub-rounded, medium dense, dark gray, moist, homogenous, HCl not tested, (Took moisture can sample MC-13a from same depth. Retained 6"). Length Recovered:1.5 ft. Length Retained:1.5 ft.		
70				22 24	D-14	GS MC	GW-GM, M.C. = 8%, LL = 20 Well graded GRAVEL with silt and sand, sub-angular,		
60									
65									
65									
60									
70									

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14





# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 128.6 ft

HOLE No. BH-3p-08

Sheet 4 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
55							21 (45)			AL	dense, brownish gray, moist, homogenous, HCl not tested, Note color change in bottom 3" of sample to light green. Length Recovered:0.7 ft. Length Retained:0.7 ft.		
75							23 (63)		D-15	GS MC AL	GW-GM, M.C. = 8%, LL = 20 Well graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.2 ft. Length Retained:1.2 ft.		
80							54/6" (REF)		D-16		Well graded GRAVEL with sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested, Trace of non-plastic Silt less than 10, est. Gravel 70-80%, est. fine to coarse Sand 20-30%. Very little drilling fluid lost down hole. Length Recovered:0.5 ft. Length Retained:0.5 ft.		
85							55/6" (REF)		D-17		Well graded GRAVEL with sand, sub-angular, very dense, dark gray, wet, homogenous, HCl not tested, Trace of non-plastic Silt less than 10%. Est. Gravel 70-80%, est. fine to coarse Sand 20-30%. Very little drilling fluid lost down hole. Length Recovered:0.3 ft. Length Retained:0.3 ft.		
90							50 (50/5" (REF)		D-18		Well graded GRAVEL with sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested, Trace of non-plastic Silt less than 10%. Est. Gravel 70-80%, est. fine to coarse Sand 20-30%. Very little drilling fluid lost down hole. Length Recovered:0.5 ft. Length Retained:0.5 ft. 2" ID x 2 1/2" OD oversize sampler		
95							75 (50/5"		D-19	GS MC	GW, M.C. = 6% Well graded GRAVEL with sand, sub-rounded, very		



# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 128.6 ft

HOLE No. BH-3p-08

Sheet 5 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	◆ Field SPT (N) + Moisture Content ▨ RQD	20   40   60   80 Blows/6" (N) and/or RQD FF	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
					(REF)				dense, dark gray, wet, homogenous, HCl not tested, Trace of non-plastic Silt less than 10%. Est. Gravel 70-80%, est. fine to coarse Sand 20-30%. (Glacial Till). Very little drilling fluid lost down hole. Length Recovered:0.7 ft. Length Retained:0.7 ft.		
30					>>◆	50/4" (REF)	D-20	GS MC	GW, M.C. = 6% Well graded GRAVEL with sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.4 ft. Length Retained:0.4 ft. 2" ID x 2 1/2" OD oversize sampler		
100											
25											
105											
20											
110											
15											
115											
10											
120											

A standpipe monument was installed on this boring.

The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.

End of test hole boring at 99.4 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data.

Note: REF = SPT Refusal

## WATER LEVEL READINGS

DATE	DEPTH	ELEVATION
04/20/2009	12.9	115.7
05/05/2009	15.25	113.35
07/07/2009	13.75	114.85
08/10/2009	14.77	113.83
09/09/2009	14.73	113.87
10/16/2009	14.01	114.59
11/13/2009	13.3	115.3
12/10/2009	13.16	115.44
01/20/2010	11.95	116.65
02/18/2010	13.05	115.55



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760 SR 162 Elevation 135.9 ft

HOLE No. BH-4p-08

Sheet 1 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969T

Site Address Vic. of 136 Street East and SR-162

Inspector Cleo Andrews 1677

Start September 26, 2006 Completion September 28, 2008 Well ID# APJ-624 (1" OD Piezo Well) Equipment CME 55 with Autohammer

Station DS 22+64.607 Offset 0.60ft Lt. Hole Dia 4 (inches) Method Wet Rotary

Northing 659695.186 Easting 1208490.794 Collected by Region Survey Crew Datum State Plane South

County Pierce Subsection NE-SE-1/4 Section 13 Range 4 EWM Township 19 N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
135.0											0.0' to 4.0' silty Sand as shown in wash returns and by drilling. Note pictures taken of drill site and surrounding area.		
5							1 2 2 (4)	D-1		GS MC	SP-SM, M.C. = 23% Poorly graded SAND with silt, traces of small gravel and red sand specks, very loose, dark brown, wet, stratified, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
130.0													
10							1 1 1 (2)	D-2		GS MC AL	SM, M.C. = 16%, LL = 24, PL = NP Silty SAND with gravel, very loose, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft.		
125.0													
15							1 1 2 (3)	D-3			Poorly graded GRAVEL with silt and sand, sub-rounded, very loose, brownish gray, wet, homogenous, HCl not tested. Length Recovered:0.5 ft. Length Retained:0.5 ft. Trace of non-plastic Silt. Eest. Gravel 70-80%, est. fine to coarse Sand 20-30%.		
120.0													
20							>> 31 68/6"	D-4		GS MC	GP-GM, M.C. = 7% Poorly graded GRAVEL with silt and sand, sub-rounded,		

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOILGDT 10/27/14

5/16/11



# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 135.9 ft

HOLE No. BH-4p-08

Sheet 2 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	<div> <div>◆</div> Field SPT (N) <div>+</div> Moisture Content <div>▨</div> RQD </div> <div>20 40 60 80</div>	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
115				(REF)				very loose, brown, moist, homogenous, HCl not tested. Length Recovered: 1.0 ft. Length Retained: 1.0 ft. 2"ID X 2 1/2"OD Oversize sampler	8/10/09	
25	110			24 26 15 (41)	D-5			Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered: 1.0 ft. Length Retained: 1.0 ft. Trace of non-plastic Silt est. 5-10%, est. Gravel 70-80%, est. fine to coarse Sand 20-30%. 2"ID X 2 1/2"OD Oversize sampler		
30	105			17 32 38 (70)	D-6		GS MC	SP-SM, M.C. = 15% Poorly graded SAND with silt and gravel, dense, dark gray, wet, homogenous, HCl not tested. Length Recovered: 1.0 ft. Length Retained: 1.0 ft. 2"ID X 2 1/2"OD Oversize sampler		
35	100			17 32 35 (67)	D-7			Poorly graded SAND with silt and gravel, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered: 1.0 ft. Length Retained: 1.0 ft. Trace of non-plastic Silt 3-10%, est. Gravel 60-70%, est. fine to coarse Sand 30-40%. 2"ID X 2 1/2"OD Oversize sampler		
40	95			10 47 35 (82)	D-8		GS MC	SP, M.C. = 10% Poorly graded SAND with gravel, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered: 0.5 ft. Length Retained: 0.5 ft. 2"ID X 2 1/2"OD Oversize sampler		
								Note started drilling easier at 42.0'. Some Gravel are 2 1/2" x 2" in size.		
45				5 9	D-9			Silty SAND with gravel, sub-rounded, medium dense, dark gray, moist, homogenous, HCl not tested.		

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 135.9 ft

HOLE No. BH-4p-08

Sheet 3 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80							
90				6 (15)	X			Length Recovered:0.5 ft. Length Retained:0.5 ft. 2"IDX21/2"OD Oversize sampler		
50				3 4 3 (7)	X	D-10	GS MC AL	SM, M.C. = 18%, LL = 24, PL = NP Silty SAND, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft. Took moisture can sample MC-10a from same depth. Retained 4". Some Gravel are 2 1/2" x 2" in size. 2"IDX21/2"OD Oversize sampler		
85										
55				5 4 5 (9)	X	D-11	GS MC	SM, M.C. = 19% Silty SAND with gravel, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:0.5 ft. Length Retained:0.5 ft. Some Gravel are 2 1/2" x 2" in size. 2"IDX21/2"OD Oversize sampler		
80										
60				3 3 4 (7)	X	D-12	GS MC AL	SC-SM, M.C. = 16%, PI = 4 Silty, Clayey SAND with gravel, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.0 ft. Some Gravel are 2 1/2" x 1 1/2" in size. 2"IDX21/2"OD Oversize sampler		
75										
65				3 3 4 (7)	X	D-13	GS MC	SM, M.C. = 15% Silty SAND with gravel, sub-rounded, loose, dark gray, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.5 ft.(Took moisture can sample MC-13a same depth. Retained 4"). 2"IDX21/2"OD Oversize sampler		
70										
				85 35	X	D-14	GS MC	GM, M.C. = 8% Silty GRAVEL with sand, sub-rounded, very dense,		
70										



# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 135.9 ft

HOLE No. BH-4p-08

Sheet 4 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
65				35 (70)			brown, moist, homogenous, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.0 ft. 2"IDX21/2"OD Oversize sampler		
75				10 18 28 (46)	D-15	GS MC	SM, M.C. = 22% Silty SAND with gravel, decayed wood brown in color and wood particle in top 6" of sample, dense, dark gray, moist, stratified, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.0 ft. Some gravel are 2" x 2 1/2" in size. Note encountered coarser Gravel at 77.0' harder drilling. 2"IDX21/2"OD Oversize sampler		
80				28 40 26 (66)	D-16	GS MC	GW, M.C. = 5% Well graded GRAVEL with sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.0 ft. Length Retained:1.0 ft. Trace of non-plastic Silt. Est. Gravel 70-80%, some are 1" x 1" to 2" x 2" in size, est. fine to coarse Sand 20-30%. 2"IDX21/2"OD Oversize sampler		
85				64 75/5" (REF)	D-17		Well graded GRAVEL with sand, sub-rounded, very dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.9 ft. Length Retained:0.9 ft. Trace of non-plastic Silt, est. less than 10%, est. Gravel 70-80%, some are 2" x 2" in size, est. fine to coarse Sand 20-30%. 2"IDX21/2"OD Oversize sampler		
90				70 50 50/5" (REF)	D-18		Well graded GRAVEL with sand, sub-rounded, very dense, dark gray, wet, HCl not tested. Length Recovered:1.4 ft. Length Retained:1.4 ft. Trace of non-plastic Silt, est. less than 10%, est. Gravel 70-80%, some are 2" x 2" in size, est. fine to coarse Sand 20-30%. 2"IDX21/2"OD Oversize sampler		
95				55 57	D-19	GS MC	GW-GM, M.C = 6% Well graded GRAVEL with silt and sand, sub-rounded,		

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card R-72834

Job No. XL-2760

SR 162

Elevation 135.9 ft

HOLE No. BH-4p-08

Sheet 5 of 5

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
40				45 (REF)				very dense, dark gray, wet, HCl not tested. Length Recovered:1.5 ft. Length Retained:1.0 ft. 2"IDX21/2"OD Oversize sampler		
100				50 100/5" (REF)		D-20		Well graded GRAVEL with silt and sand, sub-rounded, very dense, dark gray, wet, HCl not tested. Length Recovered:0.9 ft. Length Retained:0.9 ft. Traces of non-plastic Silt, less than 10%. Est. Gravel 70-80%, some are up to 2" x 2" in size. Est. fine to coarse Sand 20-30%. 2"IDX21/2"OD Oversize sampler		
35										
105										
30										
110										
25										
115										
20										
120										

## WATER LEVEL READINGS

DATE	DEPTH	ELEVATION
04/20/2009	19.6	116.3
05/05/2009	20.1	115.8
07/07/2009	20.77	115.13
08/10/2009	21.69	114.21
09/09/2009	21.55	114.35
10/16/2009	21.21	114.69
11/13/2009	20.2	115.7
12/10/2009	20.01	115.89
01/20/2010	18.2	117.7
02/18/2010	19.5	116.4



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card SE46872/AE19932

Job No. XL-2760-A SR 162 Elevation 129.9 ft

HOLE No. BH-5-12

Sheet 1 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny Lic# 2742

Component \_\_\_\_\_

Inspector Harvey, Thomas #2599

Start December 5, 2012 Completion December 12, 2012 Well ID# \_\_\_\_\_ Equipment CME 850 (9C2-2)

Station DS 19+17 Offset 4.7 feet left Hole Dia 4 (inches) Historical SPT Efficiency Past Rig Efficiency 83.8%

Northing 660017.816 Easting 1208360.256 Collected by Region Survey Crew Method Mud Rotary

Lat 47.1301783 Long -122.2359314 Datum NAD 83/91 HARN, NAVD88, SPS (ft) Drill Fluid Bentonite

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
5	125.0						3 2 3 (5)		D-1	MC GS	SM, MC=25% Silty SAND with organics, loose, brown, moist, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
							9 13 18 (31)		D-2		Poorly graded GRAVEL with sand, sub-rounded, dense, brown, moist, homogeneous. HCl not tested. Recovered: 1.0 ft Retained: 1.0 ft		
10	120.0						21 25 29 (54)		D-3	MC GS	GP, MC=10% Poorly graded GRAVEL with sand, sub-rounded, very dense, brown, moist, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
							9 10 13 (23)		D-4		Poorly graded GRAVEL with sand, sub-rounded, medium dense, brown, wet, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
15	115.0						9 8 8 (16)		D-5		Poorly graded GRAVEL with sand, sub-rounded, medium dense, brown, wet, homogeneous. HCl not tested. Recovered: 0.8 ft Retained: 0.8 ft		
							4 3 10 (13)		D-6		Poorly graded GRAVEL with sand, sub-rounded, medium dense, brown, wet, homogeneous. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
20	110.0						10 17		D-7		Well graded GRAVEL, sub-rounded, dense, gray, wet, homogeneous. HCl not tested.		

12-12-2012

ENTERPRISE BORING LOG XL-2760-A 162 PUYALLUP RIVER BRIDGE.GPJ ENTERPRISE DATA TEMPLATE.GDT 10/27/14





# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 129.9 ft

HOLE No. BH-5-12

Sheet 2 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	<div> <div>SPT Efficiency</div> <div>Field SPT (N)</div> <div>Moisture Content</div> <div>RQD</div> </div>	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80							
				14 (31)				Recovered: 0.3 ft Retained: 0.3 ft		
				15 (22)		D-8		Well graded SAND with gravel, sub-rounded, medium dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.8 ft Retained: 0.8 ft		
25	105			6 (18)		D-9		Poorly graded SAND with gravel, sub-rounded, medium dense, gray, moist, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
				33 (47)		D-10		Poorly graded GRAVEL with silt and sand, sub-rounded, dense, gray, wet, homogeneous. HCl not tested. Fractured clast in sample indicates presense of cobble size material. Recovered: 1.0 ft Retained: 1.0 ft		
30	100			27 (50/0" (REF))		D-11	MC GS	GP-GM, MC=9% Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 1.0 ft Retained: 1.0 ft		
35	95			30 (49)		D-12		Poorly graded GRAVEL with silt and sand, sub-rounded, dense, gray, wet, homogeneous. HCl not tested. Recovered: 1.0 ft Retained: 1.0 ft		
40	90			8 (16)		D-13		No Recovery.		
45	85			11 (30)		D-14	MC GS	SM, MC=18%, PI=3 Silty SAND with gravel, sub-rounded, dense, gray, moist,		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 129.9 ft

HOLE No. BH-5-12

Sheet 3 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
50	80			8 (38)	X	AL	homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
55	75								
60	70								
65	65			6 8 14 (22)	X	D-15 MC GS AL	SC-SM, MC=15%, PI=4 Silty, clayey SAND with gravel, sub-rounded, medium dense, gray, moist, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
70	60			8 14	X	D-16	Silty, clayey SAND with gravel, sub-rounded, dense, gray, moist, homogeneous. HCl not tested.		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 129.9 ft

HOLE No. BH-5-12

Sheet 4 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	<div><div><div><div></div></div>SPT Efficiency</div><div><div></div></div>Field SPT (N)</div> <div><div></div></div> Moisture Content <div><div></div></div> RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20406080							
				24 (38)	X			Recovered: 1.5 ft Retained: 1.5 ft		
75	55			>> 50/6" (REF)	X	D-17		Well graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
80	50			>> 50/6" (REF)	X	D-18		Well graded GRAVEL, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Fractured clast in sample indicates presense of cobble size material. Recovered: 0.3 ft Retained: 0.3 ft		
85	45			32 30 22 (52)	X	D-19		Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.5 ft Retained: 0.5 ft		
90	40			29 24 23 (47)	X	D-20		Poorly graded GRAVEL with silt and sand, sub-rounded, dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
95	35			>> 50/6" (REF)	X	D-21	MC GS	GP-GM, MC=12% Poorly graded GRAVEL with silt and sand, sub-rounded,		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 129.9 ft

HOLE No. BH-5-12

Sheet 5 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
											very dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
100	30						>> 11 50/6" (REF)	⊗	D-22		Poorly graded SAND with gravel, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.5 ft Retained: 0.5 ft		
105	25						>> 29 50/6" (REF)	⊗	D-23	MC GS	SP-SM, MC=16% Poorly graded SAND with silt and gravel, sub-rounded, very dense, gray, moist, stratified. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
110	20						40 37 23 (60)	⊗	D-24		Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist, stratified. HCl not tested. Recovered: 0.8 ft Retained: 0.8 ft		
115	15						>> 50/6" (REF)	⊗	D-25	MC GS	GP-GM, MC=11% Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
120	10						>> 50/1" (REF)	⊗	D-26		No Recovery.		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 129.9 ft

HOLE No. BH-5-12

Sheet 6 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
125	5						>> 50/4" (REF)		D-27		Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
130	0						>> 50/2" (REF)		D-28		Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist. HCl not tested. Fractured clast, 1.5in diameter, indicates presense of cobble size material. Recovered: 0.3 ft Retained: 0.3 ft		
135	-5						>> 50/1" (REF)		D-29		Well graded GRAVEL, sub-rounded, very dense, gray, moist. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
140	-10						>> 50/2" (REF)		D-30		Well graded GRAVEL, sub-angular, very dense, gray, moist. HCl not tested. Fractured clast in sample indicates presense of cobble size material. Recovered: 0.3 ft Retained: 0.3 ft		
145	-15						>> 50/4" (REF)		D-31		Well graded SAND with gravel, sub-angular, very dense, gray, moist. HCl not tested.		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 129.9 ft

HOLE No. BH-5-12

Sheet 7 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency				Blows/5" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
											Recovered: 0.4 ft Retained: 0.4 ft		
150	-20						50/1" (REF)		D-32		Well graded GRAVEL, sub-angular, very dense, gray, moist. HCI not tested. Fractured clast in sample indicates presense of cobble size material. Recovered: 0.3 ft Retained: 0.3 ft		
155	-25										The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Office and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.		
160	-30										End of test hole boring at 149.1 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
165	-35										Bail/Recharge test: Hole Diameter: 4in. - Depth of boring during bail test: 149.1ft. Depth of casing during bail test: 144ft. Bailed bore hole water level to 21.4ft. Recharge after 5 minutes :13.3ft.		
170	-40										NOTE: 2"IDX2 1/2"OD Oversize sampler.		



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card RE07854

Job No. XL-2760-A SR 162 Elevation 124.9 ft

HOLE No. BH-6p-12

Sheet 1 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny Lic# 2742

Component \_\_\_\_\_

Inspector Harvey, Thomas #2599

Start December 3, 2012 Completion December 5, 2012 Well ID# BHB-875 Equipment CME 850 (9C2-2)

Station DS 20+16 Offset 0.2 feet left Hole Dia 4 (inches) Historical SPT Efficiency Past Rig Efficiency 83.8%

Northing 659926.022 Easting 1208397.817 Collected by Region Survey Crew Method Mud Rotary

Lat 47.1299289 Long -122.2357724 Datum NAD 83/91 HARN, NAVD88, SPS (ft) Drill Fluid Bentonite

Depth (ft)	Elevation (ft)	Profile	<div> <div>SPT Efficiency</div> <div>Field SPT (N)</div> <div>Moisture Content</div> <div>RQD</div> </div> <div>20 40 60 80</div>	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater readings were taken from 04-25-2014 to 07-10-2014	Instrument
5	120.0			2 2 3 (5)	D-1			Silty SAND, loose, brown, moist, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
				4 13 16 (29)	D-2		MC GS	SM, MC=23% Silty SAND trace gravels/organics, dense, brown, moist, stratified. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
10	115.0			17 10 6 (16)	D-3			Well graded SAND with gravel, sub-rounded, medium dense, brown, wet, homogeneous. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
				8 10 10 (20)	D-4			Poorly graded GRAVEL with sand, sub-rounded, medium dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.5 ft Retained: 0.5 ft		
15	110.0			11 7 6 (13)	D-5			Poorly graded GRAVEL with sand, sub-rounded, medium dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.3 ft Retained: 0.3 ft		
				20 16 13 (29)	D-6			Poorly graded GRAVEL with sand, sub-rounded, dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.8 ft Retained: 0.8 ft		
20	105.0			12 17	D-7		MC GS	GP, MC=10% Poorly graded GRAVEL with sand, sub-rounded, dense,		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 124.9 ft

HOLE No. BH-6p-12

Sheet 2 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	<div> <div>●</div> SPT Efficiency <div>◆</div> Field SPT (N) <div>+</div> Moisture Content <div>▨</div> RQD </div>	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80							
				17 (34)				gray, moist, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
				36 32 25 (57)	D-8			Poorly graded GRAVEL with sand, sub-rounded, very dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
25	100			20 27 12 (39)	D-9			Poorly graded GRAVEL with sand, sub-rounded, dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.3 ft Retained: 0.3 ft		
				28 36 34 (70)	D-10		MC GS	GP, MC=6% Poorly graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 1.0 ft Retained: 1.0 ft		
30	95			50/0" 41 33 (REF)	D-11			Poorly graded GRAVEL with sand, sub-angular, very dense, gray, wet, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
				18 6 4 (10)	D-12			No Recovery.		
35	90									
40	85			4 5 7 (12)	D-13		MC GS AL	SM, MC=20%, LL=25 Silty SAND, medium dense, gray, wet, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
				3 4	D-14			Silty SAND, loose, gray, wet, homogeneous. HCl not tested.		
45	80									





# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 124.9 ft

HOLE No. BH-6p-12

Sheet 3 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
				4 (8)	X		Recovered: 1.5 ft Retained: 1.5 ft		
50	75								
55	70								
60	65			6 6 12 (18)	X D-15 X		Silty SAND, medium dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.3 ft Retained: 0.3 ft		
65	60								
70	55			>>	X D-16 X		Well graded GRAVEL with silt and sand, sub-angular, very dense, gray, wet, homogeneous. HCl not tested.		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 124.9 ft

HOLE No. BH-6p-12

Sheet 4 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
				(REF)			Recovered: 0.8 ft Retained: 0.8 ft		
75	50			36 38 50/10" (REF)	D-17	MC GS	GW-GM, MC=8% Well graded GRAVEL with silt and sand, sub-angular, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
80	45			27 29 29 (58)	D-18		Well graded GRAVEL with silt and sand, sub-rounded, very dense, gray, wet, homogeneous. HCl not tested. Recovered: 1.5 ft Retained: 1.5 ft		
85	40			33 49 49 (98)	D-19		Well graded GRAVEL with silt and sand, sub-rounded, very dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.3 ft Retained: 0.3 ft		
90	35			32 42 49 (91)	D-20		Well graded GRAVEL with silt and sand, sub-rounded, very dense, gray, wet, homogeneous. HCl not tested. Recovered: 1.0 ft Retained: 1.0 ft		
95	30			49 50/5"	D-21	MC GS	GP-GM, MC=10% Poorly graded GRAVEL with silt and sand, sub-rounded,		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 124.9 ft

HOLE No. BH-6p-12

Sheet 5 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
							(REF)				very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.8 ft Retained: 0.8 ft		
100	25						>> 38 50/6" (REF)	D-22			Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
105	20						49 39 18 (57)	D-23			Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, wet, homogeneous. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
110	15						>> 40 34 50/2" (REF)	D-24			Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft		
115	10						>> 50/2" (REF)	C-25 D-26 C-27			GRAVEL with cobbles, gray, moist, homogeneous. HCl not tested. Recovered: 2.0 ft Retained: 2.0 ft		
120	5										No Recovery. GRAVEL with cobbles, gray, moist, homogeneous. HCl not tested. Recovered: 4.0 ft Retained: 4.0 ft		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 124.9 ft

HOLE No. BH-6p-12

Sheet 6 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency ◆ Field SPT (N) + Moisture Content ▨ RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80	36 30 20 (50)	▲	D-28	MC GS	GP-GM, MC=11% Poorly graded GRAVEL with silt and sand, sub-rounded, dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.5 ft Retained: 0.5 ft		
125	0			19 33 34 (67)	▲	D-29		Poorly graded GRAVEL with silt and sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 1.0 ft Retained: 1.0 ft		
130	-5			>> 50/4" (REF)	▲	D-30	MC GS	GW, MC=11% Well graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
135	-10			>> 50/2" (REF)	▲	D-31		Well graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.4 ft Retained: 0.4 ft		
140	-15			>> 50/1" (REF)	▲	D-32		Well graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.3 ft Retained: 0.3 ft		
145	-20			>> 50/5" (REF)	▲	D-33		Poorly graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested.		



# LOG OF TEST BORING

Job No. XL-2760-A

SR 162

Elevation 124.9 ft

HOLE No. BH-6p-12

Sheet 7 of 7

Project SR162 Puyallup River Bridge Replacement

Driller Henderson, Danny

Depth (ft)	Elevation (ft)	Profile	SPT Efficiency				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
											Recovered: 0.5 ft Retained: 0.5 ft		
150	-25						>> 50/6" (REF)	50/6" (REF)	D-34		Poorly graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.5 ft Retained: 0.5 ft		
155	-30						>> 50/3" (REF)	50/3" (REF)	D-35	MC GS	GP, MC=7% Poorly graded GRAVEL with sand, sub-rounded, very dense, gray, moist, homogeneous. HCl not tested. Recovered: 0.6 ft Retained: 0.6 ft A standpipe monument was installed on this boring.		
160	-35										The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Office and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.		
165	-40										End of test hole boring at 154.3 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
170	-45										Bail/Recharge test: Hole Diameter: 4in. Depth of boring during bail test: 154.3ft. Depth of casing during bail test: 109ft. Bailed bore hole water level to 18.5ft. Recharge after 5 minutes :8ft.  NOTE: 2"IDx21/2"OD Oversize sampler.		



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card RE06027

Job No. XL-2760 SR 162 Elevation 135.0 ft

HOLE No. BH-7scp-11

Sheet 1 of 7

Project SR-162 Puyallup River Bridge Replacement

Driller Josh Roberts Lic# 2924

Site Address SR-162 vicinity of 136th st east

Inspector Ybarra, Tony #1683

Start July 5, 2011 Completion July 7, 2011 Well ID# BCR 134 Equipment Sonic - AH

Station DS 21+93.71 Offset 19.83ft Lt. Hole Dia 8 (inches) Method

Northing 659768.809 Easting 1208484.482 Collected by Region Survey Crew Datum State Plane South

County Pierce Subsection NE1/4 of SE1/4 Section 13 Range 4 EWM Township 19

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
									C-1		Start drilling at 11:30 am. Poorly graded SAND with gravel, brownish gray, moist, homogeneous, HCl not tested Length Recovered: 5 ft. Length Retained: 5 ft.		
5	130.0								C-2				
											Silty GRAVEL with sand, mottled gray, brown, orange, brownish gray, wet, homogeneous, HCl not tested, Moisture Sample #1. Length Recovered: 4 ft. Length Retained: 4 ft.		
10	125.0								C-3	GS MC	GM, MC=9% Silty GRAVEL with sand, sub-rounded, gray, moist, homogeneous, HCl not tested. Length Recovered: 5 ft. Length Retained: 5 ft.		
15	120.0								C-4	MC	MC=16% Silty GRAVEL with sand, rounded, cobbles, dark brown, moist, homogeneous, HCl not tested, scattered cobbles less than 6", 18' became wet. Moisture sample #2. Length Recovered: 3 ft. Length Retained: 3 ft.		
												3/27/14	
												7/10/14	
20													

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card RE06027

Job No. XL-2760 SR 162

Elevation 135.0 ft

HOLE No. BH-7scp-11

Sheet 2 of 7

Project SR-162 Puyallup River Bridge Replacement

Driller Josh Roberts Lic# 2924

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
									C-5		Silty GRAVEL with sand, sub-rounded, cobbles, strong brown, wet, homogeneous, HCl not tested, 22' to 25' olive gray, water bearing. Cobbles less than 5". Moisture Sample #3. Length Recovered: 3 ft. Length Retained: 3 ft.		
25	110								C-6	GS MC	GM, MC=1% Silty GRAVEL with sand, rounded, cobbles up to 6 in, gray, wet, homogeneous, HCl not tested, Moisture Sample #4. Length Recovered: 4 ft. Length Retained: 4 ft.		
30	105								C-7		Silty GRAVEL with sand, cobbles, dark olive gray, wet, homogeneous, HCl not tested, cobbles up to 5 in. Length Recovered: 3.5 ft. Length Retained: 3.5 ft.		
35	100								C-8		Silty GRAVEL with sand, rounded, cobbles, gray, wet, homogeneous, HCl not tested. Driller to try different bit. Advancing cobble down the boring. Moisture Sample #5. Length Recovered: 2 ft. Length Retained: 2 ft.		
40	95								C-9	GS MC	GM, MC=9% Silty GRAVEL with sand, sub-rounded, cobbles up to 6 in, gray, wet, homogeneous, HCl not tested, 5' cave, clean out. 44' changed to SILT with cobbles. Moisture Sample #6. Length Recovered: 5 ft. Length Retained: 5 ft.		
45													



LOG OF TEST BORING

Start Card RE06027

Job No. XL-2760

SR 162

Elevation 135.0 ft

HOLE No. BH-7scp-11

Sheet 3 of 7

Project SR-162 Puyallup River Bridge Replacement

Driller Josh Roberts

Lic# 2924

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
									C-10		Gravelly SILT, cobbles up to 6 in, gray, moist, homogeneous, HCl not tested, 15' sand cave or heave, Scattered cobbles, and pieces of wood. Moisture Sample #7. Length Recovered: 5 ft. Length Retained: 5 ft.		
50	85								C-11	GS MC	ML, MC=16% Gravelly SILT, cobbles up to 7 in, pieces of wood and organics, soft, gray, moist, homogeneous, HCl not tested, No recovery. Changed bit to recover sample. Moisture Sample #8. Length Recovered: 5 ft. Length Retained: 5 ft.		
55	80								C-12		Gravelly SILT, cobbles less than 6", gray, moist, homogeneous, HCl not tested. Length Recovered: 5 ft. Length Retained: 5 ft.		
60	75								C-13		Gravelly SILT, red volcanic sand, gray, moist, homogeneous, HCl not tested. Length Recovered: 5 ft. Length Retained: 5 ft.		
65	70								C-14		Gravelly SILT, gray, wet, homogeneous, HCl not tested, no recovery from initial run; recovered disturbed sample on second attempt. Length Recovered: 5 ft. Length Retained: 5 ft.		
70													

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



Job No. XL-2760

SR 162

Elevation 135.0 ft

HOLE No. BH-7scp-11

Sheet 4 of 7

Project SR-162 Puyallup River Bridge Replacement

Driller Josh Roberts Lic# 2924

Depth (ft)	Elevation (ft)	Profile	◆ Field SPT (N)	⊕ Moisture Content	▨ RQD	20	40	60	80	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
75	60		20	40	60	80						C-15		Gravelly SILT, dark gray, wet, homogeneous, HCl not tested, moist silt encountered at 72 ft. Moisture Sample #9. Length Recovered: 5 ft. Length Retained: 5 ft.		
												C-16	GS MC	ML, MC=6% Gravelly SILT, gray, wet, stratified, HCl not tested, Moisture Sample #10. Length Recovered: 4 ft. Length Retained: 4 ft.  4:30 pm, add casing and clean out hole.		
80	55										6 15 49 (64)	D-17	MC	Water at 20.5ft. 7am. 18ft of sand in casing, cleaned out before sampling. MC=8% Silty SAND with gravel, very dense, olive gray, wet, homogeneous, HCl not tested. Length Recovered: 1.5 ft. Length Retained: 1.5 ft.		
												C-18		Silty GRAVEL with sand, sub-rounded, cobbles less than 5 in, olive gray, wet, homogeneous, HCl not tested, Became well graded GRAVEL at 81.5ft. Moisture Sample #11. Length Recovered: 2 ft. Length Retained: 2 ft.		
85	50											C-19	GS MC	GM, MC=1% Silty GRAVEL with sand, cobbles up to 5 in, olive gray, wet, homogeneous, HCl not tested, Moisture Sample #12. Length Recovered: 3 ft. Length Retained: 3 ft.		
90	45									5 45 40 (85)	D-20	MC	MC=9% Well graded GRAVEL with sand, sub-angular, very dense, olive gray, wet, homogeneous, HCl not tested. Length Recovered: 0.8 ft. Length Retained: 0.8 ft.			
											C-21		Silty GRAVEL with sand, sub-rounded, cobbles up to 4 in, olive gray, wet, stratified with poorly graded SAND and well graded GRAVEL, HCl not tested, poor recovery 2'. Go back in and recover 5' more. Moisture Sample #13 and #14. Length Recovered: 5 ft. Length Retained: 5 ft.			
95																



# LOG OF TEST BORING

Start Card RE06027

Job No. XL-2760

SR 162

Elevation 135.0 ft

HOLE No. BH-7scp-11

Sheet 5 of 7

Project SR-162 Puyallup River Bridge Replacement

Driller Josh Roberts

Lic# 2924

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
100	35			◆			5 16 27 (43)	▲	D-22		Poorly graded GRAVEL, sub-angular, dense, dark gray, moist, homogeneous, HCl not tested, driving on a rock at the end of sample. Length Recovered: 1 ft. Length Retained: 1 ft.		
								▲	C-23		Well graded GRAVEL with sand, sub-rounded, cobbles up to 4 in, olive gray, wet, homogeneous, HCl not tested. Length Recovered: 1 ft. Length Retained: 1 ft.  Driller said a cobble was stuck in the bit blocking sample recovery. Asked him to resume drilling 5 ft runs.		
105	30												
110	25		+	◆			5 4 22 (26)	▲	D-24	MC	MC=16% Poorly graded SAND with gravel, medium dense, dark gray, moist, homogeneous, HCl not tested. Length Recovered: 0.9 ft. Length Retained: 0.9 ft.		
								▲	C-25		Poorly graded SAND with well graded GRAVEL, dark gray, moist, stratified, HCl not tested. Length Recovered: 3 ft. Length Retained: 3 ft.		
115	20								C-26		Poorly graded SAND with gravel and well graded GRAVEL with cobbles up to 3 in, dark olive gray, wet, stratified, HCl not tested. Moisture Sample #15. Length Recovered: 3 ft. Length Retained: 3 ft.		
120			◆										

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



# LOG OF TEST BORING

Start Card RE06027

Job No. XL-2760

SR 162

Elevation 135.0 ft

HOLE No. BH-7scp-11

Sheet 6 of 7

Project SR-162 Puyallup River Bridge Replacement

Driller Josh Roberts Lic# 2924

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
				4 7 (30/0")	D-27 C-28		Well graded SAND with gravel, medium dense, dark olive gray, wet, homogeneous, HCl not tested, stopped after 30 blows and no penetration at 121 ft. Length Recovered: 0.5 ft. Length Retained: 0.5 ft. No recovery, Cobble blocking the core barrel, per driller.		
125	10				C-29	GS MC	ML, MC=5% Gravelly SILT with cobbles less than 6 in, dark olive gray, moist, stratified, HCl not tested, 2 ft well graded gravel with cobbles, 3 ft poorly graded sand with gravel. Moisture Sample #16. Length Recovered: 5 ft. Length Retained: 5 ft.		
130	5			2 6 20 (26)	D-30 C-31	MC	MC=19% Poorly graded SAND, medium dense, dark olive gray, moist, homogeneous, HCl not tested. Length Recovered: 1 ft. Length Retained: 1 ft. End of day, 5pm water at 19ft.		
135	0				C-32	GS MC	Silty GRAVEL rounded, and cobbles up to 4 in, dark olive, wet, homogeneous, HCl not tested, Top 1ft of sample poorly graded SAND. Moisture Sample #17. Length Recovered: 3.5 ft. Length Retained: 3.5 ft. 7-7-11, 7:15 am water at 17.6 ft. GM, MC=1% Silty GRAVEL with sand, sub-rounded, and cobbles less than 6 in, dark olive, wet, stratified with well graded SAND and well graded GRAVEL, HCl not tested. Moisture Sample #18. Length Recovered: 3.5 ft. Length Retained: 3.5 ft.		
140	-5			11 15 15 (30)	D-33 C-34	MC	MC=8% Well graded GRAVEL with sand, sub-rounded, medium dense, dark olive gray, wet, homogeneous, HCl not tested. Length Recovered: 0.9 ft. Length Retained: 0.9 ft. Silty GRAVEL with sand, sub-rounded, cobbles up to 5 in, dark olive gray, wet, homogeneous, HCl not tested. Length Recovered: 2.5 ft. Length Retained: 2.5 ft.		
145									



# LOG OF TEST BORING

Start Card RE06027

Job No. XL-2760

SR 162

Elevation 135.0 ft

HOLE No. BH-7scp-11

Sheet 7 of 7

Project SR-162 Puyallup River Bridge Replacement

Driller Josh Roberts

Lic# 2924

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
					C-35		Silty GRAVEL with sand, sub-rounded, cobbles up to 6 in, dark olive gray, wet, homogeneous, HCl not tested. Length Recovered: 5 ft. Length Retained: 5 ft.		
150	-15			16 50 (66)	D-36	MC	MC=10% Well graded SAND with gravel, and silt, very dense, dark olive gray, wet, homogeneous, HCl not tested. Length Recovered: 0.7 ft. Length Retained: 0.7 ft.		
							11:00 am start piezo. install. 2 pm complete installation. Water in piezo. at 17.6 ft.  A flush mount monument was installed on this boring.  The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.  End of test hole boring at 151 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
155	-20								
160	-25								
165	-30								
170									

SOILA XL-2760 SR162 PUYALLUP RIVER BRIDGE.GPJ SOIL.GDT 10/27/14



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card S-42652

Job No. XL-2760 SR 162 Elevation ft

HOLE No. NW-01-10

Sheet 1 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969

Site Address Vic. Of SR-162 and 136th. St.

Inspector Nelson, Dave #1678

Start October 25, 2010 Completion October 25, 2010 Well ID#  Equipment CME 55 (9C7-1) - AH

Station  Offset  Hole Dia 4 (inches) Method Wet Rotary

Northing 660233.9 Easting 1208310.6 Collected by HQ Geotech Division Datum State Plane South

County Pierce Subsection SW1/4 of NE1/4 Section 13 Range 4ewm Township 19n

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
5							4 5 9 10 (14)	D-1			Poorly graded SAND with gravel, medium dense, dark gray, moist, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
10							12 10 10 16 (20)	D-2			Well graded GRAVEL with sand, sub-rounded, medium dense, dark gray, wet, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
15							12 16 30 32 (46)	D-3			Well graded GRAVEL with sand, sub-rounded, dense, brown, wet, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
20													



# LOG OF TEST BORING

Start Card S-42652

Job No. XL-2760

SR 162

Elevation ft

HOLE No. NW-01-10

Sheet 2 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			◆	+	▨								
			20	40	60	80							
											The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.		
25											End of test hole boring at 16 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
30													
35													
40													
45													



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card S-42652

Job No XL-2760 SR 162 Elevation ft

HOLE No. NW-02-10

Sheet 1 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969

Site Address Vic. Of SR-162 and 136th. St.

Inspector Nelson, Dave #1678

Start October 25, 2010 Completion October 25, 2010 Well ID#  Equipment CME 55 (9C7-1) - AH

Station  Offset  Hole Dia 4 (inches) Method Wet Rotary

Northing 660536.4 Easting 1208171.7 Collected by HQ Geotech Division Datum State Plane South

County Pierce Subsection SW1/4 of NE1/4 Section 13 Range 4ewm Township 19n

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
5			20 40 60 80	3 3 10 32 (13)	D-1		Poorly graded SAND with gravel, medium dense, dark brown, moist, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
10				10 11 7 8 (18)	D-2		Well graded GRAVEL with sand, sub-rounded, medium dense, dark brown, wet, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
15				8 8 10 18 (18)	D-3		Well graded GRAVEL with sand, sub-rounded, medium dense, brown, wet, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
20									



# LOG OF TEST BORING

Start Card S-42652

Job No. XL-2760

SR 162

Elevation ft

HOLE No. NW-02-10

Sheet 2 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
25											<p>The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.</p> <p>End of test hole boring at 16 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal</p>		
30													
35													
40													
45													





Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card S-42652

Job No. XL-2760 SR 162 Elevation ft

HOLE No. NW-03-10

Sheet 1 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad Lic# 2969

Site Address Vic. Of SR-162 and 136th. St.

Inspector Nelson, Dave #1678

Start October 25, 2010 Completion October 25, 2010 Well ID#  Equipment CME 55 (9C7-1) - AH

Station  Offset  Hole Dia 4 (inches) Method Wet Rotary

Northing 660748.8 Easting 1208101.6 Collected by HQ Geotech Division Datum State Plane South

County Pierce Subsection SW1/4 of NE1/4 Section 13 Range 4ewm Township 19n

Depth (ft)	Elevation (ft)	Profile	◆ Field SPT (N) + Moisture Content ▨ RQD 20 40 60 80	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
5			◆	10 10 20 22 (30)	D-1			Well graded GRAVEL with sand, sub-rounded, medium dense, gray, moist, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
10			◆	10 12 21 27 (33)	D-2			Well graded GRAVEL with sand, sub-rounded, dense, gray, moist, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
15			◆	17 16 18 19 (34)	D-3			Well graded GRAVEL with sand, sub-rounded, dense, brown, wet, homogenous, HCl not tested. Length Recovered:2 ft. Length Retained:2 ft.		
20										



# LOG OF TEST BORING

Start Card S-42652

Job No. XL-2760

SR 162

Elevation ft

HOLE No. NW-03-10

Sheet 2 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Nelson, Brad

Lic# 2969

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
25											The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew.  End of test hole boring at 16 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
30													
35													
40													
45													



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card R-72823

Job No. XL-2760 SR 162 Elevation 120.9 ft

HOLE No. P-1-08

Sheet 1 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Sanders, Ryan Lic# 2935T

Site Address Vic. of 136 Street East and SR-162

Inspector Brian Hilts 2249

Start August 26, 2008 Completion August 26, 2008 Well ID# APJ-604 Equipment CME 55 with Autohammer

Station N/A Offset N/A Hole Dia 6 (inches) Method Wet Rotary

Northing 661060.1024 Easting 1207816.3276 Collected by Region Survey Crew Datum State Plane South

County Pierce Subsection NW SE Section 13 Range 4 EWM Township 19 N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD				Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80						
120.0							1 2 2 (4)	D-1		Silty SAND, very loose, grayish brown, dry, homogenous, HCl not tested, with wood debris, hair roots, and a trace of gravel.. Length Recovered:1 ft. Length Retained:1 ft.		
5							7 7 7 (14)	D-2		Well graded GRAVEL with sand, sub-angular, medium dense, dark grayish brown, wet, homogenous, HCl not tested, at 3.5' we encountered gravels demonstrated by drilling.. Length Recovered:0.8 ft. Length Retained:0.8 ft.		
115.0							4 5 6 (11)	D-3		Poorly graded SAND, medium dense, dark grayish brown, wet, homogenous, HCl not tested, with a trace of gravel. Length Recovered:0.8 ft. Length Retained:0.8 ft. 8/26/2008		
10							2 2 2 (4)	D-4		Sandy SILT with gravel, very loose, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.8 ft. Length Retained:0.8 ft.		
110.0							0 1	D-5		Sandy SILT with gravel, very loose, dark gray, wet, homogenous, HCl not tested.		
15												
105.0												
20												



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card R-72823

Job No. XL-2760

SR 162

Elevation 120.9 ft

HOLE No. P-1-08

Sheet 2 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Sanders, Ryan

Lic# 2935T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
100				1 (2)			Length Recovered:1.2 ft. Length Retained:1.2 ft.		
25	95			1 3 3 (6)	D-6		Sandy SILT with gravel, loose, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.2 ft. Length Retained:1.2 ft.		
30	90						A standpipe monument was installed on this boring.		
35	85						The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew."		
40	80						End of test hole boring at 25.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
45									

SOILA\_TEST\_XL-2760\_SR162\_PUYALLUP\_RIVER\_BRIDGE.GPJ SOIL.GDT 4/15/14



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card R-72823

Job No. XL-2760 SR 162 Elevation 126.1 ft

HOLE No. P-2-08

Sheet 1 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Sanders, Ryan Lic# 2935T

Site Address Vic. of 136 Street East and SR-162

Inspector Brian Hilts 2249

Start August 26, 2008 Completion August 26, 2008 Well ID# APJ-605 Equipment CME 55 with Autohammer

Station N/A Offset N/A Hole Dia 6 (inches) Method Wet Rotary

Northing 660912.6808 Easting 1207966.8881 Collected by Region Survey Crew Datum State Plane South

County Pierce Subsection NW SE Section 13 Range 4 EWM Township 19 N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)				Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80							
125.0													
5							2 1 2 (3)	D-1			Silty SAND, very loose, dark grayish brown, moist, stratified, HCl not tested, the top .7' was (SP) sand, and the bottom .2' was brown silt with some roots. Length Recovered:0.9 ft. Length Retained:0.9 ft.		
120.0													
10							2 3 3 (6)	D-2			Silty SAND, loose, dark grayish brown, moist, stratified, HCl not tested, sand stratified with sandy silt with FeO stains throughout.. Length Recovered:1.1 ft. Length Retained:1.1 ft.		
115.0													
15							8 9 11 (20)	D-3			Well graded GRAVEL with sand, sub-angular, medium dense, dark gray, wet, homogenous, HCl not tested, at 11.5' we encountered gravels demonstrated by drilling.. Length Recovered:0.7 ft. Length Retained:0.7 ft.	8/26/2008	
110.0													
20							8 8	D-4			Well graded GRAVEL with sand, sub-angular, medium dense, brown, wet, homogenous, HCl not tested, at 21'	10/3/2008	



# LOG OF TEST BORING

Start Card R-72823

Job No. XL-2760

SR 162

Elevation 126.1 ft

HOLE No. P-2-08

Sheet 2 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Sanders, Ryan

Lic# 2935T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
105				8 (16)				we had a soil change demonstrated by drilling (less dense) sandy silt with gravel.. Length Recovered:0.6 ft. Length Retained:0.6 ft.		
25				0 2 6 (8)	D-5			Sandy SILT with gravel, loose, dark gray, wet, homogenous, HCl not tested. Length Recovered:0.6 ft. Length Retained:0.6 ft.		
100								A flush mount monument was installed on this boring.		
30								The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew."		
95								End of test hole boring at 25.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
35										
90										
40										
85										
45										

SOILA\_TEST\_XL-2760\_SR162\_PUYALLUP\_RIVER\_BRIDGE.GPJ SOIL.GDT 4/15/14



Washington State  
Department of Transportation

# LOG OF TEST BORING

Start Card R-72833

Job No. XL-2760 SR 162 Elevation 125.7 ft

HOLE No. P-3-08

Sheet 1 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Sanders, Ryan Lic# 2935T

Site Address Vic. of 136 Street East and SR-162

Inspector Brian Hilts 2249

Start August 26, 2008 Completion August 26, 2008 Well ID# APJ-623 Equipment CME 55 with Autohammer

Station N/A Offset N/A Hole Dia 6 (inches) Method Wet Rotary

Northing 661052.6748 Easting 1207946.807 Collected by Region Survey Crew Datum State Plane South

County Pierce Subsection NW SE Section 13 Range 4 EWM Township 19 N

Depth (ft)	Elevation (ft)	Profile	Field SPT (N) Moisture Content RQD	Blows/6" (N) and/or RQD FF	Sample Type Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20 40 60 80						
125.0									
5	120.0			2 1 2 (3)	D-1		Silty SAND, very loose, dark grayish brown, moist, homogenous, HCl not tested, with a trace of wood debris, hair roots, and gravel. Length Recovered:1 ft. Length Retained:1 ft.		
10	115.0			13 16 18 (34)	D-2		Well graded GRAVEL with sand, sub-angular, dense, dark grayish brown, moist, homogenous, HCl not tested. Length Recovered:1.2 ft. Length Retained:1.2 ft.		
15	110.0			25 25 23 (48)	D-3		Well graded GRAVEL with sand, sub-angular, dense, dark grayish brown, wet, homogenous, HCl not tested. Length Recovered:1.2 ft. Length Retained:1.2 ft. 8/26/2008		
20				10 8	D-4		Silty GRAVEL with sand, sub-angular, medium dense, dark grayish brown, wet, stratified, HCl not tested, the		



# LOG OF TEST BORING

Start Card R-72833

Job No. XL-2760

SR 162

Elevation 125.7 ft

HOLE No. P-3-08

Sheet 2 of 2

Project SR-162 Puyallup River Bridge Replacement

Driller Sanders, Ryan

Lic# 2935T

Depth (ft)	Elevation (ft)	Profile	Field SPT (N)	Moisture Content	RQD	Blows/6" (N) and/or RQD FF	Sample Type	Sample No. (Tube No.)	Lab Tests	Description of Material	Groundwater	Instrument
			20	40	60	80						
105								4 (12)		top .6' was (GW) gravel with sand, and the bottom .3' was dark gray sandy silt with gravel (soil change at approx 20'.. Length Recovered:0.9 ft. Length Retained:0.9 ft.		
25								1 3 1 (4)	D-5	Sandy SILT with gravel, very loose, dark gray, wet, homogenous, HCl not tested. Length Recovered:1.2 ft. Length Retained:1.2 ft.		
100												
30												
95										The implied accuracy of the borehole location information displayed on this boring log is typically sub-meter in (X,Y) when collected by the HQ Geotech Division and sub-centimeter in (X,Y,Z) when collected by the Region Survey Crew."		
35										End of test hole boring at 25.5 ft below ground elevation. This is a summary Log of Test Boring. Soil/Rock descriptions are derived from visual field identifications and laboratory test data. Note: REF = SPT Refusal		
90												
40												
85												
45												



**SR 162  
Puyallup River Bridge  
Bridge Replacement**

**APPENDIX C**

**TEMPORARY EROSION SEDIMENT CONTROL PLAN  
NARRATIVE**

# **TEMPORARY EROSION SEDIMENT CONTROL PLAN NARRATIVE**

**SR 162, Puyallup River Bridge - Bridge Replacement**

**Washington State Department of Transportation**

**Olympic Region**

**9/3/2014**

**Project Engineer:**

**Steve Fuchs**

**Designer:**

**Tim Moeckel**

**TESC Plan Reviewer:**

**Jeff Williams**

## **Project Overview**

### **Location**

This project is located in Pierce County, Washington on SR 162 from MP 6.61 to MP 7.10. It is situated in Section 13, Township 19N, Range 4E of the Washington State plane coordinate system, and is approximately 4.3 miles south of Sumner and 0.9 miles north of Orting.

### **Description**

This P2 Structures Preservation project replaces an existing functionally obsolete bridge over the Puyallup River on SR 162. Construction of the new bridge will improve safety on SR 162 by including full width lanes and shoulders. The new bridge will be built downstream (east) from the existing bridge which will require a partial realignment of the SR 162 roadway. The section of realigned roadway will be constructed to match the height of the new bridge above the Puyallup River floodplain in order to pass a 100-year storm event. The existing, historically significant bridge will remain in place at project completion.

### **Construction Activities**

The anticipated work consists of grading, drainage, erosion control, structures (bridge and noise wall), landscaping, surfacing, hot mix asphalt, guardrail, pavement marking, traffic control, and other work.

## **Certified Erosion and Sediment Control Lead**

Name:	CESCL ID#:	Expiration Date:
Contact Number:		

Name:	CESCL ID#:	Expiration Date:
Contact Number:		

Name:	CESCL ID#:	Expiration Date:
Contact Number:		

Proof of current CESCLs can be found at Ecology's CESCL Database:  
<https://fortress.wa.gov/ecy/wqcescl/>

## **Existing Site Conditions**

### **Soils**

The type of soil in the project area has been identified by the NRCS soil survey as Puyallup fine sandy loam under Hydrologic Group B with the northeast area of the project categorized as Aquic Herofluvents under Hydrologic Group C. Per the WSDOT Infiltration Test Report, thirteen test pits were bored in the project area. The bore test results showed that the composition of the project area soil is primarily sand with silt and gravel with 4 of the 13 test pits containing cobbles (approx. 70% sand, 20% silt, 10% gravel). See the 9/8/2008 Infiltration Test Report for more information.

Generally speaking, soil in this area is well-draining, moderately susceptible to erosion, and particles of this soil type should settle quickly when suspended in water (less than 30% silt, and no clay present in the bore samples of the soil).

This soil type should be ideal to allow storm water infiltration into the vegetated areas of the project. However, the erosion potential is high for exposed soils on steep slopes. Silt fences will be required at the base of slopes where clearing and grubbing exposes erodible soils to runoff.

Due to the high infiltration rate for the soil type shown in the soil survey and observed results from soils tests, it is anticipated that most of the rainfall will infiltrate into the ground with the use of proper BMP's.

Silt fences will be used to stop any runoff from entering the Puyallup River, leaving the project Right-of-Way, or construction easements.

## **Precipitation**

### **Annual Rainfall**

The project is located within an area that receives an average rainfall of 41.77 inches per year. Historically, the area has received a minimum rainfall of 22.07 inches per year, and a maximum rainfall of 62.88 inches per year. The months receiving the highest amounts of rainfall span from November through March and receive an average of 4 to 5 inches of rain per month.

### **High Intensity Rain Events**

The project area has an average of 24 days per year that receive greater than 0.5 inch of rainfall in a single day. The months from November thru January averaged 4 days per month receiving greater than 0.5 inch of rain in a single day. The project area has an average of 5 days per year receiving greater than 1.0 inches of rainfall in a single day. The months from October thru February averaged 1 day per month receiving greater than 1.0 inches of rain in a single day. In summary, the high intensity rain events primarily occurred during the winter/spring months ranging from October thru March with an average of 4 to 5 days per month experiencing high intensity rain events.

The rainfall estimates are taken from the Western Regional Climate Center (WRCC) website using the McMillan Reservoir station located approximately 1.5 miles west of the project.

The construction project is anticipated to start in February of 2015 and last until September 2015. The critical months to control storm water will likely last from February to April based upon past weather patterns. Work in this time frame is anticipated to be bridge shaft and bridge abutment construction with this work occurring adjacent to the Puyallup River. Silt fence placed at the base of slopes and compost blankets covering steep slopes should handle low intensity rain events. However, additional BMP's such as wattles, compost socks, plastic sheeting, pump systems, etc. should be considered to handle high intensity rain events.

## **Topography**

The majority of the project terrain is level with steep slopes located at the banks of the Puyallup River. The river bank slopes range from 10 – 20 feet high with slope grades ranging from 1:1 to 2:1. The existing side slopes along the SR 162 roadway vary from 2:1 to 4:1 with a 3.5% maximum roadway superelevation. Silt fence is placed at the clearing and grubbing limits of the slopes to prevent run-off from leaving the project site. Compost blanket is placed on the slopes after clearing grubbing to prevent erosion of the slopes. Additional BMP's such as straw wattles, compost socks, plastic sheeting, and pump systems can be used if necessary.

## **Vegetation**

The project area is surrounded by a flood plain that lies adjacent to the Puyallup River channel. The vegetation in all four quadrants of the project area consists of grassland with stands of trees or larger forested areas. The vegetation at the banks of the Puyallup River consists of shrubs and trees. The tree types in the project and river bank areas are a mix of deciduous and conifer trees.

Any undisturbed vegetation will aid in the slowing the velocities of runoff which helps to prevent erosion and aid in the infiltration of the runoff. During design, the areas of clearing and grubbing have been kept to the minimum extent possible. During construction, clearing and grubbing of only the actively worked areas should be considered to keep the areas of exposed soils to a minimum. This consideration should be especially considered during the wet months ranging from February through April. In addition to natural vegetation, silt fences will be placed to collect solids suspended in storm water runoff and keep the solids from leaving the clearing and grubbing areas.

## **Drainage and Adjacent Areas**

The current drainage system within the project area is comprised of ditches running to closed depression areas to disperse and infiltrate storm water. Most storm water infiltrates into the ground with a small portion draining directly into the Puyallup River. Site observations conducted by WSDOT personnel show the project area storm water runoff infiltrating into the ground without any signs of pooling. For the areas directly northeast and southeast of the existing bridge (where most of the project work takes place) a majority of the storm water infiltrates into the ground with small quantities of water discharging directly into the river. Site observations have not detected any sources of offsite water entering the project limits.

## **Ground Water**

Piezometer readings were taken from four bore holes that were drilled on both sides of the river where most of the project work (roadway and bridge work) will take place. Two of the bore holes are located northeast of the existing bridge, and two of the boreholes are located southeast of the existing bridge. A summary of the measurements are as follows:

Bore Hole ID#	Min. Water Depth from Ground Surface (ft.)	Max. Water Depth from Ground Surface (ft.)	Notes
BH-3P-08	10.7	15.25	Located approximately 150' north of river
BH-6P-12	7.9	10.0	Located at top of north side river bank
BH-7scp-11	16.7	19.2	Located at top of south side river bank
BH-4P-08	15.5	21.7	Located approximately 150' south of river

Three of the five shafts for the new bridge will be drilled directly adjacent to the river. The shaft construction work will be one of the first orders of work and is expected to occur in the months of February and March. The shafts are over 100 feet in length and will extend well into the ground water level. Care in handling/disposal of the shaft groundwater and concrete will be necessary.

### **Sensitive Areas**

There are no sensitive areas located in or adjacent to the project limits.

### **Existing Encumbrances**

Two utilities will be relocated during the project. No drain fields or wells will be affected.

The water line relocation work will be completed by the Contractor while the gas line relocation work will be completed by the utility company. All erosion control BMP's associated with the utility relocates will be installed and maintained by the Contractor.

In the event of a water line break, the Contractor and Contracting Agency are provided with phone numbers to the local utility company so they can call and get the line shut off quickly. In addition, the Contractor should make every attempt to stop and/or redirect the concentrated flow of water away from private property or the river with temporary earth berms.

### **Time and Duration**

Construction is expected to begin in February 2015 and end in November 2015 with the project scheduled to last 180 working days. The bridge work is anticipated to begin in February and last until mid-September spanning 140 working days. Roadwork (excavation, embankment, paving, and striping) is expected to be complete by the end of September. Landscaping/planting is expected to occur from mid-October till beginning of November.

### **Purpose of Narrative**

The narrative allows WSDOT to meet its internal policies as well as meeting construction permit requirements by having a printed copy of the plan on the construction site for resource agency review.

## **Risk Analysis & BMP Selection**

The narrative addresses 12 TESC Elements. In each of the sections below, the erosion/sediment control risks for the Elements are discussed in detail. Appropriate BMP's are identified and the Standard Specification references are provided. If a General Special Provision is necessary to more thoroughly address the risk, the reference is listed below the Standard Specification. When the risk is unique and no contractual method exists for addressing it, a Special Provision must be prepared. A reference to the Special Provision is then listed at the end of each Element section.

### **TESC Element 1: Mark Clearing Limits**

A first order of work on the project will be to mark clearing limits with a high visibility fence 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 Standard Specifications Section 1-10.1(2). Refer to the TESC Contract Plans for an illustration of these limits. Clearing limits and/or areas not to be disturbed include easements, setbacks, adjacent properties, and sensitive areas. These areas will be surveyed, staked, and flagged before any clearing and grubbing can begin.

Critical environmental areas (CEA) will be identified by the use of high visibility fencing. Retain duff layer, native topsoil and existing vegetation in an undisturbed state to the maximum extent practicable.

Upon installation of the fencing, the Contractor shall request the Engineer to inspect the fence. The WSDOT onsite inspector will monitor and evaluate whether the Contractor is respecting the limits as staked in the field.

#### **BMPs Identified:**

Vegetation protection and restoration: Standard Specifications 1-07.16(2)

Wetland and sensitive area protection: Standard Specifications 1-07.16(2)A

High visibility silt fence: Standard Specifications 8-01.3(9)A3 / Standard Plan I-30.17

### **TESC Element 2: Establish Construction Access**

TESC Element 2: Establish construction access.

Tracking sediment onto paved roads will be minimized. All vehicular traffic arriving at or leaving the project site will be restricted to stabilized construction entrances placed at specified locations before any major grading takes place. Refer to the TESC Contract Plans for the locations of proposed construction entrances. If any sediment is transported onto a road surface, the road will be cleaned thoroughly at the end of each work day (or more often if necessary). Sediment will be removed from the roadway by sweeping or other comparable means at least once a day. Sweeping operations shall utilize moisture, as necessary, to limit the generation of dust. Note that sweeping does not remove fine sediment particles from the roadway; therefore, a rain event can still cause a turbid discharge. If the stabilized construction entrances fails to prevent sediment track-out, the use of a tire wash may become necessary per Standard Specification Section 8-01.3(7).

BMPs Identified:

Stabilized construction entrance: Standard Specifications 8-01.3(7) / Standard Plan I-80.10

Street cleaning: Standard Specifications 8-01.3(8)

Tire wash: Standard Specifications 8-01.3(7)

### **TESC Element 3: Control Flow Rates**

TESC Element 3: Control flow rates.

High soil permeability, dense vegetation, and flat grades on this project will aid in flow control. The soil type and flat terrain will allow infiltration of turbid water onsite. For the construction areas just north and south of the Puyallup River, the contractor will convey any runoff that does not infiltrate into the ground away from the Puyallup River into undisturbed vegetated areas within the project limits or stop/contain the runoff at the silt fence line. If it is deemed necessary by the Engineer, the cleared slopes on the banks of the Puyallup River may have their surfaced roughened, and/or straw wattles or compost socks installed to slow down flow rates of surface water.

BMPs Identified:

Dispersion/Infiltration: Standard Specifications 8-01.3(1)D

Surface roughening: Standard Specifications 8-01.3(2)A

Straw wattles: Standard Specifications 8-01.3(10) / Standard Plan I-30.30

Compost socks: Standard Specifications 8-01.3(12) / Standard Plan I-30.40

### **TESC Element 4: Install Sediment Controls**

TESC Element 4: Install sediment controls.

The Contractor shall install sediment control BMPs prior to beginning any soil-disturbing activities. High visibility silt fence and silt fence with backup support will be installed to reduce the transport of sediment by providing a barrier to sediment-laden runoff.

Preserving natural vegetation will be used as a BMP on this project to the maximum extent possible. Vegetation provides rainfall impact absorption, runoff volume and velocity reduction, sediment trapping, and root stabilization of soil.

Street cleaning is another BMP that will be implemented in concurrence with construction entrances if it is determined that an adjacent paved surface is affected by sediment tracking. At the end of each day (or more often if necessary) street cleaning should be set up to remove sediment that may have been tracked out. Sediment should be removed by shoveling or sweeping and carefully removed to a suitable disposal area where it will not be re-eroded.

If it is deemed necessary by the Engineer, newly constructed embankments and cleared slopes on the Puyallup River may have additional sediment control BMP's installed such as surface roughening, straw wattles, or compost socks.

Refer to the TESC Contract Plans for recommended locations of the aforementioned BMP's. All BMP's shown on the TESC plans shall be installed before soil disturbing work begins when applicable. The TESC plans shall be actively managed by the Contractor ESC Lead



and WSDOT Project Office Inspectors. Changes and/or additions to the TESC plans shall submitted to the WSDOT project engineer for approval to proactively control/manage turbid discharge.

**BMPs Identified:**

Silt fence: Standard Specifications 8-01.3(9)A / Standard Plan I-30.10

High visibility silt fence: Standard Specifications 8-01.3(9)A3 / Standard Plan I-30.17

Dispersion/Infiltration: Standard Specifications 8-01.3(1)D

Surface roughening: Standard Specifications 8-01.3(2)A

Straw wattles: Standard Specifications 8-01.3(10) / Standard Plan I-30.30

Compost socks: Standard Specifications 8-01.3(12) / Standard Plan I-30.40

## **TESC Element 5: Stabilize soils**

### **TESC Element 5: Stabilize soils.**

All exposed unworked soils and stockpiles will be stabilized on inactive areas as soon as practical. This stabilization requirement includes protecting the soils against wind erosion and applies to all soils on site whether the soil is at final grade or not. Selected soil stabilization measures must be appropriate for the time of year. The following are typical physical BMP's utilized for these elements that are found in the WSDOT Standard Specifications beginning on 8-01.3(2). For the BMP's not indicated on the TESC plan sheets, it will be under the discretion of the ESC Lead to determine suitable combinations of the following applications based on the current field conditions.

- Preserving Natural Vegetation
- Temporary Mulching
- Soil Binding Using Polyacrylamide
- Placing Erosion Control Blanket
- Placing Compost Blanket
- Placing Plastic Covering
- Permanent Seeding and Planting
- Temporary Seeding and Planting
- Topsoil
- Sod
- Check Dam
- Surface Roughening
- Wattles
- Stabilized Construction Entrance
- Construction Road Stabilization
- Gradient Terraces
- Dust Control BMP's

Erodible soil that is not being worked and that could drain to surface waters, whether at final grade or not, must be covered within the following time limits using approved soil cover practices:

October 1 through April 30:                      2-Day Maximum

May 1 to September 30:                          7-Day Maximum

**BMPs Identified:**

Vegetation protection and restoration: Standard Specifications 1-07.16(2)

Sodding: Standard Specifications 8-02.3(16)A

Topsoil: Standard Specifications 8-02.3(4)

Temporary mulching: Standard Specifications 8-01.3(2)D

Soil binding using polyacrylamide: Standard Specifications 8-01.3(2)E

Erosion control blanket: Standard Specifications 8-01.3(3) / Standard Plan I-60.10

Compost blanket: Standard Specifications 8-01.3(4)

Plastic covering: Standard Specifications 8-01.3(5)

Seeding, fertilizing, and mulching: Standard Specifications 8-01.3(2)

## **TESC Element 6: Protect slopes**

TESC Element 6: Protect slopes.

The project area is relatively flat in proximity to the roadway alignment work. For bridge work, the topography adjacent to the river has steep slopes running from the top of the river bank down to the river. Cut and fill slopes will be constructed in a manner that will minimize vegetation removal and thus minimize erosion. During construction, cleared cut and fill slopes will be protected with compost blankets. If the Engineer deems it necessary, one or more of the following slope protection BMP's can be used: erosion control blankets, plastic sheeting, wattles, compost socks, and blown straw. Once work is completed in an area that contains cut or fill slopes, the slopes shall be stabilized by covering slopes with sod or mulch, and temporary or permanent seeding.

Any operation will not expose more erodible earth than listed below, without written approval from the WSDOT Project Engineer:

October 1 - April 30:	5 Acres
May 1 - September 30:	17 Acres

The following are typical physical BMPs used to minimize erosion on cut and fill slopes. Further information on these BMPs can be found in the WSDOT Standard Specifications beginning on 8-01.3(2). For those BMPs not indicated on the TESC plan sheets, it will be under the discretion of the ESC Lead during construction to determine suitable combinations of the following applications based on the current field conditions.

- Surface Roughening
- Temporary Pipe Slope Drain
- Temporary Curb
- Interceptor Dike and Swale
- Surface Drains
- Wattles
- Live Fascines
- Gradient Terraces
- Preserving Natural Vegetation
- Temporary Mulching
- Soil Binding Using Polyacrylamide
- Biodegradable Erosion Control Blanket

- Compost Blanket
- Plastic Covering
- Permanent Seeding and Planting
- Temporary Seeding and Planting
- Topsoil
- Sod
- Quarry Rock Splash Pad

BMPs Identified:

Seeding, fertilizing, and mulching: Standard Specifications 8-01.3(2)A

Erosion control blanket: Standard Specifications 8-01.3(3) / Standard Plan I-60.10

Plastic covering: Standard Specifications 8-01.3(5)

Blown straw

Straw wattles: Standard Specifications 8-01.3(10) / Standard Plan I-30.30

Compost blanket: Standard Specifications 8-01.3(4)

## **TESC Element 7: Protect drain inlets**

TESC Element 7: Protect drain inlets.

There are no existing drain inlets or bridge scuppers that need to be protected within the project limits. No work is being completed on the existing bridge since it is not being removed. Ditches are present in project area but the flat grade throughout the project area prevents conveyance of water through the ditches. Storm water that collects in the ditches typically infiltrate into the ground due to high soil permeability.

New drain inlets will be protected as they are installed. They will remain plugged/protected until the storm water system is completely constructed and is ready to treat the storm water runoff. If the Engineer deems it necessary, compost socks may be used in conjunction with the inlet protection devices to prevent run-off from entering the drain inlets.

BMPs Identified:

Inlet protection - below grate: Standard Specification 8-01.3(9)D / Standard Plan I-40.20

Inlet protection - above grate: Standard Specification 8-01.3(9)D

Inlet protection – grate cover: Standard Specification 8-01.3(9)D

Compost sock: Standard Specification 8-01.3(12) / Standard Plan I-30.40

## **TESC Element 8: Stabilize channels and outlets**

TESC Element 8: Stabilize channels and outlets.

All temporary conveyance systems subject to runoff from fill slopes during construction will be stabilized to prevent erosion and reduce sediment transport from the site. Runoff at the banks of the Puyallup River will be encouraged to sheet flow and be trapped by silt fence. If it is determined during construction that a temporary channel conveyance is needed to direct or tight line water to the bottom of the slope, it shall be protected with erosion control BMP's as determined by Contract ESC Lead and WSDOT personnel. All other runoff will be conveyed away from the Puyallup River to infiltrate into the ground within the project limits.

New conveyances in the form of vegetative filter strips and a biofiltration swale will be built as shown in the Contract drainage plans. The vegetative filter strips are designed to collect

runoff water, convey it away from the roadway or river, treat the storm water for pollutants, and infiltrate the storm water into the ground. The biofiltration swale is designed to collect runoff water, convey it away from the roadway, treat the storm water for pollutants, and disperse the storm water for infiltration into soil. Any remaining storm water that does not get infiltrated is then conveyed to the river via storm sewer pipe. Included in the design of the conveyances are methods to protect the channel using bark or wood chip mulch, fine compost, and seeding, fertilizing, and mulching. In addition, a level spreader is used as outlet protection. If the Engineer deems it necessary, the following channel/outlet stabilization BMP's may be used: erosion control blanket, check dams, quarry spalls, etc.

**BMPs Identified:**

Conveyance stabilization

Erosion control blanket in channel

Bark or wood chip mulch: Standard Specifications 8-02.3(10)

Check dam: Standard Specifications 8-01.3(6) / Standard Plan I-50.20

Outlet Protection

Seeding, fertilizing, and mulching: Standard Specifications 8-01.3(2)

Fine compost blanket: Contract Provisions

Concrete flow spreader: Contract Provisions

## **TESC Element 9: Control pollutants [1-07.15(1)]**

### **TESC Element 9: Control Pollutants**

All pollutants will be handled and disposed of in such a manner that does not cause contamination of storm water or ground water. All fueling of equipment will occur away from critical areas. Per Standard Specification 1-07.15(1), a site specific Spill Prevention Control and Countermeasures (SPCC) plan will be required addressing the containment and cleanup of any incidental spills of hazardous materials within the project limits. Spill control kits shall be readily available on the project site to allow immediate cleanup of any spills. The SPCC plan will be included in the Storm Water Pollution Prevention Plan (SWPPP).

Project specific concerns to address in the SPCC plan include, but are not limited to, the following:

The Contractor will provide methods for handling pollutants considered hazardous in the SPCC plan. This includes petroleum products, hydraulic fluid, and other hydrocarbons or pH-modifying substances.

A separate area shall be set aside for wash out of concrete delivery trucks, concrete pumping equipment, and concrete tools. This area will have no impact to surface waters.

Equipment used for this project shall be free of external petroleum-based products while working around the Puyallup River. Equipment shall be checked daily for leaks and any necessary repairs shall be completed prior to commencing work activities along the stream.

Any work over Puyallup River will include methods of containment to prevent any construction materials from entering the water during all phases of bridge construction (i.e. girder materials, superstructure materials, deck materials, concrete slurries, and paint).

Material placed within the water will be free of sediment and other contaminants. Structures containing concrete shall be sufficiently cured prior to contact with water to avoid leaching. Fresh concrete shall not be allowed to come into contact with state waters.

Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the receiving waters. A separate area shall be set aside that does not have any possibility of draining to surface waters for the washing out of concrete delivery trucks pumping equipment and tools.

Non-hazardous pollutants such as waste material, demolition debris, wood and so forth are required by WSDOT Standard Specifications 2-01 through 2-03 to be properly disposed-of by the Contractor.

Methods for controlling hazardous materials shall be explained in the Spill Prevention, Control and Countermeasures (SPCC) plan that will be generated by the Contractor. The ESC Lead will take appropriate action to assure that measures are in place to prevent or minimize contamination of storm water.

### **TESC Element 10: Control dewatering. [8-01.3(1)]**

TESC Element 10: Control dewatering. [8-01.3(1)]

When groundwater is encountered in an excavation or other area, the Contractor shall control, treat, and discharge the water as described in Standard Specification 8-01.3(1)C. Water slurry resulting from the excavation of bridge shafts shall be controlled, treated, and disposed of in accordance with Standard Specifications 6-19.3(4)F.

### **TESC Element 11: Maintain BMP's [8-01.3(15)]**

TESC Element 11: Maintain BMPs. [8-01.3(15)]

All temporary and permanent erosion and sediment control BMPs will be maintained as needed to assure continued performance of their intended function. Trapped sediment will be removed or stabilized on site. BMP removal will occur after final site stabilization is achieved or when the Engineer determines that the temporary BMP is no longer needed. Final stabilization is achieved after completion of all soil disturbing activities, and establishment of a permanent vegetative cover or permanent stabilization measures are achieved to prevent erosion. Disturbed soil areas resulting from the BMP removal will be permanently stabilized. The contractor shall inspect and maintain BMPs in accordance with WSDOT Standard Specification, Maintenance; 8-01.3(15) and the schedule outlined in 8-01.3(1)B, Erosion and Sediment Control (ESC) Lead.

BMPs Identified:

Replacement BMP materials on hand

Site inspections completed by CESCL: Standard Specifications 8-01.3(1)B

## **TESC Element 12: Manage the project [1-07.5(1); 1-07.15; 8-01.3(1)B]**

TESC Element 12: Manage the project. [1-07.5(1); 1-07.15; 8-01.3(1)B]

A TESC Plan will be kept onsite and all inspection reports will be made available upon request. The TESC Plan and BMP installation and maintenance will be handled by the designated CESCL identified in the plan. The TESC plan is a living document. Therefore, the TESC plan will be updated as changes occur and reflect the site conditions that currently exist on the site. All permits, approvals, and commitments shall be kept onsite and made available for inspection upon request. Whenever inspections and/or monitoring reveal that BMP's identified in the TESC plan are inadequate due to actual or potential discharge of pollutants, the plans must be modified as appropriate in a timely manner. The plans must also be updated whenever there are significant changes in the project design or in construction methods that could affect the potential for erosion or spills.

To the maximum extent possible, the following actions will apply to this project:

- 1) The Contractor shall preserve vegetation and minimize disturbance and compaction of native soil except as needed for building purposes.
- 2) Where feasible, the Contractor shall phase construction activities to minimize the amount of soil exposed at any one time and prevent the transport of sediment from the site during construction.
- 3) The Contractor shall time sediment control BMP installation in accordance with TESC Element 4.
- 4) To minimize erosion, the Contractor shall follow soil cover timing requirements and exposure limits in TESC Element 5 and Standard Specification 8-01.3(1). Projects that infiltrate all runoff are exempt from the above restrictions. Individual contract special provisions and Project Engineer directives may be more stringent, based on specific location characteristics or changing site or weather conditions.
- 5) The work of utility contractors and subcontractors shall be coordinated to meet requirements of both TESC and SPCC plans.
- 6) The Contractor shall ensure that all BMPs are inspected, monitored, and maintained in accordance with TESC Element 11. Sampling may be initiated to ensure compliance.
- 7) The Contractor's WSDOT Certified Erosion Control Lead shall be onsite or on call at all times.

**SR 162  
Puyallup River Bridge  
Bridge Replacement**

**APPENDIX D**

**COMPLIANCE IMPLEMENTING AGREEMENT BETWEEN  
THE WASHINGTON STATE DEPARTMENT OF ECOLOGY  
AND THE WASHINGTON STATE DEPARTMENT OF  
TRANSPORTATION (2004)**

**COMPLIANCE  
IMPLEMENTING AGREEMENT**  
Between  
**THE WASHINGTON STATE  
DEPARTMENT OF ECOLOGY**  
And  
**THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION**  
**REGARDING COMPLIANCE WITH THE STATE OF WASHINGTON  
SURFACE WATER QUALITY STANDARDS**  
November 1, 2004

**THIS COMPLIANCE IMPLEMENTING AGREEMENT** is being adopted by the Washington State Department of Ecology (Ecology), and the Washington State Department of Transportation, (WSDOT) to assist both agencies in obtaining and maintaining compliance on Ecology issued permits, Orders, Certifications, approvals, implementing agreements, and with the State of Washington Water Quality Standards. This CIA defines elements that are necessary to increase compliance for WSDOT and WSDOT hired contractors.

**TERMS AND CONDITIONS:**

Ecology and WSDOT agree to implement the following requirements of this Agreement:

- A. WSDOT shall develop a statewide compliance program by December 31<sup>st</sup>, 2004 to include or address the following:
  1. Improved compliance with all water quality laws, Ecology Interagency Agreements, 401 Water Quality Certifications and 402 Construction Stormwater Permits.
  2. Assurance that all environmentally sensitive areas, mitigation areas, and wetland buffers, are fenced as a first order of work. Clearly delineate sensitive areas, mitigation areas and wetland buffers, fencing requirements, 401 Water Quality Certification conditions, and NPDES permit conditions in contract provisions and/or plan sheets as appropriate. Maintain fencing requirements throughout construction.
  3. A requirement that an Environmental Inspector, trained in maintaining compliance with 401 Water Quality Certification conditions and NPDES permit requirements, mitigation requirements, and WSDOT's compliance procedures, be assigned, and/or available to, all project sites to ensure compliance with 401 Water Quality Certification conditions and NPDES permit conditions through construction completion and site stabilization.
  4. A requirement for WSDOT Project Engineers to notify Ecology ten calendar days prior to commencing any work, excluding construction fencing, in environmentally sensitive areas, mitigation areas, and wetland buffers.
  5. A requirement for WSDOT Project Engineers to consult with the WSDOT Environmental Inspectors to ensure that the proposed work in environmentally sensitive areas, mitigation areas, and wetland buffers is in compliance with permit



conditions. If it is determined that the proposed work is not in compliance with the permit conditions, then the resource agencies shall be notified prior to commencing work in these areas.

6. A requirement for the Contractor to submit a detailed work plan to be approved by the WSDOT Project Engineer, in consultation with the WSDOT Environmental Inspector and/or regional environmental representative prior to the onset of any work in sensitive areas and mitigation sites, and that all work in wetland mitigation areas, be verified by WSDOT to ensure the contractor has met all permit conditions.
7. Development and implementation of a commitment tracking system to identify all project commitments made during planning, NEPA/SEPA, design, and permitting. All project commitments shall be clearly communicated to the contractor, construction project office staff, and supporting design offices.
8. Assurance that all environmental commitments have been achieved prior to the completion of the project, and that WSDOT's Maintenance and Operations staff have received a copy of and understand all long-term compliance expectations, including mitigation site monitoring and maintenance, for the project site.
9. Track and report non-compliance events for periodic assessment of statewide compliance performance for maintenance, construction, and ferry service operations

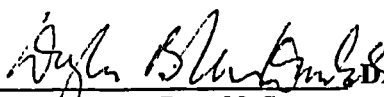
**B. Ecology and WSDOT Shall:**

1. Commit to jointly assess existing agency workloads and staffing requirements to ensure project delivery and compliance priorities are met. Work priorities, responsibilities, and staffing levels will be aligned to meet these needs.
2. Work together to review non-compliance events in order to evaluate progress and improvements needed for the Compliance Program.

**This Compliance Implementing Agreement is effective upon the date of signature below. This Agreement contains all the terms and conditions agreed upon by the parties. No other understandings, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind either of the parties hereto.**

IN WITNESS WHEREOF, the parties hereto have executed this Compliance Implementing Agreement as of the day and year first above written.

**WASHINGTON STATE  
DEPARTMENT OF TRANSPORTATION**

 DATE 11/2/04  
Douglas B. MacDonald, Secretary  
Washington State Dept. of Transportation

**WASHINGTON STATE  
DEPARTMENT OF ECOLOGY**

 DATE 11/5/04  
Linda Hoffman, Director  
Washington State Department of Ecology

**SR 162  
Puyallup River Bridge  
Bridge Replacement**

**APPENDIX E**

**NPDES INDUSTRIAL STORMWATER PERMIT FOR  
CONSTRUCTION ACTIVITIES  
PERMIT NO. WAR302478**



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000

711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

November 6, 2014

**RECEIVED**

NOV 13 2014

Kevin Dayton  
Washington State Dept of Transportation  
PO Box 47440  
Olympia, WA 98504-7440

ENVIRONMENTAL & HYDRAULIC SERVICES

**RE: Coverage under the Construction Stormwater General Permit**

<b>Permit number:</b>	<b>WAR302478</b>
<b>Site Name:</b>	<b>SR 162 Puyallup River Bridge McMillin</b>
<b>Location:</b>	<b>SR 162, MP 6.61 - MP 7.10</b>
	<b>Sumner, WA County: Pierce</b>
<b>Disturbed Acres:</b>	<b>2.63</b>

Dear Mr. Dayton:

The Washington State Department of Ecology (Ecology) received your Notice of Intent for coverage under Ecology's Construction Stormwater General Permit (permit). This is your permit coverage letter. Your permit coverage is effective on November 6, 2014. Please retain this permit coverage letter with your permit (enclosed), stormwater pollution prevention plan (SWPPP), and site log book. These materials are the official record of permit coverage for your site.

Please take time to read the entire permit and contact Ecology if you have any questions.

**Appeal Process**

You have a right to appeal coverage under the general permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this letter. This appeal is limited to the general permit's applicability or non-applicability to a specific discharger. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).



Kevin Dayton  
November 6, 2014  
Page 2

To appeal, you must do the following within 30 days of the date of receipt of this letter:

- File your appeal and a copy of the permit cover page with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and the permit cover page on Ecology in paper form - by mail or in person (see addresses below). E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

**Address and Location Information:**

**Street Addresses:**

Department of Ecology  
Attn: Appeals Processing Desk  
300 Desmond Drive SE  
Lacey, WA 98503

---

Pollution Control Hearings Board (PCHB)  
1111 Israel Road SW, Suite 301  
Tumwater, WA 98501

**Mailing Addresses:**

Department of Ecology  
Attn: Appeals Processing Desk  
PO Box 47608  
Olympia, WA 98504-7608

---

Pollution Control Hearings Board  
PO Box 40903  
Olympia, WA 98504-0903

**Electronic Discharge Monitoring Reports (WQWebDMR)**

This permit requires that Permittees submit monthly discharge monitoring reports (DMRs) electronically using Ecology's secure online system, WQWebDMR. To sign up for WQWebDMR go to: [www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html](http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html). If you have questions, contact Tonya Wolfe at (360) 407-7097 (Olympia area), or (800) 633-6193/option 3, or email [WQWebPortal@ecy.wa.gov](mailto:WQWebPortal@ecy.wa.gov).

**Ecology Field Inspector Assistance**

If you have questions regarding stormwater management at your construction site, please contact Christina Curtiss of Ecology's Southwest Regional Office in Lacey at [christina.curtiss@ecy.wa.gov](mailto:christina.curtiss@ecy.wa.gov), or (360) 407-0246.

**Questions or Additional Information**

Ecology is committed to providing assistance. Please review our web page at: [www.ecy.wa.gov/programs/wq/stormwater/construction/](http://www.ecy.wa.gov/programs/wq/stormwater/construction/). If you have questions about the construction stormwater general permit, please contact Josh Klimek at [josh.klimek@ecy.wa.gov](mailto:josh.klimek@ecy.wa.gov), or (360) 407-7451.

Sincerely,

A handwritten signature in black ink that reads "Denny W. Moore (Acting for B. C. Moore)".

Bill Moore, P.E., Manager  
Program Development Services Section  
Water Quality Program

Enclosure

Issuance Date: December 1, 2010  
Effective Date: January 1, 2011  
Expiration Date: December 31, 2015

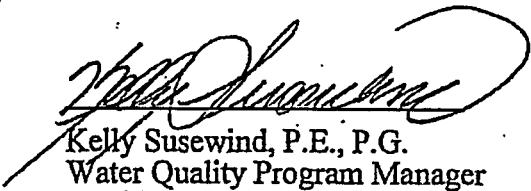
# CONSTRUCTION STORMWATER GENERAL PERMIT

National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General  
Permit for Stormwater Discharges Associated with Construction Activity

State of Washington  
Department of Ecology  
Olympia, Washington 98504

In compliance with the provisions of  
Chapter 90.48 Revised Code of Washington  
(State of Washington Water Pollution Control Act)  
and  
Title 33 United States Code, Section 1251 et seq.  
The Federal Water Pollution Control Act (The Clean Water Act)

Until this permit expires, is modified or revoked, Permittees that have properly obtained  
coverage under this general permit are authorized to discharge in accordance with the special and  
general conditions that follow.



Kelly Susewind, P.E., P.G.  
Water Quality Program Manager  
Washington State Department of Ecology

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## SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions within this permit for additional submittal requirements. Appendix A provides a list of definitions. Appendix B provides a list of acronyms.

Table 1. Summary of Permit Report Submittals

Permit Section	Submittal	Frequency	First Submittal Date
S5.A and S8	High Turbidity/Transparency Phone Reporting	As Necessary	Within 24 hours
S5.B	Discharge Monitoring Report	Monthly*	Within 15 days of applicable monitoring period
S5.F and S8	Noncompliance Notification	As necessary	Immediately
S5.F	Noncompliance Notification – Written Report	As necessary	Within 5 Days of non-compliance
G2.	Notice of Change in Authorization	As necessary	
G6.	Permit Application for Substantive Changes to the Discharge	As necessary	
G8.	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration
G9.	Notice of Permit Transfer	As necessary	
G20.	Notice of Planned Changes	As necessary	
G22.	Reporting Anticipated Non-compliance	As necessary	

**SPECIAL NOTE:** \*Permittees must submit Discharge Monitoring Reports (DMRs) to the Washington State Department of Ecology monthly, regardless of site discharge, for the full duration of permit coverage. Refer to Section S5.B of this General Permit for more specific information regarding DMRs.

Table 2. Summary of Required On-site Documentation

Document Title	Permit Conditions
Permit Coverage Letter	See Conditions S2, S5
Construction Stormwater General Permit	See Conditions S2, S5
Site Log Book	See Conditions S4, S5
Stormwater Pollution Prevention Plan (SWPPP)	See Conditions S9, S5



## **SPECIAL CONDITIONS**

### **S1. PERMIT COVERAGE**

#### **A. Permit Area**

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal and Tribal lands as specified in Special Condition S1.E.3.

#### **B. Operators Required to Seek Coverage Under this General Permit:**

1. Operators of the following construction activities are required to seek coverage under this CSWGP:
  - a. Clearing, grading and/or excavation that results in the disturbance of one or more acres and discharges stormwater to surface waters of the State; and clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more and discharge stormwater to surface waters of the State.
    - i. This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, and discharge to surface waters of the State (that is, forest practices that prepare a site for construction activities); and
  - b. Any size construction activity discharging stormwater to waters of the State that the Department of Ecology ( "Ecology"):
    - i. Determines to be a significant contributor of pollutants to waters of the State of Washington.
    - ii. Reasonably expects to cause a violation of any water quality standard.
2. Operators of the following activities are not required to seek coverage under this CSWGP (unless specifically required under Special Condition S1.B.1.b. above):
  - a. Construction activities that discharge all stormwater and non-stormwater to ground water, sanitary sewer, or combined sewer, and have no point source discharge to either surface water or a storm sewer system that drains to surface waters of the State.
  - b. Construction activities covered under an Erosivity Waiver (Special Condition S2.C).
  - c. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

C. Authorized Discharges:

1. Stormwater Associated with Construction Activity. Subject to compliance with the terms and conditions of this permit, Permittees are authorized to discharge stormwater associated with construction activity to surface waters of the State or to a storm sewer system that drains to surface waters of the State. (Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.)
2. Stormwater Associated with Construction Support Activity. This permit also authorizes stormwater discharge from support activities related to the permitted construction site (for example, an on-site portable rock crusher, off-site equipment staging yards, material storage areas, borrow areas, etc.) provided:
  - a. The support activity relates directly to the permitted construction site that is required to have a NPDES permit; and
  - b. The support activity is not a commercial operation serving multiple unrelated construction projects, and does not operate beyond the completion of the construction activity; and
  - c. Appropriate controls and measures are identified in the Stormwater Pollution Prevention Plan (SWPPP) for the discharges from the support activity areas.
3. Non-Stormwater Discharges. The categories and sources of non-stormwater discharges identified below are authorized conditionally, provided the discharge is consistent with the terms and conditions of this permit:
  - a. Discharges from fire-fighting activities.
  - b. Fire hydrant system flushing.
  - c. Potable water, including uncontaminated water line flushing.
  - d. Pipeline hydrostatic test water.
  - e. Uncontaminated air conditioning or compressor condensate.
  - f. Uncontaminated ground water or spring water.
  - g. Uncontaminated excavation dewatering water (in accordance with S9.D.10).
  - h. Uncontaminated discharges from foundation or footing drains.
  - i. Water used to control dust. Permittees must minimize the amount of dust control water used.
  - j. Routine external building wash down that does not use detergents.
  - k. Landscape irrigation water.

The SWPPP must adequately address all authorized non-stormwater discharges, except for discharges from fire-fighting activities, and must comply with Special

Condition S3. At a minimum, discharges from potable water (including water line flushing), fire hydrant system flushing, and pipeline hydrostatic test water must undergo the following: dechlorination to a concentration of 0.1 parts per million (ppm) or less, and pH adjustment to within 6.5 – 8.5 standard units (su), if necessary.

D. Prohibited Discharges:

The following discharges to waters of the State, including ground water, are prohibited.

1. Concrete wastewater.
2. Wastewater from washout and clean-up of stucco, paint, form release oils, curing compounds and other construction materials.
3. Process wastewater as defined by 40 Code of Federal Regulations (CFR) 122.1 (see Appendix A of this permit).
4. Slurry materials and waste from shaft drilling.
5. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
6. Soaps or solvents used in vehicle and equipment washing.
7. Wheel wash wastewater, unless discharged according to Special Condition S9.D.9.d.
8. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed according to Special Condition S9.D.10.

E. Limits on Coverage

Ecology may require any discharger to apply for and obtain coverage under an individual permit or another more specific general permit. Such alternative coverage will be required when Ecology determines that this CSWGP does not provide adequate assurance that water quality will be protected, or there is a reasonable potential for the project to cause or contribute to a violation of water quality standards.

The following stormwater discharges are not covered by this permit:

1. Post-construction stormwater discharges that originate from the site after completion of construction activities and the site has undergone final stabilization.
2. Non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance, from which there is natural runoff as excluded in 40 CFR Subpart 122.
3. Stormwater from any federal project or project on federal land or land within an Indian Reservation except for the Puyallup Reservation. Within the Puyallup

Reservation, any project that discharges to surface water on land held in trust by the federal government may be covered by this permit.

4. Stormwater from any site covered under an existing NPDES individual permit in which stormwater management and/or treatment requirements are included for all stormwater discharges associated with construction activity.
5. Stormwater from a site where an applicable Total Maximum Daily Load (TMDL) requirement specifically precludes or prohibits discharges from construction activity.

## **S2. APPLICATION REQUIREMENTS**

### **A. Permit Application Forms**

#### **1. Notice of Intent Form/Timeline**

- a. Operators of new or previously unpermitted construction activities must submit a complete and accurate permit application (Notice of Intent, or NOI) to Ecology.
- b. The operator must submit the NOI at least 60 days before discharging stormwater from construction activities and must submit it on or before the date of the first public notice (see Special Condition S2.B below for details). The 30-day public comment period required by WAC 173-226-130(5) begins on the publication date of the second public notice. Unless Ecology responds to the complete application in writing, based on public comments, or any other relevant factors, coverage under the general permit will automatically commence on the thirty-first day following receipt by Ecology of a completed NOI, or the issuance date of this permit, whichever is later, unless Ecology specifies a later date in writing.
- c. Applicants who propose to discharge to a storm or sewer system operated by Seattle, King County, Snohomish County, Tacoma, Pierce County, or Clark County must also submit a copy of the NOI to the appropriate jurisdiction.
- d. If an applicant intends to use a Best Management Practice (BMP) selected on the basis of Special Condition S9.C.4 ("demonstrably equivalent" BMPs), the applicant must notify Ecology of its selection as part of the NOI. In the event the applicant selects BMPs after submission of the NOI, it must provide notice of the selection of an equivalent BMP to Ecology at least 60 days before intended use of the equivalent BMP.
- e. Permittees must notify Ecology regarding any changes to the information provided on the NOI by submitting an updated NOI. Examples of such changes include, but are not limited to,
  - i. changes to the Permittee's mailing address,
  - ii. changes to the on-site contact person information, and

iii. changes to the area/acreage affected by construction activity.

2. Transfer of Coverage Form

The Permittee can transfer current coverage under this permit to one or more new operators, including operators of sites within a Common Plan of Development, provided the Permittee submits a Transfer of Coverage Form in accordance with General Condition G9. Transfers do not require public notice.

B. Public Notice

For new or previously unpermitted construction activities, the applicant must publish a public notice at least one time each week for two consecutive weeks, at least 7 days apart, in a newspaper with general circulation in the county where the construction is to take place. The notice must contain:

1. A statement that "The applicant is seeking coverage under the Washington State Department of Ecology's Construction Stormwater NPDES and State Waste Discharge General Permit."
2. The name, address and location of the construction site.
3. The name and address of the applicant.
4. The type of construction activity that will result in a discharge (for example, residential construction, commercial construction, etc.), and the number of acres to be disturbed.
5. The name of the receiving water(s) (that is, the surface water(s) to which the site will discharge), or, if the discharge is through a storm sewer system, the name of the operator of the system.
6. The statement: "Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology's action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320. Comments can be submitted to: Department of Ecology, P.O. Box 47696, Olympia, WA 98504-7696 Attn: Water Quality Program, Construction Stormwater."

### C. Erosivity Waiver

Construction site operators may qualify for an erosivity waiver from the CSWGP if the following conditions are met:

1. The site will result in the disturbance of fewer than 5 acres and the site is not a portion of a common plan of development or sale that will disturb 5 acres or greater.
2. Calculation of Erosivity "R" Factor and Regional Timeframe:
  - a. The project's rainfall erosivity factor ("R" Factor) must be less than 5 during the period of construction activity, as calculated using either the Texas A&M University online rainfall erosivity calculator at: <http://ci.tamu.edu/> or EPA's calculator at <http://cfpub.epa.gov/npdes/stormwater/lew/lewcalculator.cfm>. The period of construction activity starts when the land is first disturbed and ends with final stabilization. In addition:
  - b. The entire period of construction activity must fall within the following timeframes:
    - i. For sites west of the Cascades Crest: June 15 – September 15.
    - ii. For sites east of the Cascades Crest, excluding the Central Basin: June 15 – October 15.
    - iii. For sites east of the Cascades Crest, within the Central Basin: no additional timeframe restrictions apply. The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches. For a map of the Central Basin (Region 2), refer to <http://www.ecy.wa.gov/pubs/ecy070202.pdf>.
3. Construction site operators must submit a complete Erosivity Waiver certification form at least one week before disturbing the land. Certification must include statements that the operator will:
  - a. Comply with applicable local stormwater requirements; and
  - b. Implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.
4. This waiver is not available for facilities declared significant contributors of pollutants as defined in Special Condition S1.B.1.b.
5. This waiver does not apply to construction activities which include non-stormwater discharges listed in Special Condition S1.C.3.
6. If construction activity extends beyond the certified waiver period for any reason, the operator must either:
  - a. Recalculate the rainfall erosivity "R" factor using the original start date and a new projected ending date and, if the "R" factor is still under 5 and the entire

project falls within the applicable regional timeframe in Special Condition S2.C.2.b, complete and submit an amended waiver certification form before the original waiver expires; or

- b. Submit a complete permit application to Ecology in accordance with Special Condition S2.A and B before the end of the certified waiver period.

### **S3. COMPLIANCE WITH STANDARDS**

- A. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges not in compliance with these standards are not authorized.
- B. Prior to the discharge of stormwater and non-stormwater to waters of the State, the Permittee must apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- C. Ecology presumes that a Permittee complies with water quality standards unless discharge monitoring data or other site-specific information demonstrates that a discharge causes or contributes to a violation of water quality standards, when the Permittee complies with the following conditions. The Permittee must fully:
  - 1. Comply with all permit conditions, including planning, sampling, monitoring, reporting, and recordkeeping conditions.
  - 2. Implement stormwater BMPs contained in stormwater management manuals published or approved by Ecology, or BMPs that are demonstrably equivalent to BMPs contained in stormwater technical manuals published or approved by Ecology, including the proper selection, implementation, and maintenance of all applicable and appropriate BMPs for on-site pollution control. (For purposes of this section, the stormwater manuals listed in Appendix 10 of the Phase I Municipal Stormwater Permit are approved by Ecology.)
- D. Where construction sites also discharge to ground water, the ground water discharges must also meet the terms and conditions of this CSWGP. Permittees who discharge to ground water through an injection well must also comply with any applicable requirements of the Underground Injection Control (UIC) regulations, Chapter 173-218 WAC.

## S4. MONITORING REQUIREMENTS, BENCHMARKS AND REPORTING TRIGGERS

Table 3. Summary of Primary Monitoring Requirements

Size of Soil Disturbance <sup>1</sup>	Weekly Site Inspections	Weekly Sampling w/ Turbidity Meter	Weekly Sampling w/ Transparency Tube	Weekly pH Sampling <sup>2</sup>	Requires CESCL Certification?
Sites that disturb less than 1 acre, but are part of a larger Common Plan of Development	Required	Not Required	Not Required	Not Required	No
Sites that disturb 1 acre or more, but fewer than 5 acres	Required	Sampling Required – either method <sup>3</sup>		Required	Yes
Sites that disturb 5 acres or more	Required	Required	Not Required <sup>4</sup>	Required	Yes

### A. Site Log Book

The Permittee must maintain a site log book that contains a record of the implementation of the SWPPP and other permit requirements, including the installation and maintenance of BMPs, site inspections, and stormwater monitoring.

### B. Site Inspections

The Permittee's (operator's) site inspections must include all areas disturbed by construction activities, all BMPs, and all stormwater discharge points. (See Special Conditions S4.B.3 and B.4 below for detailed requirements of the Permittee's Certified Erosion and Sediment Control Lead [CESCL]).

<sup>1</sup> Soil disturbance is calculated by adding together all areas affected by construction activity. Construction activity means clearing, grading, excavation, and any other activity that disturbs the surface of the land, including ingress/egress from the site.

<sup>2</sup> If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (1,000 cubic yards of poured or recycled concrete over the life of a project) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area drains to surface waters of the State or to a storm sewer stormwater collection system that drains to other surface waters of the State, the Permittee must conduct pH monitoring sampling in accordance with Special Condition S4.D.

<sup>3</sup> Sites with one or more acres, but fewer than 5 acres of soil disturbance, must conduct turbidity or transparency sampling in accordance with Special Condition S4.C.

<sup>4</sup> Sites equal to or greater than 5 acres of soil disturbance must conduct turbidity sampling using a turbidity meter in accordance with Special Condition S4.C.



Construction sites one acre or larger that discharge stormwater to surface waters of the State must have site inspections conducted by a certified CESCL. Sites less than one acre may have a person without CESCL certification conduct inspections; sampling is not required on sites that disturb less than an acre.

1. The Permittee must examine stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen. The Permittee must evaluate the effectiveness of BMPs and determine if it is necessary to install, maintain, or repair BMPs to improve the quality of stormwater discharges.

Based on the results of the inspection, the Permittee must correct the problems identified by:

- a. Reviewing the SWPPP for compliance with Special Condition S9 and making appropriate revisions within 7 days of the inspection.
  - b. Immediately beginning the process of fully implementing and maintaining appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than within 10 days of the inspection. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period.
  - c. Documenting BMP implementation and maintenance in the site log book.
2. The Permittee must inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. (For purposes of this condition, individual discharge events that last more than one day do not require daily inspections. For example, if a stormwater pond discharges continuously over the course of a week, only one inspection is required that week.) The Permittee may reduce the inspection frequency for temporarily stabilized, inactive sites to once every calendar month.
  3. The Permittee must have staff knowledgeable in the principles and practices of erosion and sediment control. The CESCL (sites one acre or more) or inspector (sites less than one acre) must have the skills to assess the:
    - a. Site conditions and construction activities that could impact the quality of stormwater, and
    - b. Effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.
  4. The SWPPP must identify the CESCL or inspector, who must be present on site or on-call at all times. The CESCL must obtain this certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the manual referred to in Special Condition S9.C.1 and 2).

5. The Permittee must summarize the results of each inspection in an inspection report or checklist and enter the report/checklist into, or attach it to, the site log book. At a minimum, each inspection report or checklist must include:
  - a. Inspection date and time.
  - b. Weather information, the general conditions during inspection and the approximate amount of precipitation since the last inspection, and precipitation within the last 24 hours.
  - c. A summary or list of all implemented BMPs, including observations of all erosion/sediment control structures or practices.
  - d. A description of the locations:
    - i. Of BMPs inspected.
    - ii. Of BMPs that need maintenance and why.
    - iii. Of BMPs that failed to operate as designed or intended, and
    - iv. Where additional or different BMPs are needed, and why.
  - e. A description of stormwater discharged from the site. The Permittee must note the presence of suspended sediment, turbidity, discoloration, and oil sheen, as applicable.
  - f. Any water quality monitoring performed during inspection.
  - g. General comments and notes, including a brief description of any BMP repairs, maintenance or installations made following the inspection.
  - h. A summary report and a schedule of implementation of the remedial actions that the Permittee plans to take if the site inspection indicates that the site is out of compliance. The remedial actions taken must meet the requirements of the SWPPP and the permit.
  - i. The name, title, and signature of the person conducting the site inspection, a phone number or other reliable method to reach this person, and the following statement: "I certify that this report is true, accurate, and complete to the best of my knowledge and belief."

C. Turbidity/Transparency Sampling Requirements

1. Sampling Methods
  - a. If construction activity involves the disturbance of 5 acres or more, the Permittee must conduct turbidity sampling per Special Condition S4.C.
  - b. If construction activity involves 1 acre or more but fewer than 5 acres of soil disturbance, the Permittee must conduct either transparency sampling or turbidity sampling per Special Condition S4.C.

## 2. Sampling Frequency

- a. The Permittee must sample all discharge locations at least once every calendar week when stormwater (or authorized non-stormwater) discharges from the site or enters any on-site surface waters of the state (for example, a creek running through a site).
- b. Samples must be representative of the flow and characteristics of the discharge.
- c. Sampling is not required when there is no discharge during a calendar week.
- d. Sampling is not required outside of normal working hours or during unsafe conditions.
- e. If the Permittee is unable to sample during a monitoring period, the Permittee must include a brief explanation in the monthly Discharge Monitoring Report (DMR).
- f. Sampling is not required before construction activity begins.

## 3. Sampling Locations

- a. Sampling is required at all points where stormwater associated with construction activity (or authorized non-stormwater) is discharged off site, including where it enters any on-site surface waters of the state (for example, a creek running through a site).
- b. The Permittee may discontinue sampling at discharge points that drain areas of the project that are fully stabilized to prevent erosion.
- c. The Permittee must identify all sampling point(s) on the SWPPP site map and clearly mark these points in the field with a flag, tape, stake or other visible marker.
- d. Sampling is not required for discharge that is sent directly to sanitary or combined sewer systems.

## 4. Sampling and Analysis Methods

- a. The Permittee performs turbidity analysis with a calibrated turbidity meter (turbidimeter) either on site or at an accredited lab. The Permittee must record the results in the site log book in nephelometric turbidity units (NTU).
- b. The Permittee performs transparency analysis on site with a 1¾-inch-diameter, 60-centimeter (cm)-long transparency tube. The Permittee will record the results in the site log book in centimeters (cm). Transparency tubes are available from: <http://watermonitoringequip.com/pages/stream.html>.

Table 4. Monitoring and Reporting Requirements

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value	Phone Reporting Trigger Value
Turbidity	NTU	SM2130 or EPA 180.1	Weekly, if discharging	25 NTU	250 NTU
Transparency	cm	Manufacturer Instructions, or Ecology guidance	Weekly, if discharging	33 cm	6 cm

#### 5. Turbidity/Transparency Benchmark Values and Reporting Triggers

The benchmark value for turbidity is 25 NTU or less. The benchmark value for transparency is 33 centimeters (cm). Note: Benchmark values do not apply to discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus; these discharges are subject to a numeric effluent limit for turbidity. Refer to Special Condition S8 for more information.

##### a. Turbidity 26 – 249 NTU, or Transparency 32 – 7 cm:

If the discharge turbidity is 26 to 249 NTU; or if discharge transparency is less than 33 cm, but equal to or greater than 6 cm, the Permittee must:

- i. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
- ii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
- iii. Document BMP implementation and maintenance in the site log book.

##### b. Turbidity 250 NTU or greater, or Transparency 6 cm or less:

If a discharge point's turbidity is 250 NTU or greater, or if discharge transparency is less than or equal to 6 cm, the Permittee must complete the reporting and adaptive management process described below.

- i. Telephone the applicable Ecology Region's Environmental Report Tracking System (ERTS) number within 24 hours, in accordance with Special Condition S5.F.
  - Central Region (Okanogan, Chelan, Douglas, Kittitas, Yakima, Klickitat, Benton): (509) 575-2490

- Eastern Region (Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman): (509) 329-3400
- Northwest Region (Kitsap, Snohomish, Island, King, San Juan, Skagit, Whatcom): (425) 649-7000
- Southwest Region (Grays Harbor, Lewis, Mason, Thurston, Pierce, Clark, Cowlitz, Skamania, Wahkiakum, Clallam, Jefferson, Pacific): (360) 407-6300

These numbers are also listed at the following web site:

<http://www.ecy.wa.gov/programs/wq/stormwater/construction/permit.html>

- ii. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the date the discharge exceeded the benchmark.
- iii. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems within 10 days of the date the discharge exceeded the benchmark. If installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when the Permittee requests an extension within the initial 10-day response period.
- iv. Document BMP implementation and maintenance in the site log book.
- v. Continue to sample discharges daily until:
  - a) Turbidity is 25 NTU (or lower); or
  - b) Transparency is 33 cm (or greater); or
  - c) The Permittee has demonstrated compliance with the water quality limit for turbidity:
    - 1) No more than 5 NTU over background turbidity, if background is less than 50 NTU, or
    - 2) No more than 10% over background turbidity, if background is 50 NTU or greater; or
  - d) The discharge stops or is eliminated.

**D. pH Sampling Requirements -- Significant Concrete Work or Engineered Soils**

If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (significant concrete work means greater than 1000 cubic yards poured concrete or recycled concrete used over the life of a project ) or the use of engineered soils (soil amendments including but not limited to Portland cement-treated base [CTB], cement kiln dust [CKD], or fly ash), and stormwater from the affected area

drains to surface waters of the State or to a storm sewer system that drains to surface waters of the state, the Permittee must conduct pH monitoring as set forth below. Note: In addition, discharges to segments of water bodies on Washington State's 303(d) list (Category 5) for high pH are subject to a numeric effluent limit for pH; refer to Special Condition S8.

1. For sites with significant concrete work, the Permittee must begin the pH monitoring period when the concrete is first poured and exposed to precipitation, and continue weekly throughout and after the concrete pour and curing period, until stormwater pH is in the range of 6.5 to 8.5 (su).
2. For sites with engineered soils, the Permittee must begin the pH monitoring period when the soil amendments are first exposed to precipitation and must continue until the area of engineered soils is fully stabilized.
3. During the applicable pH monitoring period defined above, the Permittee must obtain a representative sample of stormwater and conduct pH analysis at least once per week.
4. The Permittee must monitor pH in the sediment trap/pond(s) or other locations that receive stormwater runoff from the area of significant concrete work or engineered soils before the stormwater discharges to surface waters.
5. The benchmark value for pH is 8.5 standard units. Anytime sampling indicates that pH is 8.5 or greater, the Permittee must either:
  - a. Prevent the high pH water (8.5 or above) from entering storm sewer systems or surface waters; or
  - b. If necessary, adjust or neutralize the high pH water until it is in the range of pH 6.5 to 8.5 (su) using an appropriate treatment BMP such as carbon dioxide (CO<sub>2</sub>) sparging or dry ice. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO<sub>2</sub> sparging or dry ice.
6. The Permittee must perform pH analysis on site with a calibrated pH meter, pH test kit, or wide range pH indicator paper. The Permittee must record pH monitoring results in the site log book.

## **S5. REPORTING AND RECORDKEEPING REQUIREMENTS**

### **A. High Turbidity Phone Reporting**

Anytime sampling performed in accordance with Special Condition S4.C indicates turbidity has reached the 250 NTU phone reporting level, the Permittee must call Ecology's Regional office by phone within 24 hours of analysis. The web site is <http://www.ecy.wa.gov/programs/wq/stormwater/construction/permit.html>. Also see phone numbers in Special Condition S4.C.5.b.i.

### **B. Discharge Monitoring Reports**

Permittees required to conduct water quality sampling in accordance with Special Conditions S4.C (Turbidity/Transparency), S4.D (pH), S8 (303[d]/TMDL sampling), and/or G13 (Additional Sampling) must submit the results to Ecology.

Permittees must submit monitoring data using Ecology's WebDMR program. To find out more information and to sign up for WebDMR go to:  
<http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html>.

Permittees unable to submit electronically (for example, those who do not have an internet connection) must contact Ecology to request a waiver and obtain instructions on how to obtain a paper copy DMR at:

Mailing Address:  
Department of Ecology  
Water Quality Program  
Attn: Stormwater Compliance Specialist  
PO Box 47696  
Olympia, WA 98504-7696

Permittees who obtain a waiver not to use WebDMR must use the forms provided to them by Ecology; submittals must be mailed to the address above. Permittees shall submit DMR forms to be received by Ecology within 15 days following the end of each month.

If there was no discharge during a given monitoring period, all Permittees must submit a DMR as required with "no discharge" entered in place of the monitoring results. For more information, contact Ecology staff using information provided at the following web site: <http://www.ecy.wa.gov/programs/spills/response/assistancesoil%20map.pdf>

### **C. Records Retention**

The Permittee must retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), Stormwater Pollution Prevention Plan, and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of three years following the termination of permit coverage. Such information must include all calibration and maintenance records, and records of all data used to complete the application for this

permit. This period of retention must be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

**D. Recording Results**

For each measurement or sample taken, the Permittee must record the following information:

1. Date, place, method, and time of sampling or measurement.
2. The first and last name of the individual who performed the sampling or measurement.
3. The date(s) the analyses were performed.
4. The first and last name of the individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

**E. Additional Monitoring by the Permittee**

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Special Condition S4 of this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Permittee's DMR.

**F. Noncompliance Notification**

In the event the Permittee is unable to comply with any part of the terms and conditions of this permit, and the resulting noncompliance may cause a threat to human health or the environment, the Permittee must:

1. Immediately notify Ecology of the failure to comply by calling the applicable Regional office ERTS phone number (find at <http://www.ecy.wa.gov/programs/spills/response/assistancesoil%20map.pdf>) or refer to Special Condition S4.C.5.b.i.
2. Immediately take action to prevent the discharge/pollution, or otherwise stop or correct the noncompliance, and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to Ecology within five (5) days of becoming aware of the violation.
3. Submit a detailed written report to Ecology within five (5) days, unless requested earlier by Ecology. The report must contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



The Permittee must report any unanticipated bypass and/or upset that exceeds any effluent limit in the permit in accordance with the 24-hour reporting requirement contained in 40 C.F.R. 122.41(l)(6)).

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply. Refer to Section G14 of this permit for specific information regarding non-compliance.

**G. Access to Plans and Records**

1. The Permittee must retain the following permit documentation (plans and records) on-site, or within reasonable access to the site, for use by the operator or for on-site review by Ecology or the local jurisdiction:
  - a. General Permit.
  - b. Permit Coverage Letter.
  - c. Stormwater Pollution Prevention Plan (SWPPP).
  - d. Site Log Book.
2. The Permittee must address written requests for plans and records listed above (Special Condition S5.G.1) as follows:
  - a. The Permittee must provide a copy of plans and records to Ecology within 14 days of receipt of a written request from Ecology.
  - b. The Permittee must provide a copy of plans and records to the public when requested in writing. Upon receiving a written request from the public for the Permittee's plans and records, the Permittee must either:
    - i. Provide a copy of the plans and records to the requester within 14 days of a receipt of the written request; or
    - ii. Notify the requester within 10 days of receipt of the written request of the location and times within normal business hours when the plans and records may be viewed; and provide access to the plans and records within 14 days of receipt of the written request; or

Within 14 days of receipt of the written request, the Permittee may submit a copy of the plans and records to Ecology for viewing and/or copying by the requester at an Ecology office, or a mutually agreed location. If plans and records are viewed and/or copied at a location other than at an Ecology office, the Permittee will provide reasonable access to copying services for which a reasonable fee may be charged. The Permittee must notify the requester within 10 days of receipt of the request where the plans and records may be viewed and/or copied.

## **S6. PERMIT FEES**

The Permittee must pay permit fees assessed by Ecology. Fees for stormwater discharges covered under this permit are established by Chapter 173-224 WAC. Ecology continues to assess permit fees until the permit is terminated in accordance with Special Condition S10 or revoked in accordance with General Condition G5.

## **S7. SOLID AND LIQUID WASTE DISPOSAL**

The Permittee must handle and dispose of solid and liquid wastes generated by construction activity, such as demolition debris, construction materials, contaminated materials, and waste materials from maintenance activities, including liquids and solids from cleaning catch basins and other stormwater facilities, in accordance with:

- A. Special Condition S3, Compliance with Standards.
- B. WAC 173-216-110.
- C. Other applicable regulations.

## **S8. DISCHARGES TO 303(D) OR TMDL WATER BODIES**

### **A. Sampling and Numeric Effluent Limits For Certain Discharges to 303(d)-listed Water Bodies**

- 1. Permittees who discharge to segments of water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, or phosphorus, must conduct water quality sampling according to the requirements of this section, and Special Conditions S4.C.2.b-f and S4.C.3.b-d, and must comply with the applicable numeric effluent limitations in S8.C and S8.D.
- 2. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters (Category 5) that exists on January 1, 2011, or the date when the operator's complete permit application is received by Ecology, whichever is later.

### **B. Limits on Coverage for New Discharges to TMDL or 303(d)-listed Waters**

Operators of construction sites that discharge to a 303(d)-listed water body are not eligible for coverage under this permit *unless* the operator:

- 1. Prevents exposing stormwater to pollutants for which the water body is impaired, and retains documentation in the SWPPP that details procedures taken to prevent exposure on site; or
- 2. Documents that the pollutants for which the water body is impaired are not present at the site, and retains documentation of this finding within the SWPPP; or

3. Provides Ecology with data indicating the discharge is not expected to cause or contribute to an exceedance of a water quality standard, and retains such data on site with the SWPPP. The operator must provide data and other technical information to Ecology that sufficiently demonstrate:
  - a. For discharges to waters without an EPA-approved or -established TMDL, that the discharge of the pollutant for which the water is impaired will meet in-stream water quality criteria at the point of discharge to the water body; or
  - b. For discharges to waters with an EPA-approved or -established TMDL, that there is sufficient remaining wasteload allocation in the TMDL to allow construction stormwater discharge and that existing dischargers to the water body are subject to compliance schedules designed to bring the water body into attainment with water quality standards.

Operators of construction sites are eligible for coverage under this permit if Ecology issues permit coverage based upon an affirmative determination that the discharge will not cause or contribute to the existing impairment.

C. Sampling and Numeric Effluent Limits for Discharges to Water Bodies on the 303(d) List for Turbidity, Fine Sediment, or Phosphorus

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for turbidity, fine sediment, or phosphorus must conduct turbidity sampling in accordance with Special Condition S4.C.2 and comply with either of the numeric effluent limits noted in Table 5 below.
2. As an alternative to the 25 NTU effluent limit noted in Table 5 below (applied at the point where stormwater [or authorized non-stormwater] is discharged off-site), permittees may choose to comply with the surface water quality standard for turbidity. The standard is: no more than 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or no more than a 10% increase in turbidity when the background turbidity is more than 50 NTU. In order to use the water quality standard requirement, the sampling must take place at the following locations:
  - a. Background turbidity in the 303(d)-listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge.
  - b. Turbidity at the point of discharge into the 303(d)-listed receiving water, inside the area of influence of the discharge.
3. Discharges that exceed the numeric effluent limit for turbidity constitute a violation of this permit.
4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

Table 5. Turbidity, Fine Sediment & Phosphorus Sampling and Limits for 303(d)-Listed Waters

Parameter Identified In 303(d) listing	Parameter Sampled	Unit	Analytical Method	Sampling Frequency	Numeric Effluent Limit <sup>1</sup>
<ul style="list-style-type: none"> <li>Turbidity</li> <li>Fine Sediment</li> <li>Phosphorus</li> </ul>	Turbidity	NTU	SM2130 or EPA180.1	Weekly, if discharging	25 NTU, at the point where stormwater is discharged from the site; OR In compliance with the surface water quality standard for turbidity (S8.C.1.a).

<sup>1</sup>Permittees subject to a numeric effluent limit for turbidity may, at their discretion, choose either numeric effluent limitation based on site-specific considerations including, but not limited to, safety, access and convenience.

**D. Discharges to Water Bodies on the 303(d) List for High pH**

1. Permittees who discharge to segments of water bodies on the 303(d) list (Category 5) for high pH must conduct pH sampling in accordance with the table below, and comply with the numeric effluent limit of pH 6.5 to 8.5 su (Table 6).

Table 6. pH Sampling and Limits for 303(d)-Listed Waters

Parameter identified In 303(d) listing	Parameter Sampled/Units	Analytical Method	Sampling Frequency	Numeric Effluent Limit
High pH	pH /Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5

2. At the Permittee's discretion, compliance with the limit shall be assessed at one of the following locations:
  - a. Directly in the 303(d)-listed water body segment, inside the immediate area of influence of the discharge; or
  - b. Alternatively, the permittee may measure pH at the point where the discharge leaves the construction site, rather than in the receiving water.
3. Discharges that exceed the numeric effluent limit for pH (outside the range of 6.5 – 8.5 su) constitute a violation of this permit.
4. Permittees whose discharges exceed the numeric effluent limit shall sample discharges daily until the violation is corrected and comply with the non-compliance notification requirements in Special Condition S5.F.

E. Sampling and Limits for Sites Discharging to Waters Covered by a TMDL or Another Pollution Control Plan

1. Discharges to a water body that is subject to a Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus must be consistent with the TMDL. Refer to <http://www.ecy.wa.gov/programs/wq/tmdl/index.html> for more information on TMDLs.
  - a. Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges must be consistent with any specific waste load allocations or requirements established by the applicable TMDL.
    - i. The Permittee must sample discharges weekly or as otherwise specified by the TMDL to evaluate compliance with the specific waste load allocations or requirements.
    - ii. Analytical methods used to meet the monitoring requirements must conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136. Turbidity and pH methods need not be accredited or registered unless conducted at a laboratory which must otherwise be accredited or registered.
  - b. Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but has not identified specific requirements, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.
  - c. Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with Special Conditions S4 (Monitoring) and S9 (SWPPPs) will constitute compliance with the approved TMDL.
  - d. Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.
2. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus that is completed and approved by EPA before January 1, 2011, or before the date the operator's complete permit application is received by Ecology, whichever is later. TMDLs completed after the operator's complete permit application is received by Ecology become applicable to the Permittee only if they are imposed through an administrative order by Ecology, or through a modification of permit coverage.

## **S9. STORMWATER POLLUTION PREVENTION PLAN**

The Permittee must prepare and properly implement an adequate Stormwater Pollution Prevention Plan (SWPPP) for construction activity in accordance with the requirements of this permit beginning with initial soil disturbance and until final stabilization.

### **A. The Permittee's SWPPP must meet the following objectives:**

1. To implement best management practices (BMPs) to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.
2. To prevent violations of surface water quality, ground water quality, or sediment management standards.
3. To control peak volumetric flow rates and velocities of stormwater discharges.

### **B. General Requirements**

1. The SWPPP must include a narrative and drawings. All BMPs must be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative must include documentation to explain and justify the pollution prevention decisions made for the project. Documentation must include:
  - a. Information about existing site conditions (topography, drainage, soils, vegetation, etc.).
  - b. Potential erosion problem areas.
  - c. The 12 elements of a SWPPP in Special Condition S9.D.1-12, including BMPs used to address each element.
  - d. Construction phasing/sequence and general BMP implementation schedule.
  - e. The actions to be taken if BMP performance goals are not achieved—for example, a contingency plan for additional treatment and/or storage of stormwater that would violate the water quality standards if discharged.
  - f. Engineering calculations for ponds and any other designed structures.
2. The Permittee must modify the SWPPP if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is, or would be, ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The Permittee must then:
  - a. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of the inspection or investigation.
  - b. Immediately begin the process to fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, addressing the problems no later than 10 days from the inspection or investigation. If

installation of necessary treatment BMPs is not feasible within 10 days, Ecology may approve additional time when an extension is requested by a Permittee within the initial 10-day response period,

- c. Document BMP implementation and maintenance in the site log book.

The Permittee must modify the SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the State.

**C. Stormwater Best Management Practices (BMPs)**

BMPs must be consistent with:

1. Stormwater Management Manual for Western Washington (most recent edition), for sites west of the crest of the Cascade Mountains; or
2. Stormwater Management Manual for Eastern Washington (most recent edition), for sites east of the crest of the Cascade Mountains; or
3. Revisions to the manuals listed in Special Condition S9.C.1. & 2., or other stormwater management guidance documents or manuals which provide an equivalent level of pollution prevention, that are approved by Ecology and incorporated into this permit in accordance with the permit modification requirements of WAC 173-226-230; or
4. Documentation in the SWPPP that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable Stormwater Management Manuals, including:
  - a. The technical basis for the selection of all stormwater BMPs (scientific, technical studies, and/or modeling) that support the performance claims for the BMPs being selected.
  - b. An assessment of how the selected BMP will satisfy AKART requirements and the applicable federal technology-based treatment requirements under 40 CFR part 125.3.

**D. SWPPP – Narrative Contents and Requirements**

The Permittee must include each of the 12 elements below in Special Condition S9.D.1-12 in the narrative of the SWPPP and implement them unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP.

1. Preserve Vegetation/Mark Clearing Limits
  - a. Before beginning land-disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.

- b. Retain the duff layer, native top soil, and natural vegetation in an undisturbed state to the maximum degree practicable.
2. Establish Construction Access
- a. Limit construction vehicle access and exit to one route, if possible.
  - b. Stabilize access points with a pad of quarry spalls, crushed rock, or other equivalent BMPs, to minimize tracking sediment onto roads.
  - c. Locate wheel wash or tire baths on site, if the stabilized construction entrance is not effective in preventing tracking sediment onto roads.
  - d. If sediment is tracked off site, clean the affected roadway thoroughly at the end of each day, or more frequently as necessary (for example, during wet weather). Remove sediment from roads by shoveling, sweeping, or pickup and transport of the sediment to a controlled sediment disposal area.
  - e. Conduct street washing only after sediment removal in accordance with Special Condition S9.D.2.d. Control street wash wastewater by pumping back on site or otherwise preventing it from discharging into systems tributary to waters of the State.
3. Control Flow Rates
- a. Protect properties and waterways downstream of development sites from erosion and the associated discharge of turbid waters due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site, as required by local plan approval authority.
  - b. Where necessary to comply with Special Condition S9.D.3.a, construct stormwater retention or detention facilities as one of the first steps in grading. Assure that detention facilities function properly before constructing site improvements (for example, impervious surfaces).
  - c. If permanent infiltration ponds are used for flow control during construction, protect these facilities from siltation during the construction phase.

4. Install Sediment Controls

The Permittee must design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, the Permittee must design, install and maintain such controls to:

- a. Construct sediment control BMPs (sediment ponds, traps, filters, etc.) as one of the first steps in grading. These BMPs must be functional before other land disturbing activities take place.
- b. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of



resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.

- c. Direct stormwater runoff from disturbed areas through a sediment pond or other appropriate sediment removal BMP, before the runoff leaves a construction site or before discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must meet the flow control performance standard of Special Condition S9.D.3.a.
- d. Locate BMPs intended to trap sediment on site in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
- e. Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible.
- f. Where feasible, design outlet structures that withdraw impounded stormwater from the surface to avoid discharging sediment that is still suspended lower in the water column.

5. Stabilize Soils

- a. The Permittee must stabilize exposed and unworked soils by application of effective BMPs that prevent erosion. Applicable BMPs include, but are not limited to: temporary and permanent seeding, sodding, mulching, plastic covering, erosion control fabrics and matting, soil application of polyacrylamide (PAM), the early application of gravel base on areas to be paved, and dust control.
- b. The Permittee must control stormwater volume and velocity within the site to minimize soil erosion.
- c. The Permittee must control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.
- d. Depending on the geographic location of the project, the Permittee must not allow soils to remain exposed and unworked for more than the time periods set forth below to prevent erosion:

West of the Cascade Mountains Crest

During the dry season (May 1 - Sept. 30): 7 days

During the wet season (October 1 - April 30): 2 days

East of the Cascade Mountains Crest, except for Central Basin\*

During the dry season (July 1 - September 30): 10 days

During the wet season (October 1 - June 30): 5 days

The Central Basin\*, East of the Cascade Mountains Crest

During the dry Season (July 1 - September 30): 30 days  
During the wet season (October 1 - June 30): 15 days

**\*Note:** The Central Basin is defined as the portions of Eastern Washington with mean annual precipitation of less than 12 inches.

- e. The Permittee must stabilize soils at the end of the shift before a holiday or weekend if needed based on the weather forecast.
  - f. The Permittee must stabilize soil stockpiles from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.
  - g. The Permittee must minimize the amount of soil exposed during construction activity.
  - h. The Permittee must minimize the disturbance of steep slopes.
  - i. The Permittee must minimize soil compaction and, unless infeasible, preserve topsoil.
6. Protect Slopes
- a. The Permittee must design and construct cut-and-fill slopes in a manner to minimize erosion. Applicable practices include, but are not limited to, reducing continuous length of slope with terracing and diversions, reducing slope steepness, and roughening slope surfaces (for example, track walking).
  - b. The Permittee must divert off-site stormwater (run-on) or ground water away from slopes and disturbed areas with interceptor dikes, pipes, and/or swales. Off-site stormwater should be managed separately from stormwater generated on the site.
  - c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion.
    - i. West of the Cascade Mountains Crest: Temporary pipe slope drains must handle the peak 10-minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model (WWHM) to predict flows, bare soil areas should be modeled as "landscaped area."

- ii. East of the Cascade Mountains Crest: Temporary pipe slope drains must handle the expected peak flow velocity from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.
  - d. Place excavated material on the uphill side of trenches, consistent with safety and space considerations.
  - e. Place check dams at regular intervals within constructed channels that are cut down a slope.
7. Protect Drain Inlets
- a. Protect all storm drain inlets made operable during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
  - b. Clean or remove and replace inlet protection devices when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
8. Stabilize Channels and Outlets
- a. Design, construct and stabilize all on-site conveyance channels to prevent erosion from the following expected peak flows:
    - i. West of the Cascade Mountains Crest: Channels must handle the peak 10-minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis must use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis must use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the WWHM to predict flows, bare soil areas should be modeled as "landscaped area."
    - ii. East of the Cascade Mountains Crest: Channels must handle the expected peak flow velocity from a 6-month, 3-hour storm for the developed condition, referred to as the short duration storm.
  - b. Provide stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the outlets of all conveyance systems.
9. Control Pollutants
- Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. The Permittee must:

- a. Handle and dispose of all pollutants, including waste materials and demolition debris that occur on site in a manner that does not cause contamination of stormwater.
  - b. Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Double-walled tanks do not require additional secondary containment.
  - c. Conduct maintenance, fueling, and repair of heavy equipment and vehicles using spill prevention and control measures. Clean contaminated surfaces immediately following any spill incident.
  - d. Discharge wheel wash or tire bath wastewater to a separate on-site treatment system that prevents discharge to surface water, such as closed-loop recirculation or upland land application, or to the sanitary sewer with local sewer district approval.
  - e. Apply fertilizers and pesticides in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Follow manufacturers' label requirements for application rates and procedures.
  - f. Use BMPs to prevent contamination of stormwater runoff by pH-modifying sources. The sources for this contamination 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, dewatering concrete vaults, concrete pumping and mixer washout waters. (Also refer to the definition for "concrete wastewater" in Appendix A--Definitions.)
  - g. Adjust the pH of stormwater if necessary to prevent violations of water quality standards.
  - h. Assure that washout of concrete trucks is performed offsite or in designated concrete washout areas only. Do not wash out concrete trucks onto the ground, or into storm drains, open ditches, streets, or streams. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge to surface waters of the State is prohibited.
  - i. Obtain written approval from Ecology before using chemical treatment other than CO<sub>2</sub> or dry ice to adjust pH.
10. Control Dewatering
- a. Permittees must discharge foundation, vault, and trench dewatering water, which have characteristics similar to stormwater runoff at the site, into a

controlled conveyance system before discharge to a sediment trap or sediment pond.

- b. Permittees may discharge clean, non-turbid dewatering water, such as well-point ground water, to systems tributary to, or directly into surface waters of the State, as specified in Special Condition S9.D.8, provided the dewatering flow does not cause erosion or flooding of receiving waters. Do not route clean dewatering water through stormwater sediment ponds. Note that "surface waters of the State" may exist on a construction site as well as off site; for example, a creek running through a site.
- c. Other treatment or disposal options may include:
  - i. Infiltration.
  - ii. Transport off site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters.
  - iii. Ecology-approved on-site chemical treatment or other suitable treatment technologies.
  - iv. Sanitary or combined sewer discharge with local sewer district approval, if there is no other option.
  - v. Use of a sedimentation bag with discharge to a ditch or swale for small volumes of localized dewatering.
- d. Permittees must handle highly turbid or contaminated dewatering water separately from stormwater.

#### 11. Maintain BMPs

- a. Permittees must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications.
- b. Permittees must remove all temporary erosion and sediment control BMPs within 30 days after achieving final site stabilization or after the temporary BMPs are no longer needed.

#### 12. Manage the Project

- a. Phase development projects to the maximum degree practicable and take into account seasonal work limitations.
- b. Inspection and monitoring -- Inspect, maintain and repair all BMPs as needed to assure continued performance of their intended function. Conduct site inspections and monitoring in accordance with Special Condition S4.
- c. Maintaining an updated construction SWPPP -- Maintain, update, and implement the SWPPP in accordance with Special Conditions S3, S4 and S9.

**E. SWPPP – Map Contents and Requirements**

The Permittee's SWPPP must also include a vicinity map or general location map (for example, a USGS quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.

The SWPPP must also include a legible site map (or maps) showing the entire construction site. The following features must be identified, unless not applicable due to site conditions:

1. The direction of north, property lines, and existing structures and roads.
2. Cut and fill slopes indicating the top and bottom of slope catch lines.
3. Approximate slopes, contours, and direction of stormwater flow before and after major grading activities.
4. Areas of soil disturbance and areas that will not be disturbed.
5. Locations of structural and nonstructural controls (BMPs) identified in the SWPPP.
6. Locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas.
7. Locations of all surface water bodies, including wetlands.
8. Locations where stormwater or non-stormwater discharges off-site and/or to a surface water body, including wetlands.
9. Location of water quality sampling station(s), if sampling is required by state or local permitting authority.
10. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

**S10. NOTICE OF TERMINATION**

- A. The site is eligible for termination of coverage when it has met any of the following conditions:
1. The site has undergone final stabilization, the Permittee has removed all temporary BMPs (except biodegradable BMPs clearly manufactured with the intention for the material to be left in place and not interfere with maintenance or land use), and all stormwater discharges associated with construction activity have been eliminated; or
  2. All portions of the site that have not undergone final stabilization per Special Condition S10.A.1 have been sold and/or transferred (per General Condition G9), and the Permittee no longer has operational control of the construction activity; or

3. For residential construction only, the Permittee has completed temporary stabilization and the homeowners have taken possession of the residences.
- B. When the site is eligible for termination, the Permittee must submit a complete and accurate Notice of Termination (NOT) form, signed in accordance with General Condition G2, to:

Department of Ecology  
Water Quality Program - Construction Stormwater  
PO Box 47696  
Olympia, Washington 98504-7696

The termination is effective on the date Ecology receives the NOT form, unless Ecology notifies the Permittee within 30 days that termination request is denied because the Permittee has not met the eligibility requirements in Special Condition S10.A.

Permittees transferring the property to a new property owner or operator/permittee are required to complete and submit the Notice of Transfer form to Ecology, but are not required to submit a Notice of Termination form for this type of transaction.

## **GENERAL CONDITIONS**

### **G1. DISCHARGE VIOLATIONS**

All discharges and activities authorized by this general permit must be consistent with the terms and conditions of this general permit. Any discharge of any pollutant more frequent than or at a level in excess of that identified and authorized by the general permit must constitute a violation of the terms and conditions of this permit.

### **G2. SIGNATORY REQUIREMENTS**

- A. All permit applications must bear a certification of correctness to be signed:
  - 1. In the case of corporations, by a responsible corporate officer of at least the level of vice president of a corporation;
  - 2. In the case of a partnership, by a general partner of a partnership;
  - 3. In the case of sole proprietorship, by the proprietor; or
  - 4. In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official.
- B. All reports required by this permit and other information requested by Ecology must be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - 1. The authorization is made in writing by a person described above and submitted to the Ecology.
  - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.
- C. Changes to authorization. If an authorization under paragraph G2.B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph G2.B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section must make the following certification:

“I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering



information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

### **G3. RIGHT OF INSPECTION AND ENTRY**

The Permittee must allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records are kept under the terms and conditions of this permit.
- B. To have access to and copy -- at reasonable times and at reasonable cost -- any records required to be kept under the terms and conditions of this permit.
- C. To inspect -- at reasonable times -- any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor -- at reasonable times -- any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

### **G4. GENERAL PERMIT MODIFICATION AND REVOCATION**

This permit may be modified, revoked and reissued, or terminated in accordance with the provisions of Chapter 173-226 WAC. Grounds for modification, revocation and reissuance, or termination include, but are not limited to, the following:

- A. When a change occurs in the technology or practices for control or abatement of pollutants applicable to the category of dischargers covered under this permit.
- B. When effluent limitation guidelines or standards are promulgated pursuant to the CWA or Chapter 90.48 RCW, for the category of dischargers covered under this permit.
- C. When a water quality management plan containing requirements applicable to the category of dischargers covered under this permit is approved, or
- D. When information is obtained that indicates cumulative effects on the environment from dischargers covered under this permit are unacceptable.

### **G5. REVOCATION OF COVERAGE UNDER THE PERMIT**

Pursuant to Chapter 43.21B RCW and Chapter 173-226 WAC, the Director may terminate coverage for any discharger under this permit for cause. Cases where coverage may be terminated include, but are not limited to, the following:

- A. Violation of any term or condition of this permit.
- B. Obtaining coverage under this permit by misrepresentation or failure to disclose fully all relevant facts.
- C. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.
- D. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
- E. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations.
- F. Nonpayment of permit fees or penalties assessed pursuant to RCW 90.48.465 and Chapter 173-224 WAC.
- G. Failure of the Permittee to satisfy the public notice requirements of WAC 173-226-130(5), when applicable.

The Director may require any discharger under this permit to apply for and obtain coverage under an individual permit or another more specific general permit. Permittees who have their coverage revoked for cause according to WAC 173-226-240 may request temporary coverage under this permit during the time an individual permit is being developed, provided the request is made within ninety (90) days from the time of revocation and is submitted along with a complete individual permit application form.

#### **G6. REPORTING A CAUSE FOR MODIFICATION**

The Permittee must submit a new application, or a supplement to the previous application, whenever a material change to the construction activity or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application must be submitted at least sixty (60) days prior to any proposed changes. Filing a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

#### **G7. COMPLIANCE WITH OTHER LAWS AND STATUTES**

Nothing in this permit will be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

#### **G8. DUTY TO REAPPLY**

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

## **G9. TRANSFER OF GENERAL PERMIT COVERAGE**

Coverage under this general permit is automatically transferred to a new discharger, including operators of lots/parcels within a common plan of development or sale, if:

- A. A written agreement (Transfer of Coverage Form) between the current discharger (Permittee) and new discharger, signed by both parties and containing a specific date for transfer of permit responsibility, coverage, and liability is submitted to the Director; and
- B. The Director does not notify the current discharger and new discharger of the Director's intent to revoke coverage under the general permit. If this notice is not given, the transfer is effective on the date specified in the written agreement.

When a current discharger (Permittee) transfers a portion of a permitted site, the current discharger must also submit an updated application form (NOI) to the Director indicating the remaining permitted acreage after the transfer.

## **G10. REMOVED SUBSTANCES**

The Permittee must not re-suspend or reintroduce collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of stormwater to the final effluent stream for discharge to state waters.

## **G11. DUTY TO PROVIDE INFORMATION**

The Permittee must submit to Ecology, within a reasonable time, all information that Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee must also submit to Ecology, upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

## **G12. OTHER REQUIREMENTS OF 40 CFR**

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

## **G13. ADDITIONAL MONITORING**

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

#### **G14. PENALTIES FOR VIOLATING PERMIT CONDITIONS**

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

#### **G15. UPSET**

Definition – "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in Special Condition S5.F, and; 4) the Permittee complied with any remedial measures required under this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

#### **G16. PROPERTY RIGHTS**

This permit does not convey any property rights of any sort, or any exclusive privilege.

#### **G17. DUTY TO COMPLY**

The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

## **G18. TOXIC POLLUTANTS**

The Permittee must comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

## **G19. PENALTIES FOR TAMPERING**

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this condition, punishment shall be a fine of not more than \$20,000 per day of violation, or imprisonment of not more than four (4) years, or both.

## **G20. REPORTING PLANNED CHANGES**

The Permittee must, as soon as possible, give notice to Ecology of planned physical alterations, modifications or additions to the permitted construction activity. The Permittee should be aware that, depending on the nature and size of the changes to the original permit, a new public notice and other permit process requirements may be required. Changes in activities that require reporting to Ecology include those that will result in:

- A. The permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b).
- B. A significant change in the nature or an increase in quantity of pollutants discharged, including but not limited to: for sites 5 acres or larger, a 20% or greater increase in acreage disturbed by construction activity.
- C. A change in or addition of surface water(s) receiving stormwater or non-stormwater from the construction activity.
- D. A change in the construction plans and/or activity that affects the Permittee's monitoring requirements in Special Condition S4.

Following such notice, permit coverage may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

## **G21. REPORTING OTHER INFORMATION**

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to Ecology, it must promptly submit such facts or information.

## **G22. REPORTING ANTICIPATED NON-COMPLIANCE**

The Permittee must give advance notice to Ecology by submission of a new application or supplement thereto at least forty-five (45) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, must be scheduled during non-critical water quality periods and carried out in a manner approved by Ecology.

## **G23. REQUESTS TO BE EXCLUDED FROM COVERAGE UNDER THE PERMIT**

Any discharger authorized by this permit may request to be excluded from coverage under the general permit by applying for an individual permit. The discharger must submit to the Director an application as described in WAC 173-220-040 or WAC 173-216-070, whichever is applicable, with reasons supporting the request. These reasons will fully document how an individual permit will apply to the applicant in a way that the general permit cannot. Ecology may make specific requests for information to support the request. The Director will either issue an individual permit or deny the request with a statement explaining the reason for the denial. When an individual permit is issued to a discharger otherwise subject to the construction stormwater general permit, the applicability of the construction stormwater general permit to that Permittee is automatically terminated on the effective date of the individual permit.

## **G24. APPEALS**

- A. The terms and conditions of this general permit, as they apply to the appropriate class of dischargers, are subject to appeal by any person within 30 days of issuance of this general permit, in accordance with Chapter 43.21B RCW, and Chapter 173-226 WAC.
- B. The terms and conditions of this general permit, as they apply to an individual discharger, are appealable in accordance with Chapter 43.21B RCW within 30 days of the effective date of coverage of that discharger. Consideration of an appeal of general permit coverage of an individual discharger is limited to the general permit's applicability or nonapplicability to that individual discharger.
- C. The appeal of general permit coverage of an individual discharger does not affect any other dischargers covered under this general permit. If the terms and conditions of this general permit are found to be inapplicable to any individual discharger(s), the matter

shall be remanded to Ecology for consideration of issuance of an individual permit or permits.

## **G25. SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

## **G26. BYPASS PROHIBITED**

### **A. Bypass Procedures**

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater events below the design criteria for stormwater management. Ecology may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, 3 or 4) is applicable.

1. Bypass of stormwater is consistent with the design criteria and part of an approved management practice in the applicable stormwater management manual.
2. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health.

3. Bypass of stormwater is unavoidable, unanticipated, and results in noncompliance of this permit.

This bypass is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.

- c. Ecology is properly notified of the bypass as required in Special Condition S5.F of this permit.
- 4. A planned action that would cause bypass of stormwater and has the potential to result in noncompliance of this permit during a storm event.

The Permittee must notify Ecology at least thirty (30) days before the planned date of bypass. The notice must contain:

- a. a description of the bypass and its cause
  - b. an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing.
  - c. a cost-effectiveness analysis of alternatives including comparative resource damage assessment.
  - d. the minimum and maximum duration of bypass under each alternative.
  - e. a recommendation as to the preferred alternative for conducting the bypass.
  - f. the projected date of bypass initiation.
  - g. a statement of compliance with SEPA.
  - h. a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated.
  - i. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.
- 5. For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above must be considered during preparation of the Stormwater Pollution Prevention Plan (SWPPP) and must be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

Ecology will consider the following before issuing an administrative order for this type bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.



After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve, conditionally approve, or deny the request. The public must be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under RCW 90.48.120.

B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

## APPENDIX A – DEFINITIONS

AKART is an acronym for “all known, available, and reasonable methods of prevention, control, and treatment.” AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling pollution associated with a discharge.

Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which was completed and approved by EPA before January 1, 2011, or before the date the operator’s complete permit application is received by Ecology, whichever is later.

Applicant means an operator seeking coverage under this permit.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: stormwater associated with construction activity, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Buffer means an area designated by a local jurisdiction that is contiguous to and intended to protect a sensitive area.

Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

Calendar Day A period of 24 consecutive hours starting at 12:00 midnight and ending the following 12:00 midnight.

Calendar Week (same as Week) means a period of seven consecutive days starting at 12:01 a.m. (0:01 hours) on Sunday.

Certified Erosion and Sediment Control Lead (CESCL) means a person who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by Ecology (see BMP C160 in the SWMM).

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; USC 1251 et seq.

Combined Sewer means a sewer which has been designed to serve as a sanitary sewer and a storm sewer, and into which inflow is allowed by local ordinance.

Common Plan of Development or Sale means a site where multiple separate and distinct construction activities may be taking place at different times on different schedules and/or by different contractors, but still under a single plan. Examples include: 1) phased projects and projects with multiple filings or lots, even if the separate phases or filings/lots will be constructed under separate contract or by separate owners (e.g., a development where lots are sold to separate builders); 2) a development plan that may be phased over multiple years, but is still under a

consistent plan for long-term development; 3) projects in a contiguous area that may be unrelated but still under the same contract, such as construction of a building extension and a new parking lot at the same facility; and 4) linear projects such as roads, pipelines, or utilities. If the project is part of a common plan of development or sale, the disturbed area of the entire plan must be used in determining permit requirements.

Composite Sample means a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots).

Concrete wastewater means any water used in the production, pouring and/or clean-up of concrete or concrete products, and any water used to cut, grind, wash, or otherwise modify concrete or concrete products. 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). When stormwater comes in contact with concrete wastewater, the resulting water is considered concrete wastewater and must be managed to prevent discharge to waters of the state, including ground water.

Construction Activity means land disturbing operations including clearing, grading or excavation which disturbs the surface of the land. Such activities may include road construction, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Contaminant means any hazardous substance that does not occur naturally or occurs at greater than natural background levels. See definition of "hazardous substance" and WAC 173-340-200.

Demonstrably Equivalent means that the technical basis for the selection of all stormwater BMPs is documented within a SWPPP, including:

1. The method and reasons for choosing the stormwater BMPs selected.
2. The pollutant removal performance expected from the BMPs selected.
3. The technical basis supporting the performance claims for the BMPs selected, including any available data concerning field performance of the BMPs selected.
4. An assessment of how the selected BMPs will comply with state water quality standards.
5. An assessment of how the selected BMPs will satisfy both applicable federal technology-based treatment requirements and state requirements to use all known, available, and reasonable methods of prevention, control, and treatment (AKART).

Department means the Washington State Department of Ecology.

Detention means the temporary storage of stormwater to improve quality and/or to reduce the mass flow rate of discharge.

Dewatering means the act of pumping ground water or stormwater away from an active construction site.

Director means the Director of the Washington Department of Ecology or his/her authorized representative.

Discharger means an owner or operator of any facility or activity subject to regulation under Chapter 90.48 RCW or the Federal Clean Water Act.

Domestic Wastewater means water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground water infiltration or surface waters as may be present.

Ecology means the Washington State Department of Ecology.

Engineered Soils means the use of soil amendments including, but not limited, to Portland cement treated base (CTB), cement kiln dust (CKD), or fly ash to achieve certain desirable soil characteristics.

Equivalent BMPs means operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to ground water than BMPs selected from the SWMM.

Erosion means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep.

Erosion and Sediment Control BMPs means BMPs intended to prevent erosion and sedimentation, such as preserving natural vegetation, seeding, mulching and matting, plastic covering, filter fences, sediment traps, and ponds. Erosion and sediment control BMPs are synonymous with stabilization and structural BMPs.

Final Stabilization (same as fully stabilized or full stabilization) means the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (such as riprap, gabions or geotextiles) which prevents erosion.

Ground Water means water in a saturated zone or stratum beneath the land surface or a surface water body.

Hazardous Substance means any dangerous or extremely hazardous waste as defined in RCW 70.105.010 (5) and (6), or any dangerous or extremely dangerous waste as designated by rule under chapter 70.105 RCW; any hazardous substance as defined in RCW 70.105.010(14) or any hazardous substance as defined by rule under chapter 70.105 RCW; any substance that, on the effective date of this section, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C., Sec. 9601(14); petroleum or petroleum products; and any substance or category of substances, including solid waste decomposition products, determined by the director

by rule to present a threat to human health or the environment if released into the environment. The term hazardous substance does not include any of the following when contained in an underground storage tank from which there is not a release: crude oil or any fraction thereof or petroleum, if the tank is in compliance with all applicable federal, state, and local law.

Injection Well means a well that is used for the subsurface emplacement of fluids. (See Well.)

Jurisdiction means a political unit such as a city, town or county; incorporated for local self-government.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the State from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

Notice of Intent (NOI) means the application for, or a request for coverage under this general permit pursuant to WAC 173-226-200.

Notice of Termination (NOT) means a request for termination of coverage under this general permit as specified by Special Condition S10 of this permit.

Operator means any party associated with a construction project that meets either of the following two criteria:

- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
- The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

Permittee means individual or entity that receives notice of coverage under this general permit.

pH means a liquid's measure of acidity or alkalinity. A pH of 7 is defined as neutral. Large variations above or below this value are considered harmful to most aquatic life.

pH monitoring period means the time period in which the pH of stormwater runoff from a site must be tested a minimum of once every seven days to determine if stormwater pH is between 6.5 and 8.5.

Point source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, and container from which pollutants are or may be discharged to surface waters of the State. This term does not include return flows from irrigated agriculture. (See Fact Sheet for further explanation.)

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, domestic sewage sludge (biosolids), munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste. This term does not include sewage from vessels within the meaning of section 312 of the CWA, nor does it include dredged or fill material discharged in accordance with a permit issued under section 404 of the CWA.

Pollution means contamination or other alteration of the physical, chemical, or biological properties of waters of the State; including change in temperature, taste, color, turbidity, or odor of the waters; or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare; or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wild animals, birds, fish or other aquatic life.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product (40 CFR 122.1).

Receiving water means the water body at the point of discharge. If the discharge is to a storm sewer system, either surface or subsurface, the receiving water is the water body to which the storm system discharges. Systems designed primarily for other purposes such as for ground water drainage, redirecting stream natural flows, or for conveyance of irrigation water/return flows that coincidentally convey stormwater are considered the receiving water.

Representative means a stormwater or wastewater sample which represents the flow and characteristics of the discharge. Representative samples may be a grab sample, a time-proportionate composite sample, or a flow proportionate sample. Ecology's Construction Stormwater Monitoring Manual provides guidance on representative sampling.

Sanitary sewer means a sewer which is designed to convey domestic wastewater.

Sediment means the fragmented material that originates from the weathering and erosion of rocks or unconsolidated deposits, and is transported by, suspended in, or deposited by water.

Sedimentation means the depositing or formation of sediment.

Sensitive area means a water body, wetland, stream, aquifer recharge area, or channel migration zone.

SEPA (State Environmental Policy Act) means the Washington State Law, RCW 43.21C.020, intended to prevent or eliminate damage to the environment.

Significant Amount means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a

reasonable potential to cause a violation of surface or ground water quality or sediment management standards.

Significant concrete work means greater than 1000 cubic yards poured concrete or recycled concrete over the life of a project.

Significant Contributor of Pollutants means a facility determined by Ecology to be a contributor of a significant amount(s) of a pollutant(s) to waters of the State of Washington.

Site means the land or water area where any "facility or activity" is physically located or conducted.

Source control BMPs means physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. A few examples of source control BMPs are erosion control practices, maintenance of stormwater facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead end sump.

Stabilization means the application of appropriate BMPs to prevent the erosion of soils, such as, temporary and permanent seeding, vegetative covers, mulching and matting, plastic covering and sodding. See also the definition of Erosion and Sediment Control BMPs.

Storm drain means any drain which drains directly into a storm sewer system, usually found along roadways or in parking lots.

Storm sewer system means a means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains designed or used for collecting or conveying stormwater. This does not include systems which are part of a combined sewer or Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Stormwater means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Stormwater Management Manual (SWMM) or Manual means the technical Manual published by Ecology for use by local governments that contain descriptions of and design criteria for BMPs to prevent, control, or treat pollutants in stormwater.

Stormwater Pollution Prevention Plan (SWPPP) means a documented plan to implement measures to identify, prevent, and control the contamination of point source discharges of stormwater.

Surface Waters of the State includes lakes, rivers, ponds, streams, inland waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Temporary Stabilization means the exposed ground surface has been covered with appropriate materials to provide temporary stabilization of the surface from water or wind erosion. Materials include, but are not limited to, mulch, riprap, erosion control mats or blankets and temporary cover crops. Seeding alone is not considered stabilization. Temporary stabilization is not a substitute for the more permanent "final stabilization."

Total Maximum Daily Load (TMDL) means a calculation of the maximum amount of a pollutant that a water body can receive and still meet state water quality standards. Percentages of the total maximum daily load are allocated to the various pollutant sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDL calculations must include a "margin of safety" to ensure that the water body can be protected in case there are unforeseen events or unknown sources of the pollutant. The calculation must also account for seasonable variation in water quality.

Treatment BMPs means BMPs that are intended to remove pollutants from stormwater. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

Transparency means a measurement of water clarity in centimeters (cm), using a 60 cm transparency tube. The transparency tube is used to estimate the relative clarity or transparency of water by noting the depth at which a black and white Secchi disc becomes visible when water is released from a value in the bottom of the tube. A transparency tube is sometimes referred to as a "turbidity tube."

Turbidity means the clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

Uncontaminated means free from any contaminant, as defined in MTCA cleanup regulations. See definition of "contaminant" and WAC 173-340-200.

Waste Load Allocation (WLA) means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality based effluent limitation (40 CFR 130.2[h]).

Water quality means the chemical, physical, and biological characteristics of water, usually with respect to its suitability for a particular purpose.

Waters of the State includes those waters as defined as "waters of the United States" in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and "waters of the State" as defined in Chapter 90.48 RCW, which include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

Well means a bored, drilled or driven shaft, or dug hole whose depth is greater than the largest surface dimension. (See Injection well.)



Wheel wash wastewater means any water used in, or resulting from the operation of, a tire bath or wheel wash (BMP C106: Wheel Wash), or other structure or practice that uses water to physically remove mud and debris from vehicles leaving a construction site and prevent track-out onto roads. When stormwater combines with wheel wash wastewater, the resulting water is considered wheel wash wastewater and must be managed according to Special Condition S9.D.9.

## APPENDIX B – ACRONYMS

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CESCL	Certified Erosion and Sediment Control Lead
CFR	Code of Federal Regulations
CKD	Cement Kiln Dust
cm	Centimeters
CTB	Cement-Treated Base
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
ESC	Erosion and Sediment Control
FR	Federal Register
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
SWMM	Stormwater Management Manual
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
USC	United States Code
USEPA	United States Environmental Protection Agency
WAC	Washington Administrative Code
WQ	Water Quality
WWHM	Western Washington Hydrology Model

**SR 162**  
**Puyallup River Bridge**  
**Bridge Replacement**

**APPENDIX F**

**HYDRAULIC PROJECT APPROVAL (HPA)**  
**PERMIT NO. 2014-6-300+01**





## HYDRAULIC PROJECT APPROVAL

Washington Department of  
Fish & Wildlife  
PO Box 43234  
Olympia, WA 98504-3234  
(360) 902-2200

Issued Date: October 24, 2014

Project End Date: September 15, 2018

Permit Number: 2014-6-300+01

FPA/Public Notice Number: N/A

Application ID: 1330

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
WA State DOT ATTENTION: Jeff Sawyer PO Box 47440 Olympia, WA 98504-4770	

**Project Name:** SR 162 Puyallup River Bridge- Bridge Replacement

**Project Description:** This project proposes to replace the existing bridge over the Puyallup River on SR 162 between Sumner and Orting in Pierce County. The project limits are MP 6.62 to MP 7.10. The new bridge will be constructed to the east of the existing bridge and a portion of SR 162 will be realigned to tie in with the new bridge. See JARPA

### PROVISIONS

#### PLANS

1. Work shall be accomplished per plans and specifications approved by the Washington Department of Fish and Wildlife entitled "SR 162 Puyallup River Bridge - Bridge Replacement" and dated August 25, 2014, as well as the landscaping and wood placement details, except as modified by this Hydraulic Project Approval. A copy of these plans shall be available on site during construction.
2. Work below the ordinary high water line shall only occur between July 16 and September 15 for calendar years 2015 to 2018.

#### NEW BRIDGE

3. Excavation for and placement of the foundation and superstructure shall be outside the ordinary high water line.
4. The bridge structure shall be placed in a manner to minimize damage to the streambed and banks.
5. The bridge shall be constructed to pass the 100-year peak flow with consideration of debris likely to be encountered.
6. Abutments, piers, piling, sills, approach fills, etc., shall not constrict the flow and cause any appreciable increase (not to exceed 0.2 feet) in backwater elevation (calculated at the 100-year flood) or channel-wide scour, and shall be aligned to cause the least effect on the hydraulics of the river.
7. Structures containing concrete shall be sufficiently cured prior to contact with water to avoid leaching. Fresh concrete shall not be allowed to come into contact with state waters.
8. Approach material shall be structurally stable and shall be composed of material that if eroded into the water shall not be detrimental to fish life.

#### EQUIPMENT

9. Equipment used for this project shall be free of external petroleum-based products while working around the river. Accumulation of soils or debris shall be removed from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to its working below or over the ordinary high water line. Equipment shall be checked daily for leaks and any necessary repairs shall be completed prior to commencing work activities along the river.
10. All equipment used on this site that will come in contact with waters of the state, including excavator, barge deck,



## HYDRAULIC PROJECT APPROVAL

Washington Department of  
Fish & Wildlife  
PO Box 43234  
Olympia, WA 98504-3234  
(360) 902-2200

Issued Date: October 24, 2014

Project End Date: September 15, 2018

Permit Number: 2014-6-300+01

FPA/Public Notice Number: N/A

Application ID: 1330

and hand tools, shall be thoroughly cleaned before arriving at the site. All equipment that came in contact with water of the state shall also be cleaned after leaving the site and before moving to a new construction site. All water and chemicals used to clean equipment should be properly disposed of to prevent the spread of invasive species.

11. Biodegradable hydraulic fluid shall be used in all equipment within and over OHW.

### FISH AND WATER QUALITY

12. If at any time, as a result of project activities, fish are observed in distress, a fish kill occurs, or water quality problems develop (including equipment leaks or spills), immediate notification shall be made to the Washington Military Department's Emergency Management Division at 1-800-258-5990, and to the Area Habitat Biologist listed below.

13. Every effort shall be taken during all phases of this project to ensure that sediment-laden water is not allowed to enter the river.

14. Extreme care shall be taken to ensure that no petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the river.

15. Fresh concrete or concrete by-products shall not be allowed to enter the river at any time during this project. All forms used for concrete shall be completely sealed to prevent the possibility of fresh concrete from getting into the river.

### MITIGATION

16. At least five (5) trees removed from the riparian area and/or floodplain shall be used as large wood (root balls attached if possible) immediately downstream of the project to insure no-net-loss of habitat function.

### REVEGETATION

17. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to construct the project. Within seven calendar days of project completion, all disturbed areas shall be protected from erosion using vegetation or other means. Within one year of project completion, the banks, shall be revegetated with native or other approved woody species. Vegetative cuttings shall be planted at a maximum interval of three feet (on center) and maintained as necessary for three years to ensure 80 percent survival.

LOCATION #1:	Site Name: State Route 162, Mile Post (MP) 6.62 to MP 7.10 Puyallup, WA 98374					
WORK START:	July 16, 2015			WORK END:	September 15, 2018	
WRIA	Waterbody:			Tributary to:		
10 - Puyallup - White	Puyallup River			Puyallup River		
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
SE 1/4	13	19 N	04 E	47.129752	-122.235917	Pierce
Location #1 Driving Directions						



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### APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in a civil penalty of up to one hundred dollars per day and/or a gross misdemeanor charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

**MINOR MODIFICATIONS TO THIS HPA:** You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA. A minor modification to the required work timing means up to a one-week deviation from the timing window in the HPA when there are no spawning or incubating fish present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. Minor modifications do not require you to pay additional application fees or be issued a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at <http://wdfw.wa.gov/licensing/hpa/>. If you do not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Include the HPA number and a description of the requested change and send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to [HPAapplications@dfw.wa.gov](mailto:HPAapplications@dfw.wa.gov). Do not include payment with your request. You should allow up to 45 days for the department to process your request.



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FPA/Public Notice Number: N/A

Application ID: 1330

**MAJOR MODIFICATIONS TO THIS HPA:** You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you paid an application fee for your original HPA you must pay an additional \$150 for the major modification. If you did not pay an application fee for the original HPA, no fee is required for a change to it. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at <http://wdfw.wa.gov/licensing/hpa/>. If you do not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Include the HPA number, check, and a description of the requested change. Send your written request and payment, if applicable, by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You should allow up to 45 days for the department to process your request.

### APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

**A. INFORMAL APPEALS:** WAC 220-110-340 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the Washington Department of Fish and Wildlife HPA Appeals Coordinator, 600 Capitol Way North, Olympia, Washington 98501-1091; e-mail to [HPAapplications@dfw.wa.gov](mailto:HPAapplications@dfw.wa.gov); fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee will conduct an informal hearing and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

**B. FORMAL APPEALS:** WAC 220-110-350 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.





## HYDRAULIC PROJECT APPROVAL

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Fish & Wildlife  
PO Box 43234  
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Project End Date: September 15, 2018

Permit Number: 2014-6-300+01  
FPA/Public Notice Number: N/A  
Application ID: 1330

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the Washington Department of Fish and Wildlife HPA Appeals Coordinator, 600 Capitol Way North, Olympia, Washington 98501-1091; e-mail to [HPAapplications@dfw.wa.gov](mailto:HPAapplications@dfw.wa.gov); fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

**C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS:** If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist      Douglas.Wiedemeier@dfw.wa.gov  
Doug Wiedemeier      360-902-2526

 for Director  
WDFW



**SR 162  
Puyallup River Bridge  
Bridge Replacement**

**APPENDIX G**

**PIERCE COUNTY SHORELINE  
PERMIT NO. SD25-09**



WAC 173-27 [ 27 ]  
Ecology Edition  
WAC 173-27-990 Appendix A

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MAY 26 2010

WA State Department  
of Ecology (SWRO)

**Shoreline Management Act  
Permit Data Sheet and Transmittal Letter**

From: Pierce County  
Planning and Land Services  
2401 South 35<sup>th</sup> Street  
Tacoma, WA 98409

To: Shoreline Permit Review  
Department of Ecology  
PO Box 47775  
Olympia, WA 98504-7775

Date of Transmittal: 05-25-2010

Date of Receipt: \_\_\_\_\_

Type of Permit: (Indicate all that apply)

Substantial Development X; Conditional Use \_\_\_\_; Variance \_\_\_\_; Revision \_\_\_\_; Other \_\_\_\_

Local Government Decision: Approval \_\_\_\_; Conditional Approval X; Denial \_\_\_\_

Applicant information:

Applicant's Representative:

Washington State Dept. of Transportation  
Attn: Jeff Sawyer,  
Environmental and Hydraulic Manager  
P.O. Box 47417  
Olympia, WA 98504-7417

Washington State Dept. of Transportation  
Attn: Randy Neff, Environmental Planner  
P.O. Box 47417  
Olympia, WA 98504-7417

Pierce County Parks Department  
9112 Lakewood Drive S.W.  
Lakewood, WA 98499-5925

Mary Weatherly  
13923 State Route 162 East  
Orting, WA 98360-9501

Are the applicants the property owner? Yes X No \_\_\_\_

Location of the Property: (Section Township and Range to the nearest ¼, ¼ Section or latitude and longitude, and a street address where available)

Specifically at State Route 162, Mile Post (MP) 6.63 to MP 7.06., in Sec. 13, T19N, R4E, W.M.

Water Body Name: Puyallup River

Shoreline of Statewide Significance: Yes X No \_\_\_\_

Environmental Designation: Rural Shoreline Environment

Description of the Project: (Summary of the intended use of project purpose)

To construct a new bridge #162/006 also known as the McMillin Bridge and to realign a portion of SR 162 to tie in with the new bridge. The project limits are MP 6.63 to MP 7.06 in Pierce County.

Notice of Application Date: 10-07-2009

Final Decision Date: 05-24-2010

By: Robert E. Jenkins, Senior Planner

Phone: (253)798-7016

(Local government primary contact on this application)

[Statutory Authority: RCW 90.58.140(3) and [90.58].200. 96-20-075 (order 95-17), § 173-27-990, filed 9/30/96, effective 10/31/96.]

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WA State Department  
of Ecology (SWRO)

The following master program provisions are applicable to this development:

**Shoreline Master Program**

**Rural Residential Shoreline Environment**

Definition and Purpose

General Regulations and Policies

Preferred Uses

Roads and Railroads

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WA State Department  
of Ecology (SWRO)

Development pursuant to this permit shall be undertaken pursuant to the following terms and conditions:

1. Completion or substantial progress toward completion of this project shall occur within two years of the effective date of the approval, or the approval shall become null and void per Section 20.76.330 of the Shoreline Use Regulations.
2. The applicant shall be required to obtain permits from all agencies with jurisdictions including, but not limited to, U.S. Army Corps of Engineers, the Washington State Departments of Ecology, Fish and Wildlife, and Natural Resources, the Pierce County Fire Prevention Bureau, Pierce County Building Division, and Tacoma-Pierce County Health Department. It shall be the applicant's responsibility to secure any required permits.
3. The applicant must comply with all other local, state, and federal regulations, and obtain relevant permits. It is the sole responsibility of the applicant to contact the other jurisdictions and secure any and all other permits required for this proposed project.
4. Any lighting shall be targeted to the roadway and not unduly contribute to light pollution in this rural area.
5. Any noise reduction measures associated with the bridge and realigned roadway shall utilize natural, native plants to the maximum extent allowed. The applicant shall consult with Pierce County Planning and Land Services during the decision-making process regarding noise reduction measures.
6. No contractor staging areas shall be allowed within 200 feet of the Puyallup River.
7. Salmonid impacts will be minimized by obtaining a WDFW HPA and implementing all provisions including an in-water work window, which is expected to be July 15 to August 31.
8. Volitional fish relocation will occur. If more intense fish relocation efforts are required, the WSDOT Fish Handling Protocol will be adhered to.

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WA State Department  
of Ecology (SWRO)

9. In-water construction will take place when the stream flows and the dewatered area are low, possibly dry and listed fish are less likely to be present.
10. All instream depressions remaining on the gravel bar after removal of the temporary containment structure footings will be regraded to prevent fish entrapment.
11. No piers will be placed below the OHWL.
12. If there is a change in species status, or are any changes to the project that may impact listed species, consultation will be reinitiated.
13. Disturbance of the streambed and banks shall be limited to that necessary to dismantle the existing bridge and install the new bridge.
14. Approach material shall be structurally stable and composed of material that, if eroded into the stream, shall not be detrimental to fish life.
15. Standard erosion control and spill control BMPs will be fully implemented.
16. There will be no staging areas within wetlands.
17. Vegetated areas that are impacted during construction will be re-vegetated after construction is complete.
18. The decision set forth herein is based upon representations made and exhibits, including plans and proposals submitted at the hearing conducted by the hearing examiner. Any substantial change(s) or deviation(s) in such plans, proposals, or conditions of approval imposed shall be subject to the approval of the hearing examiner and may require further and additional hearings.
19. The authorization granted herein is subject to all applicable federal, state, and local laws, regulations, and ordinances. Compliance with such laws, regulations, and ordinances is a condition precedent to the approvals granted and is a continuing requirement of such approvals. By accepting this/these approvals, the applicant represents that the development and activities allowed will comply with such laws, regulations, and ordinances. If, during the term of the approval granted, the development and activities permitted do not comply with such laws, regulations, or ordinances, the applicant agrees to promptly bring such development or activities into compliance.



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MAY 25 2010


WA State Department of Ecology (SWRO)

This permit is granted to the Shoreline Management Act of 1971 and nothing in this permit shall excuse the applicant from compliance with any other federal, state, or local ordinances, or regulations applicable to this project, but not inconsistent with the Shoreline Management Act (Chapter 90.58 RCW):

This permit may be rescinded pursuant to RCW 90.58.140(7) in the event the permittee fails to comply with the terms of conditions hereof.

CONSTRUCTION PURSUANT TO THIS PERMIT WILL NOT BEGIN OR IS NOT AUTHORIZED UNTIL THIRTY (30) DAYS FROM THE DATE OF FILING ORDER OF THE LOCAL GOVERNMENT WITH THE REGIONAL OFFICE OF THE DEPARTMENT OF ECOLOGY AND THE ATTORNEY GENERAL, OR UNTIL ALL REVIEW PROCEEDINGS INITIATED WITHIN THIRTY DAYS FROM THE DATE OF SUCH FILING HAVE TERMINATED.

May 25, 2010  
Date

  
Signature of Authorized Local Government Official

THIS SECTION FOR DEPARTMENT OF ECOLOGY USE ONLY IN REGARD TO A SUBSTANTIAL DEVELOPMENT PERMIT WITH A CONDITIONAL USE OR VARIANCE.

Date received by Department of Ecology \_\_\_\_\_

Approved \_\_\_\_\_ Denied \_\_\_\_\_

This substantial development permit with conditional use/variance is approved by the Department of Ecology pursuant to Chapter 90.58 RCW. Development shall be undertaken pursuant to the following additional terms and conditions:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Authorized Department of Ecology Official

State of Washington  
Department of Labor & Industries  
Prevailing Wage Section - Telephone 360-902-5335  
PO Box 44540, Olympia, WA 98504-4540

### Washington State Prevailing Wage

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.

#### Journey Level Prevailing Wage Rates for the Effective Date: 12/3/2014

County	Trade	Job Classification	Wage	Holiday	Overtime	Note
Pierce	Asbestos Abatement Workers	Journey Level	\$42.67	5D	1H	
Pierce	Boilermakers	Journey Level	\$64.44	5N	1C	
Pierce	Brick Mason	Brick And Block Finisher	\$44.46	5A	1M	
Pierce	Brick Mason	Journey Level	\$51.32	5A	1M	
Pierce	Brick Mason	Pointer-Caulker-Cleaner	\$51.32	5A	1M	
Pierce	Building Service Employees	Janitor	\$9.37		1	
Pierce	Building Service Employees	Shampooer	\$10.08		1	
Pierce	Building Service Employees	Waxer	\$10.08		1	
Pierce	Building Service Employees	Window Cleaner	\$13.22		1	
Pierce	Cabinet Makers (In Shop)	Journey Level	\$28.36		1	
Pierce	Carpenters	Acoustical Worker	\$52.32	5D	4C	
Pierce	Carpenters	Bridge, Dock And Wharf Carpenters	\$52.32	5D	4C	
Pierce	Carpenters	Carpenter	\$52.32	5D	4C	
Pierce	Carpenters	Carpenters on Stationary Tools	\$52.45	5D	4C	
Pierce	Carpenters	Creosoted Material	\$52.42	5D	4C	
Pierce	Carpenters	Floor Finisher	\$52.32	5D	4C	
Pierce	Carpenters	Floor Layer	\$52.32	5D	4C	
Pierce	Carpenters	Scaffold Erector	\$52.32	5D	4C	
Pierce	Cement Masons	Journey Level	\$52.38	7A	1M	
Pierce	Divers & Tenders	Diver	\$105.37	5D	4C	8A
Pierce	Divers & Tenders	Diver On Standby	\$59.50	5D	4C	
Pierce	Divers & Tenders	Diver Tender	\$54.82	5D	4C	
Pierce	Divers & Tenders	Surface Rcv & Rov Operator	\$54.82	5D	4C	
Pierce	Divers & Tenders	Surface Rcv & Rov Operator Tender	\$51.07	5A	4C	
Pierce	Dredge Workers	Assistant Engineer	\$53.00	5D	3F	
Pierce	Dredge Workers	Assistant Mate (Deckhand)	\$52.58	5D	3F	
Pierce	Dredge Workers	Boatmen	\$52.30	5D	3F	
Pierce	Dredge Workers	Engineer Welder	\$54.04	5D	3F	

Pierce	<u>Dredge Workers</u>	Leverman, Hydraulic	\$55.17	<u>5D</u>	<u>3F</u>	
Pierce	<u>Dredge Workers</u>	Mates	\$52.30	<u>5D</u>	<u>3F</u>	
Pierce	<u>Dredge Workers</u>	Oiler	\$52.58	<u>5D</u>	<u>3F</u>	
Pierce	<u>Drywall Applicator</u>	Journey Level	\$52.32	<u>5D</u>	<u>1H</u>	
Pierce	<u>Drywall Tapers</u>	Journey Level	\$52.37	<u>5P</u>	<u>1E</u>	
Pierce	<u>Electrical Fixture Maintenance Workers</u>	Journey Level	\$17.76		<u>1</u>	
Pierce	<u>Electricians - Inside</u>	Cable Splicer	\$61.96	<u>5C</u>	<u>1G</u>	
Pierce	<u>Electricians - Inside</u>	Journey Level	\$58.35	<u>5C</u>	<u>1G</u>	
Pierce	<u>Electricians - Inside</u>	Lead Covered Cable Splicer	\$65.56	<u>5C</u>	<u>1G</u>	
Pierce	<u>Electricians - Inside</u>	Welder	\$61.96	<u>5C</u>	<u>1G</u>	
Pierce	<u>Electricians - Motor Shop</u>	Craftsman	\$15.37		<u>1</u>	
Pierce	<u>Electricians - Motor Shop</u>	Journey Level	\$14.69		<u>1</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Cable Splicer	\$68.33	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Certified Line Welder	\$62.50	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Groundperson	\$42.56	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Heavy Line Equipment Operator	\$62.50	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Journey Level Lineperson	\$62.50	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Line Equipment Operator	\$52.47	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Pole Sprayer	\$62.50	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electricians - Powerline Construction</u>	Powderperson	\$46.55	<u>5A</u>	<u>4A</u>	
Pierce	<u>Electronic Technicians</u>	Journey Level	\$32.39		<u>1</u>	
Pierce	<u>Elevator Constructors</u>	Mechanic	\$80.14	<u>7D</u>	<u>4A</u>	
Pierce	<u>Elevator Constructors</u>	Mechanic In Charge	\$86.77	<u>7D</u>	<u>4A</u>	
Pierce	<u>Fabricated Precast Concrete Products</u>	Journey Level - In-Factory Work Only	\$9.32		<u>1</u>	
Pierce	<u>Fence Erectors</u>	Fence Erector	\$22.56		<u>1</u>	
Pierce	<u>Flaggers</u>	Journey Level	\$36.17	<u>7A</u>	<u>3I</u>	
Pierce	<u>Glaziers</u>	Journey Level	\$54.91	<u>7L</u>	<u>1Y</u>	
Pierce	<u>Heat &amp; Frost Insulators And Asbestos Workers</u>	Journeyman	\$60.93	<u>5J</u>	<u>1S</u>	
Pierce	<u>Heating Equipment Mechanics</u>	Journey Level	\$70.37	<u>7F</u>	<u>1E</u>	
Pierce	<u>Hod Carriers &amp; Mason Tenders</u>	Journey Level	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Industrial Power Vacuum Cleaner</u>	Journey Level	\$9.32		<u>1</u>	
Pierce	<u>Inland Boatmen</u>	Boat Operator	\$54.57	<u>5B</u>	<u>1K</u>	
Pierce	<u>Inland Boatmen</u>	Cook	\$50.95	<u>5B</u>	<u>1K</u>	
Pierce	<u>Inland Boatmen</u>	Deckhand	\$51.19	<u>5B</u>	<u>1K</u>	
Pierce	<u>Inland Boatmen</u>	Deckhand Engineer	\$52.18	<u>5B</u>	<u>1K</u>	
Pierce	<u>Inland Boatmen</u>	Launch Operator	\$53.40	<u>5B</u>	<u>1K</u>	

Pierce	<u>Inland Boatmen</u>	Mate	\$53.40	<u>5B</u>	<u>1K</u>	
Pierce	<u>Inspection/Cleaning/Sealing Of Sewer &amp; Water Systems By Remote Control</u>	Cleaner Operator, Foamer Operator	\$9.73		<u>1</u>	
Pierce	<u>Inspection/Cleaning/Sealing Of Sewer &amp; Water Systems By Remote Control</u>	Grout Truck Operator	\$11.48		<u>1</u>	
Pierce	<u>Inspection/Cleaning/Sealing Of Sewer &amp; Water Systems By Remote Control</u>	Head Operator	\$12.78		<u>1</u>	
Pierce	<u>Inspection/Cleaning/Sealing Of Sewer &amp; Water Systems By Remote Control</u>	Technician	\$9.32		<u>1</u>	
Pierce	<u>Inspection/Cleaning/Sealing Of Sewer &amp; Water Systems By Remote Control</u>	Tv Truck Operator	\$10.53		<u>1</u>	
Pierce	<u>Insulation Applicators</u>	Journey Level	\$52.32	<u>5D</u>	<u>4C</u>	
Pierce	<u>Ironworkers</u>	Journeyman	\$61.62	<u>7N</u>	<u>10</u>	
Pierce	<u>Laborers</u>	Air, Gas Or Electric Vibrating Screed	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Airtrac Drill Operator	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Ballast Regular Machine	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Batch Weighman	\$36.17	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Brick Pavers	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Brush Cutter	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Brush Hog Feeder	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Burner	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Caisson Worker	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Carpenter Tender	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Caulker	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Cement Dumper-paving	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Cement Finisher Tender	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Change House Or Dry Shack	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Chipping Gun (under 30 Lbs.)	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Chipping Gun(30 Lbs. And Over)	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Choker Setter	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Chuck Tender	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Clary Power Spreader	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Clean-up Laborer	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Concrete Dumper/chute Operator	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Concrete Form Stripper	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Concrete Placement Crew	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Concrete Saw Operator/core Driller	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Crusher Feeder	\$36.17	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Curing Laborer	\$42.67	<u>7A</u>	<u>3I</u>	

Pierce	<u>Laborers</u>	Demolition: Wrecking & Moving (incl. Charred Material)	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Ditch Digger	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Diver	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Drill Operator (hydraulic,diamond)	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Dry Stack Walls	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Dump Person	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Epoxy Technician	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Erosion Control Worker	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Faller & Bucker Chain Saw	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Fine Graders	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Firewatch	\$36.17	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Form Setter	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Gabian Basket Builders	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	General Laborer	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Grade Checker & Transit Person	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Grinders	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Grout Machine Tender	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Groutmen (pressure)including Post Tension Beams	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Guardrail Erector	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Hazardous Waste Worker (level A)	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Hazardous Waste Worker (level B)	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Hazardous Waste Worker (level C)	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	High Scaler	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Jackhammer	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Laserbeam Operator	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Maintenance Person	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Manhole Builder-mudman	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Material Yard Person	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Motorman-dinky Locomotive	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Nozzleman (concrete Pump, Green Cutter When Using Combination Of High Pressure Air & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Bla	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Pavement Breaker	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Pilot Car	\$36.17	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Pipe Layer Lead	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Pipe Layer/tailor	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Pipe Pot Tender	\$43.46	<u>7A</u>	<u>3I</u>	

Pierce	<u>Laborers</u>	Pipe Reliner	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Pipe Wrapper	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Pot Tender	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Powderman	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Powderman's Helper	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Power Jacks	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Railroad Spike Puller - Power	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Raker - Asphalt	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Re-timberman	\$44.00	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Remote Equipment Operator	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Rigger/signal Person	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Rip Rap Person	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Rivet Buster	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Rodder	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Scaffold Erector	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Scale Person	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Sloper (over 20")	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Sloper Sprayer	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Spreader (concrete)	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Stake Hopper	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Stock Piler	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Tamper & Similar Electric, Air & Gas Operated Tools	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Tamper (multiple & Self-propelled)	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Timber Person - Sewer (lagger, Shorer & Cribber)	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Toolroom Person (at Jobsite)	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Topper	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Track Laborer	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Track Liner (power)	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Traffic Control Laborer	\$38.68	<u>7A</u>	<u>3I</u>	<u>8R</u>
Pierce	<u>Laborers</u>	Traffic Control Supervisor	\$38.68	<u>7A</u>	<u>3I</u>	<u>8R</u>
Pierce	<u>Laborers</u>	Truck Spotter	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Tugger Operator	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 0-30 psi	\$64.99	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$70.02	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$73.70	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$79.40	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$81.52	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$86.62	<u>7A</u>	<u>3I</u>	<u>8Q</u>

Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$88.52	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$90.52	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$92.52	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Guage and Lock Tender	\$44.10	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Tunnel Work-Miner	\$44.10	<u>7A</u>	<u>3I</u>	<u>8Q</u>
Pierce	<u>Laborers</u>	Vibrator	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Vinyl Seamer	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Watchman	\$32.87	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Welder	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Well Point Laborer	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers</u>	Window Washer/cleaner	\$32.87	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers - Underground Sewer &amp; Water</u>	General Laborer & Topman	\$42.67	<u>7A</u>	<u>3I</u>	
Pierce	<u>Laborers - Underground Sewer &amp; Water</u>	Pipe Layer	\$43.46	<u>7A</u>	<u>3I</u>	
Pierce	<u>Landscape Construction</u>	Irrigation Or Lawn Sprinkler Installers	\$17.07		<u>1</u>	
Pierce	<u>Landscape Construction</u>	Landscape Equipment Operators Or Truck Drivers	\$14.55		<u>1</u>	
Pierce	<u>Landscape Construction</u>	Landscaping Or Planting Laborers	\$17.07		<u>1</u>	
Pierce	<u>Lathers</u>	Journey Level	\$52.32	<u>5D</u>	<u>1H</u>	
Pierce	<u>Marble Setters</u>	Journey Level	\$51.32	<u>5A</u>	<u>1M</u>	
Pierce	<u>Metal Fabrication (In Shop)</u>	Fitter	\$15.25		<u>1</u>	
Pierce	<u>Metal Fabrication (In Shop)</u>	Laborer	\$10.32		<u>1</u>	
Pierce	<u>Metal Fabrication (In Shop)</u>	Machine Operator	\$13.98		<u>1</u>	
Pierce	<u>Metal Fabrication (In Shop)</u>	Welder	\$13.98		<u>1</u>	
Pierce	<u>Millwright</u>	Journey Level	\$53.42	<u>5D</u>	<u>4C</u>	
Pierce	<u>Modular Buildings</u>	Journey Level	\$9.32		<u>1</u>	
Pierce	<u>Painters</u>	Journey Level	\$37.80	<u>6Z</u>	<u>2B</u>	
Pierce	<u>Pile Driver</u>	Journey Level	\$52.57	<u>5D</u>	<u>4C</u>	
Pierce	<u>Plasterers</u>	Journey Level	\$50.42	<u>7Q</u>	<u>1R</u>	
Pierce	<u>Playground &amp; Park Equipment Installers</u>	Journey Level	\$9.73		<u>1</u>	
Pierce	<u>Plumbers &amp; Pipefitters</u>	Journey Level	\$62.57	<u>5A</u>	<u>1G</u>	
Pierce	<u>Power Equipment Operators</u>	Asphalt Plant Operator	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Assistant Engineers	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Barrier Machine (zipper)	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Batch Plant Operator: Concrete	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Bobcat	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Brokk - Remote Demolition Equipment	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Brooms	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>

Pierce	<u>Power Equipment Operators</u>	Bump Cutter	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cableways	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Chipper	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Compressor	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Concrete Pump: Truck Mount With Boom Attachment Over 42m	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Concrete Finish Machine -laser Screed	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Conveyors	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes, 100 Tons - 199 Tons, Or 150 Ft Of Boom (including Jib With Attachments)	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes, 200 Tons To 300 Tons, Or 250 Ft Of Boom (including Jib With Attachments)	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes: 20 Tons Through 44 Tons With Attachments	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes: A-frame - 10 Tons And Under	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes: Friction 100 Tons Through 199 Tons	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes: Friction Over 200 Tons	\$56.92	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes: Over 300 Tons, Or 300' Of Boom (Including Jib With Attachments)	\$56.92	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Crusher	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Deck Engineer /deck Winches (power)	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Derricks, On Building Work	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Dozers D-9 & Under	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Drill Oilers: Auger Type, Truck Or Crane Mount	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Drilling Machine	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Elevator And Man-lift: Permanent And Shaft Type	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>		\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>



		Finishing Machine, Bidwell And Gamaco & Similar Equipment				
Pierce	<u>Power Equipment Operators</u>	Forklift: 3000 Lbs And Over With Attachments	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Forklifts: Under 3000 Lbs. With Attachments	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Grade Engineer: Using Blueprints, Cut Sheets, etc.	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Gradechecker/stakeman	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Guardrail Punch	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Horizontal/directional Drill Locator	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Horizontal/directional Drill Operator	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Hydralifts/Boom Trucks Over 10 Tons	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Hydralifts/boom Trucks, 10 Tons And Under	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Loader, Overhead 8 Yards. & Over	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Loaders, Overhead Under 6 Yards	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Loaders, Plant Feed	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Loaders: Elevating Type Belt	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Locomotives, All	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Material Transfer Device	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Mechanics, All (Leadmen - \$0.50 Per Hour Over Mechanic)	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Motor Patrol Grader - Non-finishng	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Motor Patrol Graders, Finishing	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Outside Hoists (elevators And Manlifts), Air Tuggers, strato	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>		\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>

		Overhead, Bridge Type Crane: 20 Tons Through 44 Tons				
Pierce	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Pavement Breaker	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Posthole Digger, Mechanical	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Power Plant	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Pumps - Water	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Quad 9, HD 41, D10 And Over	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Rigger And Bellman	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Rollagon	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Roller, Other Than Plant Mix	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Roto-mill, Roto-grinder	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Saws - Concrete	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Scrapers - Concrete & Carry All	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Service Engineers - Equipment	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Shotcrete/gunite Equipment	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators	Slipform Pavers	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	Power Equipment Operators		\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>

		Spreader, Toppersider & Screedman				
Pierce	<u>Power Equipment Operators</u>	Subgrader Trimmer	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Tower Bucket Elevators	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Tower Crane Over 175'in Height, Base To Boom	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Tower Crane Up: To 175' In Height, Base To Boom	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Transporters, All Track Or Truck Type	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Trenching Machines	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Truck Crane Oiler/driver - 100 Tons And Over	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Truck Crane Oiler/driver Under 100 Tons	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Truck Mount Portable Conveyor	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Welder	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Wheel Tractors, Farmall Type	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators</u>	Yo Yo Pay Dozer	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Asphalt Plant Operator	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Assistant Engineers	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Barrier Machine (zipper)	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Batch Plant Operator: Concrete	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Bobcat	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Brokk - Remote Demolition Equipment	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Brooms	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Bump Cutter	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Cableways	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Chipper	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Compressor	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Concrete Pump: Truck Mount With Boom Attachment Over 42m	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Concrete Finish Machine -laser Screed	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators-Underground Sewer &amp; Water</u>	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>

Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Conveyors	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes, 100 Tons - 199 Tons, Or 150 Ft Of Boom (including Jib With Attachments)	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes, 200 Tons To 300 Tons, Or 250 Ft Of Boom (including Jib With Attachments)	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes: 20 Tons Through 44 Tons With Attachments	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes: A-frame - 10 Tons And Under	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes: Friction 100 Tons Through 199 Tons	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes: Friction Over 200 Tons	\$56.92	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes: Over 300 Tons, Or 300' Of Boom (Including Jib With Attachments)	\$56.92	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Crusher	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Deck Engineer/deck Winches (power)	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Derricks, On Building Work	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Dozers D-9 & Under	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Drill Oilers: Auger Type, Truck Or Crane Mount	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Drilling Machine	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Elevator And Man-lift: Permanent And Shaft Type	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Forklift: 3000 Lbs And Over With Attachments	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Forklifts: Under 3000 Lbs. With Attachments	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Grade Engineer: Using Blueprints, Cut Sheets,etc.	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>

Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Gradechecker/stakeman	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Guardrail Punch	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Horizontal/directional Drill Locator	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Horizontal/directional Drill Operator	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Hydralifts/Boom Trucks Over 10 Tons	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Hydralifts/boom Trucks, 10 Tons And Under	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Loader, Overhead 8 Yards. & Over	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Loaders, Overhead Under 6 Yards	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Loaders, Plant Feed	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Loaders: Elevating Type Belt	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Locomotives, All	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Material Transfer Device	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Mechanics, All (Leadmen - \$0.50 Per Hour Over Mechanic)	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Motor Patrol Grader - Non- finishing	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Motor Patrol Graders, Finishing	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Outside Hoists (elevators And Manlifts), Air Tuggers, strato	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Overhead, Bridge Type: 100 Tons And Over	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce			\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>

	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Overhead, Bridge Type: 45 Tons Through 99 Tons				
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Pavement Breaker	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Pile Driver (other Than Crane Mount)	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Plant Oiler - Asphalt, Crusher	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Posthole Digger, Mechanical	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Power Plant	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Pumps - Water	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Quad 9, HD 41, D10 And Over	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Rigger And Bellman	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Rollagon	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Roller, Other Than Plant Mix	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Roller, Plant Mix Or Multi-lift Materials	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Roto-mill, Roto-grinder	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Saws - Concrete	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Scraper, Self Propelled Under 45 Yards	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Scrapers - Concrete & Carry All	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Scrapers, Self-propelled: 45 Yards And Over	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Service Engineers - Equipment	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Shotcrete/gunite Equipment	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>

Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Slipform Pavers	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Spreader, Toppersider & Screedman	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Subgrader Trimmer	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Tower Bucket Elevators	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Tower Crane Over 175'in Height, Base To Boom	\$56.36	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Tower Crane: Up To 175' In Height, Base To Boom	\$55.79	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Transporters, All Track Or Truck Type	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Trenching Machines	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Truck Crane Oiler/driver - 100 Tons And Over	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Truck Crane Oiler/driver Under 100 Tons	\$54.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Truck Mount Portable Conveyor	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Welder	\$55.24	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Wheel Tractors, Farmall Type	\$51.97	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Equipment Operators- Underground Sewer &amp; Water</u>	Yo Yo Pay Dozer	\$54.75	<u>7A</u>	<u>3C</u>	<u>8P</u>
Pierce	<u>Power Line Clearance Tree Trimmers</u>	Journey Level In Charge	\$44.86	<u>5A</u>	<u>4A</u>	
Pierce	<u>Power Line Clearance Tree Trimmers</u>	Spray Person	\$42.58	<u>5A</u>	<u>4A</u>	
Pierce	<u>Power Line Clearance Tree Trimmers</u>	Tree Equipment Operator	\$44.86	<u>5A</u>	<u>4A</u>	
Pierce	<u>Power Line Clearance Tree Trimmers</u>	Tree Trimmer	\$40.08	<u>5A</u>	<u>4A</u>	
Pierce	<u>Power Line Clearance Tree Trimmers</u>	Tree Trimmer Groundperson	\$30.20	<u>5A</u>	<u>4A</u>	
Pierce	<u>Refrigeration &amp; Air Conditioning Mechanics</u>	Mechanic	\$63.76	<u>5A</u>	<u>1G</u>	
Pierce	<u>Residential Brick Mason</u>	Journey Level	\$23.77		<u>1</u>	
Pierce	<u>Residential Carpenters</u>	Journey Level	\$40.14	<u>5D</u>	<u>4C</u>	
Pierce	<u>Residential Cement Masons</u>	Journey Level	\$52.38	<u>7A</u>	<u>1M</u>	
Pierce	<u>Residential Drywall Applicators</u>	Journey Level	\$40.14	<u>5D</u>	<u>4C</u>	
Pierce	<u>Residential Drywall Tapers</u>	Journey Level	\$52.37	<u>5P</u>	<u>1E</u>	

Pierce	<u>Residential Electricians</u>	JOURNEY LEVEL	\$29.29		<u>1</u>	
Pierce	<u>Residential Glaziers</u>	Journey Level	\$36.20	<u>7L</u>	<u>1H</u>	
Pierce	<u>Residential Insulation Applicators</u>	Journey Level	\$18.70		<u>1</u>	
Pierce	<u>Residential Laborers</u>	Journey Level	\$20.99		<u>1</u>	
Pierce	<u>Residential Marble Setters</u>	Journey Level	\$22.67		<u>1</u>	
Pierce	<u>Residential Painters</u>	Journey Level	\$26.13		<u>1</u>	
Pierce	<u>Residential Plumbers &amp; Pipefitters</u>	Journey Level	\$44.27	<u>5A</u>	<u>1G</u>	
Pierce	<u>Residential Refrigeration &amp; Air Conditioning Mechanics</u>	Journey Level	\$36.92	<u>5A</u>	<u>1G</u>	
Pierce	<u>Residential Sheet Metal Workers</u>	Journey Level (Field or Shop)	\$42.58	<u>7F</u>	<u>1R</u>	
Pierce	<u>Residential Soft Floor Layers</u>	Journey Level	\$42.41	<u>5A</u>	<u>3D</u>	
Pierce	<u>Residential Sprinkler Fitters (Fire Protection)</u>	Journey Level	\$42.48	<u>5C</u>	<u>2R</u>	
Pierce	<u>Residential Stone Masons</u>	Journey Level	\$22.67		<u>1</u>	
Pierce	<u>Residential Terrazzo Workers</u>	Journey Level	\$9.32		<u>1</u>	
Pierce	<u>Residential Terrazzo/Tile Finishers</u>	Journey Level	\$19.32		<u>1</u>	
Pierce	<u>Residential Tile Setters</u>	Journey Level	\$9.32		<u>1</u>	
Pierce	<u>Roofers</u>	Journey Level	\$44.39	<u>5A</u>	<u>2O</u>	
Pierce	<u>Roofers</u>	Using Irritable Bituminous Materials	\$47.39	<u>5A</u>	<u>2O</u>	
Pierce	<u>Sheet Metal Workers</u>	Journey Level (Field or Shop)	\$70.37	<u>7F</u>	<u>1E</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Boilermaker	\$40.72	<u>7M</u>	<u>1H</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Carpenter	\$33.71	<u>6E</u>	<u>1B</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Electrician	\$33.71	<u>6E</u>	<u>1B</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Heat & Frost Insulator	\$60.93	<u>5J</u>	<u>1S</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Laborer	\$19.10		<u>1</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Machinist	\$33.71	<u>6E</u>	<u>1B</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Operator	\$33.71	<u>6E</u>	<u>1B</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Painter	\$38.74	<u>6A</u>	<u>1R</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Pipefitter	\$33.71	<u>6E</u>	<u>1B</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Rigger	\$15.77		<u>1</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Sandblaster	\$38.74	<u>6A</u>	<u>1R</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	SHEET METAL	\$35.83		<u>1</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Shipfitter	\$33.71	<u>6E</u>	<u>1B</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Trucker	\$15.75		<u>1</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Warehouse	\$13.75		<u>1</u>	
Pierce	<u>Shipbuilding &amp; Ship Repair</u>	Welder/burner	\$33.71	<u>6E</u>	<u>1B</u>	
Pierce	<u>Sign Makers &amp; Installers (Electrical)</u>	Sign Installer	\$26.17		<u>1</u>	
Pierce	<u>Sign Makers &amp; Installers (Electrical)</u>	Sign Maker	\$20.33		<u>1</u>	
Pierce	<u>Sign Makers &amp; Installers (Non-Electrical)</u>	Sign Installer	\$33.43		<u>1</u>	



Pierce	<u>Sign Makers &amp; Installers (Non-Electrical)</u>	Sign Maker	\$22.79		<u>1</u>	
Pierce	<u>Soft Floor Layers</u>	Journey Level	\$42.41	<u>5A</u>	<u>3D</u>	
Pierce	<u>Solar Controls For Windows</u>	Journey Level	\$10.31		<u>1</u>	
Pierce	<u>Sprinkler Fitters (Fire Protection)</u>	Journey Level	\$69.59	<u>5C</u>	<u>1X</u>	
Pierce	<u>Stage Rigging Mechanics (Non Structural)</u>	Journey Level	\$13.23		<u>1</u>	
Pierce	<u>Stone Masons</u>	Journey Level	\$51.32	<u>5A</u>	<u>1M</u>	
Pierce	<u>Street And Parking Lot Sweeper Workers</u>	Journey Level	\$12.06		<u>1</u>	
Pierce	<u>Surveyors</u>	All Classifications	\$35.68	<u>Null</u>	<u>1</u>	
Pierce	<u>Telecommunication Technicians</u>	Journey Level	\$28.29		<u>1</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Cable Splicer	\$36.96	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Hole Digger/Ground Person	\$20.49	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Installer (Repairer)	\$35.40	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Special Aparatus Installer I	\$36.96	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Special Apparatus Installer II	\$36.19	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Telephone Equipment Operator (Heavy)	\$36.96	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Telephone Equipment Operator (Light)	\$34.34	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Telephone Lineperson	\$34.34	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Television Groundperson	\$19.45	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Television Lineperson/Installer	\$25.89	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Television System Technician	\$30.97	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Television Technician	\$27.77	<u>5A</u>	<u>2B</u>	
Pierce	<u>Telephone Line Construction - Outside</u>	Tree Trimmer	\$34.34	<u>5A</u>	<u>2B</u>	
Pierce	<u>Terrazzo Workers</u>	Journey Level	\$46.96	<u>5A</u>	<u>1M</u>	
Pierce	<u>Tile Setters</u>	Journey Level	\$46.96	<u>5A</u>	<u>1M</u>	
Pierce	<u>Tile, Marble &amp; Terrazzo Finishers</u>	Journey Level	\$20.74		<u>1</u>	
Pierce	<u>Traffic Control Stripers</u>	Journey Level	\$43.11	<u>7A</u>	<u>1K</u>	
Pierce	<u>Truck Drivers</u>	Asphalt Mix	\$22.49		<u>1</u>	
Pierce	<u>Truck Drivers</u>	Dump Truck	\$22.56		<u>1</u>	
Pierce	<u>Truck Drivers</u>	Dump Truck And Trailer	\$22.56		<u>1</u>	
Pierce	<u>Truck Drivers</u>	Other Trucks	\$30.20		<u>1</u>	
Pierce	<u>Truck Drivers</u>	Transit Mixer	\$33.17	<u>6I</u>	<u>2H</u>	

Pierce	<u>Well Drillers &amp; Irrigation Pump Installers</u>	Irrigation Pump Installer	\$16.09		<u>1</u>	
Pierce	<u>Well Drillers &amp; Irrigation Pump Installers</u>	Oiler	\$15.39		<u>1</u>	
Pierce	<u>Well Drillers &amp; Irrigation Pump Installers</u>	Well Driller	\$18.30		<u>1</u>	

**Washington State Department of Labor and Industries**  
**Policy Statement**  
**(Regarding the Production of "Standard" or "Non-standard" Items)**

Below is the department's (State L&I's) list of criteria to be used in determining whether a prefabricated item is "standard" or "non-standard". For items not appearing on WSDOT's predetermined list, these criteria shall be used by the Contractor (and the Contractor's subcontractors, agents to subcontractors, suppliers, manufacturers, and fabricators) to determine coverage under RCW 39.12. The production, in the State of Washington, of non-standard items is covered by RCW 39.12, and the production of standard items is not. The production of any item outside the State of Washington is not covered by RCW 39.12.

1. Is the item fabricated for a public works project? If not, it is not subject to RCW 39.12. If it is, go to question 2.
2. Is the item fabricated on the public works jobsite? If it is, the work is covered under RCW 39.12. If not, go to question 3.
3. Is the item fabricated in an assembly/fabrication plant set up for, and dedicated primarily to, the public works project? If it is, the work is covered by RCW 39.12. If not, go to question 4.
4. Does the item require any assembly, cutting, modification or other fabrication by the supplier? If not, the work is not covered by RCW 39.12. If yes, go to question 5.
5. Is the prefabricated item intended for the public works project typically an inventory item which could reasonably be sold on the general market? If not, the work is covered by RCW 39.12. If yes, go to question 6.
6. Does the specific prefabricated item, generally defined as standard, have any unusual characteristics such as shape, type of material, strength requirements, finish, etc? If yes, the work is covered under RCW 39.12.

Any firm with questions regarding the policy, WSDOT's Predetermined List, or for determinations of covered and non-covered workers shall be directed to State L&I at (360) 902-5330.

**WSDOT's  
Predetermined List for  
Suppliers - Manufactures - Fabricator**

Below is a list of potentially prefabricated items, originally furnished by WSDOT to Washington State Department of Labor and Industries, that may be considered non-standard and therefore covered by the prevailing wage law, RCW 39.12. Items marked with an X in the "YES" column should be considered to be non-standard and therefore covered by RCW 39.12. Items marked with an X in the "NO" column should be considered to be standard and therefore not covered. Of course, exceptions to this general list may occur, and in that case shall be evaluated according to the criteria described in State and L&I's policy statement.

ITEM DESCRIPTION	YES	NO
1. Metal rectangular frames, solid metal covers, herringbone grates, and bi-directional vaned grates for Catch Basin Types 1, 1L, 1P, and 2 and Concrete Inlets. See Std. Plans		X
2. Metal circular frames (rings) and covers, circular grates, and prefabricated ladders for Manhole Types 1, 2, and 3, Drywell Types 1, 2, and 3 and Catch Basin Type 2. See Std. Plans		X
3. Prefabricated steel grate supports and welded grates, metal frames and dual vaned grates, and Type 1, 2, and 3 structural tubing grates for Drop Inlets. See Std. Plans.		X
4. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes smaller than 60 inch diameter.		X
5. Concrete Pipe - Plain Concrete pipe and reinforced concrete pipe Class 2 to 5 sizes larger than 60 inch diameter.		X
6. Corrugated Steel Pipe - Steel lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, 1 thru 5.		X
7. Corrugated Aluminum Pipe - Aluminum lock seam corrugated pipe for culverts and storm sewers, sizes 30 inch to 120 inches in diameter. May also be treated, #5.		X

ITEM DESCRIPTION	YES	NO
8. Anchor Bolts & Nuts - Anchor Bolts and Nuts, for mounting sign structures, luminaries and other items, shall be made from commercial bolt stock. See Contract Plans and Std. Plans for size and material type.		X
9. Aluminum Pedestrian Handrail - Pedestrian handrail conforming to the type and material specifications set forth in the contract plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).	X	
10. Major Structural Steel Fabrication - Fabrication of major steel items such as trusses, beams, girders, etc., for bridges.	X	
11. Minor Structural Steel Fabrication - Fabrication of minor steel. Items such as special hangers, brackets, access doors for structures, access ladders for irrigation boxes, bridge expansion joint systems, etc., involving welding, cutting, punching and/or boring of holes. See Contract Plans for item description and shop drawings.	X	
12. Aluminum Bridge Railing Type BP - Metal bridge railing conforming to the type and material specifications set forth in the Contract Plans. Welding of aluminum shall be in accordance with Section 9-28.14(3).		X
13. Concrete Piling--Precast-Prestressed concrete piling for use as 55 and 70 ton concrete piling. Concrete to conform to Section 9-19.1 of Std. Spec..	X	
14. Precast Manhole Types 1, 2, and 3 with cones, adjustment sections and flat top slabs. See Std. Plans.		X
15. Precast Drywell Types 1, 2, and with cones and adjustment Sections. See Std. Plans.		X
16. Precast Catch Basin - Catch Basin type 1, 1L, 1P, and 2 With adjustment sections. See Std. Plans.		X

ITEM DESCRIPTION	YES	NO
17. Precast Concrete Inlet - with adjustment sections, See Std. Plans		X
18. Precast Drop Inlet Type 1 and 2 with metal grate supports. See Std. Plans.		X
19. Precast Grate Inlet Type 2 with extension and top units. See Std. Plans		X
20. Metal frames, vaned grates, and hoods for Combination Inlets. See Std. Plans		X
21. Precast Concrete Utility Vaults - Precast Concrete utility vaults of various sizes. Used for in ground storage of utility facilities and controls. See Contract Plans for size and construction requirements. Shop drawings are to be provided for approval prior to casting		X
22. Vault Risers - For use with Valve Vaults and Utilities Vaults.		X
23. Valve Vault - For use with underground utilities. See Contract Plans for details.		X
24. Precast Concrete Barrier - Precast Concrete Barrier for use as new barrier or may also be used as Temporary Concrete Barrier. Only new state approved barrier may be used as permanent barrier.		X
25. Reinforced Earth Wall Panels – Reinforced Earth Wall Panels in size and shape as shown in the Plans. Fabrication plant has annual approval for methods and materials to be used. See Shop Drawing. Fabrication at other locations may be approved, after facilities inspection, contact HQ. Lab.	X	
26. Precast Concrete Walls - Precast Concrete Walls - tilt-up wall panel in size and shape as shown in Plans. Fabrication plant has annual approval for methods and materials to be used	X	

ITEM DESCRIPTION	YES	NO
27. Precast Railroad Crossings - Concrete Crossing Structure Slabs.	X	
28. 12, 18 and 26 inch Standard Precast Prestressed Girder – Standard Precast Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
29. Prestressed Concrete Girder Series 4-14 - Prestressed Concrete Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
30. Prestressed Tri-Beam Girder - Prestressed Tri-Beam Girders for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
31. Prestressed Precast Hollow-Core Slab – Precast Prestressed Hollow-core slab for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A.	X	
32. Prestressed-Bulb Tee Girder - Bulb Tee Prestressed Girder for use in structures. Fabricator plant has annual approval of methods and materials to be used. Shop Drawing to be provided for approval prior to casting girders. See Std. Spec. Section 6-02.3(25)A	X	
33. Monument Case and Cover See Std. Plan.		X

ITEM DESCRIPTION	YES	NO
34. Cantilever Sign Structure - Cantilever Sign Structure fabricated from steel tubing meeting AASHTO-M-183. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
35. Mono-tube Sign Structures - Mono-tube Sign Bridge fabricated to details shown in the Plans. Shop drawings for approval are required prior to fabrication.	X	
36. Steel Sign Bridges - Steel Sign Bridges fabricated from steel tubing meeting AASHTO-M-138 for Aluminum Alloys. See Std. Plans, and Contract Plans for details. The steel structure shall be galvanized after fabrication in accordance with AASHTO-M-111.	X	
37. Steel Sign Post - Fabricated Steel Sign Posts as detailed in Std Plans. Shop drawings for approval are to be provided prior to fabrication		X
38. Light Standard-Prestressed - Spun, prestressed, hollow concrete poles.	X	
39. Light Standards - Lighting Standards for use on highway illumination systems, poles to be fabricated to conform with methods and materials as specified on Std. Plans. See Special Provisions for pre-approved drawings.	X	
40. Traffic Signal Standards - Traffic Signal Standards for use on highway and/or street signal systems. Standards to be fabricated to conform with methods and material as specified on Std. Plans. See Special Provisions for pre-approved drawings	X	
41. Precast Concrete Sloped Mountable Curb (Single and DualFaced) See Std. Plans.		X



ITEM DESCRIPTION	YES	NO
42. Traffic Signs - Prior to approval of a Fabricator of Traffic Signs, the sources of the following materials must be submitted and approved for reflective sheeting, legend material, and aluminum sheeting. <b>NOTE: *** Fabrication inspection required. Only signs tagged "Fabrication Approved" by WSDOT Sign Fabrication Inspector to be installed</b>	<b>X</b>	<b>X</b>
	Custom Message	Std Signing Message
43. Cutting & bending reinforcing steel		<b>X</b>
44. Guardrail components	<b>X</b>	<b>X</b>
	Custom End Sec	Standard Sec
45. Aggregates/Concrete mixes	Covered by WAC 296-127-018	
46. Asphalt	Covered by WAC 296-127-018	
47. Fiber fabrics		<b>X</b>
48. Electrical wiring/components		<b>X</b>
49. treated or untreated timber pile		<b>X</b>
50. Girder pads (elastomeric bearing)	<b>X</b>	
51. Standard Dimension lumber		<b>X</b>
52. Irrigation components		<b>X</b>

ITEM DESCRIPTION	YES	NO
53. Fencing materials		X
54. Guide Posts		X
55. Traffic Buttons		X
56. Epoxy		X
57. Cribbing		X
58. Water distribution materials		X
59. Steel "H" piles		X
60. Steel pipe for concrete pile casings		X
61. Steel pile tips, standard		X
62. Steel pile tips, custom	X	

Prefabricated items specifically produced for public works projects that are prefabricated in a county other than the county wherein the public works project is to be completed, the wage for the offsite prefabrication shall be the applicable prevailing wage for the county in which the actual prefabrication takes place.

It is the manufacturer of the prefabricated product to verify that the correct county wage rates are applied to work they perform.

See RCW 39.12.010

(The definition of "locality" in RCW 39.12.010(2) contains the phrase "wherein the physical work is being performed." The department interprets this phrase to mean the actual work site.

## **WSDOT's List of State Occupations not applicable to Heavy and Highway Construction Projects**

This project is subject to the state hourly minimum rates for wages and fringe benefits in the contract provisions, as provided by the state Department of Labor and Industries.

The following list of occupations, is comprised of those occupations that are not normally used in the construction of heavy and highway projects.

When considering job classifications for use and / or payment when bidding on, or building heavy and highway construction projects for, or administered by WSDOT, these Occupations will be excepted from the included "Washington State Prevailing Wage Rates For Public Work Contracts" documents.

- Building Service Employees
- Electrical Fixture Maintenance Workers
- Electricians - Motor Shop
- Heating Equipment Mechanics
- Industrial Engine and Machine Mechanics
- Industrial Power Vacuum Cleaners
- Inspection, Cleaning, Sealing of Water Systems by Remote Control
- Laborers - Underground Sewer & Water
- Machinists (Hydroelectric Site Work)
- Modular Buildings
- Playground & Park Equipment Installers
- Power Equipment Operators - Underground Sewer & Water
- Residential \*\*\* ALL ASSOCIATED RATES \*\*\*
- Sign Makers and Installers (Non-Electrical)
- Sign Makers and Installers (Electrical)
- Stage Rigging Mechanics (Non Structural)

The following occupations may be used only as outlined in the preceding text concerning "WSDOT's list for Suppliers - Manufacturers - Fabricators"

- Fabricated Precast Concrete Products
- Metal Fabrication (In Shop)

Definitions for the Scope of Work for prevailing wages may be found at the Washington State Department of Labor and Industries web site and in WAC Chapter 296-127.

**Washington State Department of Labor and Industries**  
**Policy Statements**  
**(Regarding Production and Delivery of Gravel, Concrete, Asphalt, etc.)**

**WAC 296-127-018 Agency filings affecting this section**

**Coverage and exemptions of workers involved in the production and delivery of gravel, concrete, asphalt, or similar materials.**

(1) The materials covered under this section include but are not limited to: Sand, gravel, crushed rock, concrete, asphalt, or other similar materials.

(2) All workers, regardless of by whom employed, are subject to the provisions of chapter 39.12 RCW when they perform any or all of the following functions:

(a) They deliver or discharge any of the above-listed materials to a public works project site:

(i) At one or more point(s) directly upon the location where the material will be incorporated into the project; or

(ii) At multiple points at the project; or

(iii) Adjacent to the location and coordinated with the incorporation of those materials.

(b) They wait at or near a public works project site to perform any tasks subject to this section of the rule.

(c) They remove any materials from a public works construction site pursuant to contract requirements or specifications (e.g., excavated materials, materials from demolished structures, clean-up materials, etc.).

(d) They work in a materials production facility (e.g., batch plant, borrow pit, rock quarry, etc.) which is established for a public works project for the specific, but not necessarily exclusive, purpose of supplying materials for the project.

(e) They deliver concrete to a public works site regardless of the method of incorporation.

(f) They assist or participate in the incorporation of any materials into the public works project.

(3) All travel time that relates to the work covered under subsection (2) of this section requires the payment of prevailing wages. Travel time includes time spent waiting to load, loading, transporting, waiting to unload, and delivering materials. Travel time would include all time spent in travel in support of a public works project whether the vehicle is empty or full. For example, travel time spent returning to a supply source to obtain another load of material for use on a public works site or returning to the public works site to obtain another load of excavated material is time spent in travel that is subject to prevailing wage. Travel to a supply source, including travel from a public works site, to obtain materials for use on a private project would not be travel subject to the prevailing wage.

(4) Workers are not subject to the provisions of chapter 39.12 RCW when they deliver materials to a stockpile.

(a) A "stockpile" is defined as materials delivered to a pile located away from the site of incorporation such that the stockpiled materials must be physically moved from the stockpile and transported to another location on the project site in order to be incorporated into the project.

(b) A stockpile does not include any of the functions described in subsection (2)(a) through (f) of this section; nor does a stockpile include materials delivered or distributed to multiple locations upon the project site; nor does a stockpile include materials dumped at the place of incorporation, or adjacent to the location and coordinated with the incorporation.

(5) The applicable prevailing wage rate shall be determined by the locality in which the work is performed. Workers subject to subsection (2)(d) of this section, who produce such materials at an off-site facility shall be paid the applicable prevailing wage rates for the county in which the off-site facility is located. Workers subject to subsection (2) of this section, who deliver such materials to a public works project site shall be paid the applicable prevailing wage rates for the county in which the public works project is located.

[Statutory Authority: Chapter 39.12 RCW, RCW 43.22.051 and 43.22.270. 08-24-101, § 296-127-018, filed 12/2/08, effective 1/2/09. Statutory Authority: Chapters 39.04 and 39.12 RCW and RCW 43.22.270. 92-01-104 and 92-08-101, § 296-127-018, filed 12/18/91 and 4/1/92, effective 8/31/92.]

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Overtime Codes

Overtime calculations are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

- I. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
  - B. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - C. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - D. The first two (2) hours before or after a five-eight (8) hour workweek day or a four-ten (10) hour workweek day and the first eight (8) hours worked the next day after either workweek shall be paid at one and one-half times the hourly rate of wage. All additional hours worked and all worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - E. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - F. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
  - G. The first ten (10) hours worked on Saturdays and the first ten (10) hours worked on a fifth calendar weekday in a four-ten hour schedule, shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - H. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions or equipment breakdown) shall be paid at one and one-half times the hourly rate of wage. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - I. All hours worked on Sundays and holidays shall also be paid at double the hourly rate of wage.
  - J. The first two (2) hours after eight (8) regular hours Monday through Friday and the first ten (10) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage.
  - K. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
  - M. All hours worked on Saturdays (except makeup days if work is lost due to inclement weather conditions) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

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1. N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
- O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.
- P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
- Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.
- R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.
- S. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays and all other overtime hours worked, except Labor Day, shall be paid at double the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
- U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays (except Labor Day) shall be paid at two times the hourly rate of wage. All hours worked on Labor Day shall be paid at three times the hourly rate of wage.
- V. All hours worked on Sundays and holidays (except Thanksgiving Day and Christmas day) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Thanksgiving Day and Christmas day shall be paid at double the hourly rate of wage.
- W. All hours worked on Saturdays and Sundays (except make-up days due to conditions beyond the control of the employer)) shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
- X. The first four (4) hours after eight (8) regular hours Monday through Friday and the first twelve (12) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked over twelve (12) hours Monday through Saturday, Sundays and holidays shall be paid at double the hourly rate of wage. When holiday falls on Saturday or Sunday, the day before Saturday, Friday, and the day after Sunday, Monday, shall be considered the holiday and all work performed shall be paid at double the hourly rate of wage.
- Y. All hours worked outside the hours of 5:00 am and 5:00 pm (or such other hours as may be agreed upon by any employer and the employee) and all hours worked in excess of eight (8) hours per day (10 hours per day for a 4 x 10 workweek) and on Saturdays and holidays (except labor day) shall be paid at one and one-half times the hourly rate of wage. (except for employees who are absent from work without prior approval on a scheduled workday during the workweek shall be paid at the straight-time rate until they have worked 8 hours in a day (10 in a 4 x 10 workweek) or 40 hours during that workweek.) All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and Labor Day shall be paid at double the hourly rate of wage.
- Z. All hours worked on Saturdays and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid the straight time rate of pay in addition to holiday pay.

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2. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
  - B. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.
  - C. All hours worked on Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at two times the hourly rate of wage.
  - F. The first eight (8) hours worked on holidays shall be paid at the straight hourly rate of wage in addition to the holiday pay. All hours worked in excess of eight (8) hours on holidays shall be paid at double the hourly rate of wage.
  - G. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.
  - H. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on holidays shall be paid at one and one-half times the hourly rate of wage.
  - O. All hours worked on Sundays and holidays shall be paid at one and one-half times the hourly rate of wage.
  - R. All hours worked on Sundays and holidays and all hours worked over sixty (60) in one week shall be paid at double the hourly rate of wage.
  - U. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked over 12 hours in a day or on Sundays and holidays shall be paid at double the hourly rate of wage.
  - W. The first two (2) hours after eight (8) regular hours Monday through Friday and the first eight (8) hours on Saturday shall be paid at one and one-half times the hourly rate of wage. All other hours worked Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage. On a four-day, ten-hour weekly schedule, either Monday thru Thursday or Tuesday thru Friday schedule, all hours worked after ten shall be paid at double the hourly rate of wage. The first eight (8) hours worked on the fifth day shall be paid at one and one-half times the hourly rate of wage. All other hours worked on the fifth, sixth, and seventh days and on holidays shall be paid at double the hourly rate of wage.
3. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
  - A. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at time and one-half the straight time rate. Hours worked over twelve hours (12) in a single shift and all work performed after 6:00 pm Saturday to 6:00 am Monday and holidays shall be paid at double the straight time rate of pay. Any shift starting between the hours of 6:00 pm and midnight shall receive an additional one dollar (\$1.00) per hour for all hours worked that shift. The employer shall have the sole discretion to assign overtime work to employees. Primary consideration for overtime work shall be given to employees regularly assigned to the work to be performed on overtime situations. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.



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3.
  - C. Work performed in excess of eight (8) hours of straight time per day, or ten (10) hours of straight time per day when four ten (10) hour shifts are established, or forty (40) hours of straight time per week, Monday through Friday, or outside the normal shift, and all work on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed after 6:00 pm Saturday to 5:00 am Monday and Holidays shall be paid at double the hourly rate of wage. After an employee has worked eight (8) hours at an applicable overtime rate, all additional hours shall be at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
  - D. All hours worked between the hours of 6:00 pm and 6:00 am, Monday through Saturday, shall be paid at a premium rate of 15% over the hourly rate of wage. All other hours worked after 6:00 am on Saturdays, shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - E. All hours worked Sundays and holidays shall be paid at double the hourly rate of wage. Each week, once 40 hours of straight time work is achieved, then any hours worked over 10 hours per day Monday through Saturday shall be paid at double the hourly wage rate.
  - F. All hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sunday shall be paid at two times the hourly rate of wage. All hours worked on paid holidays shall be paid at two and one-half times the hourly rate of wage including holiday pay.
  - H. All work performed on Sundays between March 16th and October 14th and all Holidays shall be compensated for at two (2) times the regular rate of pay. Work performed on Sundays between October 15th and March 15th shall be compensated at one and one half (1-1/2) times the regular rate of pay.
  - I. All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. In the event the job is down due to weather conditions during a five day work week (Monday through Friday,) or a four day-ten hour work week (Tuesday through Friday,) then Saturday may be worked as a voluntary make-up day at the straight time rate. However, Saturday shall not be utilized as a make-up day when a holiday falls on Friday. All hours worked Monday through Saturday over twelve (12) hours and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
4. ALL HOURS WORKED IN EXCESS OF EIGHT (8) HOURS PER DAY OR FORTY (40) HOURS PER WEEK SHALL BE PAID AT ONE AND ONE-HALF TIMES THE HOURLY RATE OF WAGE.
  - A. All hours worked in excess of eight (8) hours per day or forty (40) hours per week shall be paid at double the hourly rate of wage. All hours worked on Saturdays, Sundays and holidays shall be paid at double the hourly rate of wage.
  - B. All hours worked over twelve (12) hours per day and all hours worked on holidays shall be paid at double the hourly rate of wage.
  - C. On Monday through Friday, the first four (4) hours of overtime after eight (8) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay, unless a four (4) day ten (10) hour workweek has been established. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, the first two (2) hours of overtime after ten (10) hours of straight time work shall be paid at one and one half (1-1/2) times the straight time rate of pay. On Saturday, the first twelve (12) hours of work shall be paid at one and one half (1-1/2) times the straight time rate of pay, except that if the job is down on Monday through Friday due to weather conditions or other conditions outside the control of the employer, the first ten (10) hours on Saturday may be worked at the straight time rate of pay. All hours worked over twelve (12) hours in a day and all hours worked on Sunday and Holidays shall be paid at two (2) times the straight time rate of pay.

**Holiday Codes**

5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).
- B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).
- C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
- D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).
- H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).
- I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
- J. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, Friday after Thanksgiving Day, Christmas Eve Day, And Christmas Day (7).
- K. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9).
- L. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, And Christmas Day (8).
- N. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (9).
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday And Saturday After Thanksgiving Day, The Day Before Christmas, And Christmas Day (9). If A Holiday Falls On Sunday, The Following Monday Shall Be Considered As A Holiday.
- Q. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
- R. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, One-Half Day Before Christmas Day, And Christmas Day. (7 1/2).
- S. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, And Christmas Day (7).
- T. Paid Holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, And The Day Before Or After Christmas (9).
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).

**Holiday Codes Continued**

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6. A. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (8).
- E. Paid Holidays: New Year's Day, Day Before Or After New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day After Thanksgiving Day, Christmas Day, And A Half-Day On Christmas Eve Day. (9 1/2).
- G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, And Christmas Eve Day (11).
- H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).
- I. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, And Christmas Day (7).
- T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).
- Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

**Holiday Codes Continued**

7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday And Saturday After Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

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7. F. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the last working day before Christmas day and Christmas day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- K. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- L. Holidays: New Year's Day, Memorial Day, Labor Day, Independence Day, Thanksgiving Day, the Last Work Day before Christmas Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- M. Paid Holidays: New Year's Day, The Day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, And the Day after or before Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
- N. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. When Christmas falls on a Saturday, the preceding Friday shall be observed as a holiday.
- P. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
- Q. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
- R. Paid Holidays: New Year's Day, the day after or before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and the day after or before Christmas Day (10). If any of the listed holidays fall on Saturday, the preceding Friday shall be observed as the holiday. If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.

Benefit Code Key – Effective 8-31-2014 thru 3-3-2015

7. S. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (9). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
- T. Paid Holidays: New Year's Day, The Day After Or Before New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, Christmas Day, and The Day After Or Before Christmas Day. (10). If any of the listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

Note Codes

8. A. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:  
Over 50' To 100' -\$2.00 per Foot for Each Foot Over 50 Feet  
Over 100' To 150' -\$3.00 per Foot for Each Foot Over 100 Feet  
Over 150' To 220' -\$4.00 per Foot for Each Foot Over 150 Feet  
Over 220' -\$5.00 per Foot for Each Foot Over 220 Feet
- C. In addition to the hourly wage and fringe benefits, the following depth premiums apply to depths of fifty feet or more:  
Over 50' To 100' -\$1.00 per Foot for Each Foot Over 50 Feet  
Over 100' To 150' -\$1.50 per Foot for Each Foot Over 100 Feet  
Over 150' To 200' -\$2.00 per Foot for Each Foot Over 150 Feet  
Over 200' -Divers May Name Their Own Price
- D. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.
- L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$0.75, Level B: \$0.50, And Level C: \$0.25.
- M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: \$1.00, Levels C & D: \$0.50.
- N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$1.00, Level B: \$0.75, Level C: \$0.50, And Level D: \$0.25.
- P. Workers on hazmat projects receive additional hourly premiums as follows -Class A Suit: \$2.00, Class B Suit: \$1.50, Class C Suit: \$1.00, And Class D Suit \$0.50.
- Q. The highest pressure registered on the gauge for an accumulated time of more than fifteen (15) minutes during the shift shall be used in determining the scale paid.
- R. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. These classifications are only effective on or after August 31, 2012.

**Benefit Code Key – Effective 8-31-2014 thru 3-3-2015**

- 8. S. Effective August 31, 2012 – A Traffic Control Supervisor shall be present on the project whenever flagging or spotting or other traffic control labor is being utilized. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.
- T. Effective August 31, 2012 – A Traffic Control Laborer performs the setup, maintenance and removal of all temporary traffic control devices and construction signs necessary to control vehicular, bicycle, and pedestrian traffic during construction operations. Flaggers and Spotters shall be posted where shown on approved Traffic Control Plans or where directed by the Engineer. All flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. This classification is only effective on or after August 31, 2012.

Vendor 755800's Bid Information for Call 006, Letting 12032014, 12/03/14

Selby Bridge Company, Inc. (755800)  
Call Order 006 (Proposal ID 13C521)

County: Pierce  
Address: 2901 SE Hidden Way  
Vancouver, WA 98661  
Phone Number: 360-696-2675  
Signature Check: Joe\_Selby\_755800  
Time Bid Received: ReceiptTime  
Bid Checksum: BD015B45  
Amendment Count: 2  
Bidding Errors: No  
Items Total: 5,482,395.00  
Time Total: 0.00  
Bid Total: 5,482,395.00  
Bond ID:  
Bond was Verified:  
Bond Required Percent: 5.00  
Minimum Check Amount: 274,119.75  
Bid Security Maximum:  
Surety Name:  
Surety State of Incorporation:  
Bond Company:  
Bond Type:  
Bond Appr Flag:  
Bond Affirm:  
Bond was Paid by Check: 1

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Date: 11-04-14

Project Number: 13C521

Bid Opening Date: 12-03-14

Project: PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
Section A1 PREPARATION				
1	0001 MOBILIZATION	1.000 LUMP SUM	520,000.00000	520,000.00
2	0025 CLEARING AND GRUBBING	2.830 ACRE	10,000.00000	28,300.00
3	0050 REMOVAL OF STRUCTURE AND OBSTRUCTION	1.000 LUMP SUM	11,000.00000	11,000.00
4	0252 REMOVING NOISE BARRIER WALL SHAFT OBSTRUCTIONS	1.000 ESTIMATED	15,000.00000	15,000.00
5	0256 REMOVING SHAFT OBSTRUCTIONS	1.000 ESTIMATED	111,000.00000	111,000.00
6	REMOVING ASPHALT AND PORTLAND CEMENT CONC. PAVEMENT	1,230.000 SQ. YD.	21.00000	25,830.00
7	0170 REMOVING GUARDRAIL	300.000 LIN. FT.	5.00000	1,500.00
8	0182 REMOVING GUARDRAIL ANCHOR	4.000 EACH	174.00000	696.00
9	0310 ROADWAY EXCAVATION INCL. HAUL	1,240.000 CU. YD.	23.00000	28,520.00
10	0431 GRAVEL BORROW INCL. HAUL	20,060.000 TON	12.50000	250,750.00



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Project: PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
11	1054 GRATE INLET TYPE 2	4.000 EACH	3,000.00000	12,000.00
12	1086 QUARRY SPALLS	7.000 TON	100.00000	700.00
13	1180 SCHEDULE A CULV. PIPE 12 IN. DIAM.	81.000 LIN. FT.	40.00000	3,240.00
14	1182 SCHEDULE A CULV. PIPE 18 IN. DIAM.	31.000 LIN. FT.	65.00000	2,015.00
15	3151 TESTING STORM SEWER PIPE	149.000 LIN. FT.	5.00000	745.00
16	3482 CL. V REINF. CONC. STORM SEWER PIPE 18 IN. DIAM.	74.000 LIN. FT.	85.00000	6,290.00
17	3541 SCHEDULE A STORM SEWER PIPE 12 IN. DIAM.	95.000 LIN. FT.	40.00000	3,800.00
18	3820 BUTTERFLY VALVE 12 IN.	2.000 EACH	2,500.00000	5,000.00
19	3869 DUCTILE IRON PIPE FOR WATER MAIN 12 IN. DIAM.	1,397.000 LIN. FT.	83.00000	115,951.00
20	HDPE CASING 4 IN. DIAM.	112.000 LIN. FT.	60.00000	6,720.00
21	STEEL CASING 20 IN. DIAM.	215.000 LIN. FT.	140.00000	30,100.00

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Project: PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
22	4006 STRUCTURE EXCAVATION CLASS A INCL. HAUL	502.000 CU. YD.	23.00000	11,546.00
23	4007 SOIL EXCAVATION FOR SHAFT INCLUDING HAUL	1,230.000 CU. YD.	650.00000	799,500.00
24	4013 SHORING OR EXTRA EXCAVATION CL. A BRIDGE NO. 162/6	1.000 LUMP SUM	50,000.00000	50,000.00
25	4020 FURNISHING & PLACING TEMP. CASING FOR 8'-0 DIA. SHAFT	299.000 LIN. FT.	1.00000	299.00
26	4021 FURNISHING & PLACING TEMP. CASING FOR 10'-0 DIA. SHAFT	16.000 LIN. FT.	1.00000	16.00
27	4028 FURNISHING PERMANENT CASING FOR 10'-0 DIAM. SHAFT	12.000 LIN. FT.	335.00000	4,020.00
28	4037 PLACING PERMANENT CASING FOR 10'-0 DIAM. SHAFT	1.000 EACH	5,000.00000	5,000.00
29	4039 CASING SHORING	70.000 LIN. FT.	275.00000	19,250.00
30	4149 ST. REINF. BAR FOR BRIDGE	102,500.000 POUND	1.00000	102,500.00
31	4152 ST. REINF. BAR FOR SHAFT	263,300.000 POUND	1.25000	329,125.00

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Project: PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
32	4164 CSL ACCESS TUBE	4,120.000 LIN. FT.	10.00000	41,200.00
33	4322 CONC. CLASS 4000 FOR BRIDGE	358.000 CU. YD.	400.00000	143,200.00
34	4168 CONC. CLASS 4000P FOR SHAFT	1,230.000 CU. YD.	120.00000	147,600.00
35	4269 PRESTRESSED CONC. GIRDER WF74G	1,570.000 LIN. FT.	450.00000	706,500.00
36	4219 DEFICIENT STRENGTH CONC. PRICE ADJUSTMENT	1.000 CALCULATED	-2.00000	-2.00
37	4300 SUPERSTRUCTURE BRIDGE NO. 162/6 REPLACEMENT	1.000 LUMP SUM	450,000.00000	450,000.00
38	4410 BRIDGE RAILING TYPE BP	658.000 LIN. FT.	60.00000	39,480.00
39	4415 TRAFFIC BARRIER	658.000 LIN. FT.	125.00000	82,250.00
40	4472 NOISE BARRIER WALL TYPE 11 - NOISE WALL 1	3,900.000 SQ. FT.	40.00000	156,000.00
41	4472 NOISE BARRIER WALL TYPE 11 - NOISE WALL 2	2,270.000 SQ. FT.	40.00000	90,800.00
42	5656 BRIDGE APPROACH SLAB	274.000 SQ. YD.	200.00000	54,800.00

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Project: PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
43	5100 CRUSHED SURFACING BASE COURSE	4,330.000 TON	20.00000	86,600.00
44	5120 CRUSHED SURFACING TOP COURSE	30.000 TON	25.00000	750.00
45	5711 PLANING BITUMINOUS PAVEMENT	540.000 SQ. YD.	10.00000	5,400.00
46	5717 HMA FOR PRELEVELING CL. 1/2 IN. PG 64-22	960.000 TON	83.00000	79,680.00
47	5767 HMA CL. 1/2 IN. PG 64-22	2,430.000 TON	83.00000	201,690.00
48	5830 JOB MIX COMPLIANCE PRICE ADJUSTMENT	1.000 CALCULATED	-1.00000	-1.00
49	5835 COMPACTION PRICE ADJUSTMENT	1.000 CALCULATED	4,370.00000	4,370.00
50	5837 ASPHALT COST PRICE ADJUSTMENT	1.000 CALCULATED	13,000.00000	13,000.00
51	5873 HMA FOR APPROACH CL. 1/2 IN. PG 64-22	220.000 TON	92.00000	20,240.00
52	6516 CYCLIC DENSITY PRICE ADJUSTMENT	1.000 CALCULATED	-1.00000	-1.00
53	6403 ESC LEAD	70.000 DAY	50.00000	3,500.00

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Project: PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
54	6453 COMPOST BLANKET	2,060.000 SQ. YD.	2.40000	4,944.00
55	6471 INLET PROTECTION	4.000 EACH	110.00000	440.00
56	6468 STABILIZED CONSTRUCTION ENTRANCE	230.000 SQ. YD.	15.00000	3,450.00
57	6373 SILT FENCE	690.000 LIN. FT.	6.00000	4,140.00
58	6490 EROSION/WATER POLLUTION CONTROL	1.000 ESTIMATED	250,000.00000	250,000.00
59	6414 SEEDING, FERTILIZING, AND MULCHING	2.390 ACRE	4,700.00000	11,233.00
60	6552 PSIPE TALL OREGON-GRAPE 6-12 IN. #1 CONT.	180.000 EACH	7.00000	1,260.00
61	6552 PSIPE NOOTKA ROSE 12-24 IN. #1 CONT.	432.000 EACH	5.00000	2,160.00
62	6552 PSIPE BLACKCAP RASPBERRY 12-24 IN. #1 CONT.	168.000 EACH	7.00000	1,176.00
63	6552 PSIPE THIMBLEBERRY 12-24 IN. #1 CONT.	168.000 EACH	5.00000	840.00
64	6552 PSIPE SNOWBERRY 12-24 IN. #1 CONT.	311.000 EACH	5.00000	1,555.00

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Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
65	FINE COMPOST 2 IN. BLANKET	2.450 ACRE	9,000.00000	22,050.00
66	FINE COMPOST 3 IN. BLANKET	0.230 ACRE	14,400.00000	3,312.00
67	6481 MEDIUM COMPOST	0.010 ACRE	40,000.00000	400.00
68	6581 BARK OR WOOD CHIP MULCH	0.230 ACRE	17,265.00000	3,970.95
69	6460 MOWING	2.410 ACRE	750.00000	1,807.50
70	6635 HIGH VISIBILITY SILT FENCE	1,460.000 LIN. FT.	6.00000	8,760.00
71	FLOW SPREADER	1.000 EACH	400.00000	400.00
72	COMPOST AMENDED VEGETATED FILTER STRIP	184.000 SQ. YD.	44.00000	8,096.00
73	6727 EXTRUDED CURB	248.000 LIN. FT.	12.00000	2,976.00
74	6757 BEAM GUARDRAIL TYPE 31	1,239.000 LIN. FT.	24.00000	29,736.00
75	6760 BEAM GUARDRAIL TRANSITION SECTION TYPE 21	4.000 EACH	2,700.00000	10,800.00

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Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
76	6719 BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL	4.000 EACH	2,300.00000	9,200.00
77	6766 BEAM GUARDRAIL ANCHOR TYPE 10	2.000 EACH	670.00000	1,340.00
78	6781 TEMPORARY CONC. BARRIER	263.000 LIN. FT.	20.00000	5,260.00
79	TEMPORARY GUARDRAIL CONNECTION TYPE 1	1.000 EACH	1,300.00000	1,300.00
80	TEMPORARY GUARDRAIL CONNECTION TYPE A	1.000 EACH	665.00000	665.00
81	7440 TEMPORARY IMPACT ATTENUATOR	1.000 EACH	3,500.00000	3,500.00
82	7445 RESETTING IMPACT ATTENUATOR	1.000 EACH	1,000.00000	1,000.00
83	6832 FLEXIBLE GUIDE POST	24.000 EACH	42.00000	1,008.00
84	6806 PAINT LINE	8,103.000 LIN. FT.	0.35000	2,836.05
85	6833 PLASTIC TRAFFIC ARROW	3.000 EACH	300.00000	900.00
86	6881 PLASTIC DRAINAGE MARKING	12.000 EACH	85.00000	1,020.00

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Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
87	6875 PLASTIC JUNCTION BOX MARKING	2.000 EACH	85.00000	170.00
88	6893 CENTERLINE RUMBLE STRIP	0.390 MILE	4,300.00000	1,677.00
89	6884 RAISED PAVEMENT MARKER TYPE 2	0.080 HUNDRED	3,500.00000	280.00
90	6889 RECESSED PAVEMENT MARKER	0.700 HUNDRED	3,000.00000	2,100.00
91	6890 PERMANENT SIGNING	1.000 LUMP SUM	7,000.00000	7,000.00
92	6895 TEMPORARY PAVEMENT MARKING-SHORT DURATION	5,120.000 LIN. FT.	1.00000	5,120.00
93	INDUCTION LOOP TYPE 2	2.000 EACH	800.00000	1,600.00
94	6945 CONDUIT PIPE 2 IN. DIAM.	1,460.000 LIN. FT.	19.00000	27,740.00
95	ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGN	1.000 CALCULATED	8,000.00000	8,000.00
96	6971 PROJECT TEMPORARY TRAFFIC CONTROL	1.000 LUMP SUM	100,000.00000	100,000.00
97	ADDITIONAL FLAGGERS	1.000 CALCULATED	15,000.00000	15,000.00



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Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
98	7003 TYPE B PROGRESS SCHEDULE	1.000	10,000.00000	10,000.00
	LUMP SUM			
99	7006 STRUCTURE EXCAVATION CLASS B INCL. HAUL	160.000 CU. YD.	12.00000	1,920.00
100	7008 SHORING OR EXTRA EXCAVATION CLASS B	6,145.000 SQ. FT.	0.30000	1,843.50
101	EXCAVATION FOR REMOVING SAMPLE STATIONS	20.000 CU. YD.	25.00000	500.00
102	MANAGEMENT OF WATER DURING CONNECTIONS	1.000 CALCULATED	5,000.00000	5,000.00
103	7037 STRUCTURE SURVEYING	1.000 LUMP SUM	20,000.00000	20,000.00
104	7041 BOLLARD TYPE 1	8.000 EACH	500.00000	4,000.00
105	7083 CHAIN LINK FENCE TYPE 3	502.000 LIN. FT.	12.00000	6,024.00
106	7097 END, GATE, CORNER, AND PULL POST FOR CHAIN LINK FENCE	14.000 EACH	250.00000	3,500.00
107	7102 DOUBLE 14 FT. CHAIN LINK GATE	1.000 EACH	840.00000	840.00
108	7480 ROADSIDE CLEANUP	1.000 ESTIMATED	20,000.00000	20,000.00

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Contractor Name: Selby Bridge Company, Inc.

Item No.	Item Description	Quantity and Units	Unit Price (In Figures)	Bid Amount (In Figures)
109	7725 REIMBURSEMENT FOR THIRD PARTY DAMAGE	1.000 ESTIMATED	5.00000	5.00
110	7728 MINOR CHANGE	1.000 CALCULATED	-3.00000	-3.00
111	7732 AGGREGATE COMPLIANCE PRICE ADJUSTMENT	1.000 CALCULATED	-1.00000	-1.00
112	7736 SPCC PLAN	1.000 LUMP SUM	1,000.00000	1,000.00
113	7562 MAILBOX SUPPORT TYPE 1	2.000 EACH	400.00000	800.00
114	7562 MAILBOX SUPPORT TYPE 2	2.000 EACH	400.00000	800.00
115	1160 UNDERDRAIN PIPE 6 IN. DIAM.	86.000 LIN. FT.	20.00000	1,720.00
116	4025 GRAVEL BACKFILL FOR WALL	140.000 CU. YD.	45.00000	6,300.00
117	7014 GRAVEL BACKFILL FOR DRAIN	7.000 CU. YD.	65.00000	455.00
Section A1 Total				5,482,395.00
Bid Total				5,482,395.00

Project Number:13C521

Bid Opening Date: 12-03-14

Project: PUYALLUP RIVER BRIDGE BRIDGE REPLACEMENT

Contractor Name: Selby Bridge Company, Inc.

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Failure to list subcontractors who are proposed to perform 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 naming more than one subcontractor to perform the same work will result in your bid being nonresponsive and therefore void.

Subcontractor(s) that are proposed to perform the work of heating, ventilation and air conditioning, plumbing, as described in chapter 18.106 RCW, and electrical as described in chapter 19.28 RCW must be listed below. The work to be performed is to be listed below the subcontractor(s) name.

The requirement to name the prime contract bidder's proposed HVAC, plumbing and electrical subcontractors applies only to proposed HVAC, plumbing, and electrical subcontractors who will contract directly with the prime contract bidder submitting the bid to the public entity.

Yes I intend to use subcontractor(s) to perform these items of work.

Subcontractor Name Totem Electric of Tacoma, Inc.  
Work to be Performed Electrical

Subcontractor Name  
Work to be Performed

Subcontractor Name  
Work to be Performed

Subcontractor Name  
Work to be Performed

Subcontractor Name  
Work to be Performed

Bidders are notified that in the opinion of the enforcement agency PVC or metal conduit, junction boxes, etc, are considered electrical equipment and must be installed by a licensed electrical contractor, even if the installation is for future use and no wiring or electric current is connected during the project. A licensed electrical contractor must be listed to perform the work.

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Contractor Name: Selby Bridge Company, Inc.

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Receipt is hereby acknowledged of addendum(s) No.(s) 1,2

State of Washington Contractor's License No. selbyi\*211k1

NO LONGER

