CONTRACT DOCUMENTS FOR

CITY OF FERNDALE, WASHINGTON Thornton Street Sanitary Sewer Project City Project Number SS2015-03

Consisting of:

Bid Documents Contract Forms Specifications & Conditions Drawings



Plans Provided for:

City of Ferndale Kevin Renz, Public Works Director 2095 Main Street Ferndale, WA 98248 Phone: (360) 384-4006 **Engineer:**

Reichhardt & Ebe Engineering, Inc. 423 Front Street Lynden, WA 98264 Phone: (360) 354-3687

THORNTON STREET SANITARY SEWER PROJECT FERNDALE, WASHINGTON

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BID PROCEDURES AND CONDITIONS

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INVITATION TO BID FOR THORNTON STREET SANITARY SEWER PROJECT City Project No. SS2015-03

NOTICE IS HEREBY GIVEN by CITY OF FERNDALE that sealed bid proposals will be received by the City of Ferndale at Ferndale City Hall, 2095 Main Street, Ferndale, Washington, 98248, (360) 384-4006, until **September 28, 2017, 2:00 PM**, and will then and there be opened and publicly read for the **Thornton Street Sanitary Sewer Project.**

PROJECT DESCRIPTION: This contract provides for the installation of approximately 4,000' of sanitary sewer pipe from the vicinity of the Thornton/Malloy intersection, then easterly and southerly to the existing sanitary sewer manhole located on the north leg of the 2nd Avenue Roundabout. Work will include trench excavation; sanitary sewer pipe installation; connection to existing sanitary sewer; and other work in accordance with the Contract Plans, Special Provisions, the Standard Specifications, including the amendments thereto, and Standard Plans.

Bid Guaranty

All bid proposals shall be accompanied by a bid proposal deposit in cash, certified check, cashier's check, or surety bond in an amount equal to five percent (5%) of the amount of such bid proposal. Should the successful bidder fail to enter into such contract and furnish satisfactory performance bond and payment bond both in an amount of 100 percent (100%) of the contract price within the time stated in the specifications, the bid proposal deposit shall be forfeited to the City of Ferndale. All bidders and subcontractors shall have a contractor's license to work in the State of Washington and a City of Ferndale Business License before starting work. All work performed on this project will be subject to prevailing state wage rates.

Project Documents

Maps, plans, and specifications may be obtained from the Ferndale City Hall upon payment in the amount of \$50 for specifications and plan sets. Informational copies of maps, plans and specifications are on file for inspection in the Ferndale City Hall, 2095 Main Street, Ferndale, Washington 98248. An electronic version of the project plans and specifications are available for download on the City of Ferndale website at <u>www.cityofferndale.org/thorntonsewer.</u> If you download the bid documents you are required to contact the City to be added to the planholders' list.

Pre-Bid Conference

Bidders, prior to submittal of a bid, may attend a pre-bid conference with the Project Engineer. The meeting will start on **September 21, 2017 at 9:00 AM** at the Ferndale City Hall, 2095 Main Street, Ferndale, Washington 98248. A jobsite visit may follow upon request.

The City of Ferndale in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-Assisted Programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

The City of Ferndale is an Equal Opportunity and Affirmative Action Employer. Minority and Women-Owned firms are encouraged to submit bids.

BID PROPOSAL FORMS

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BID PROPOSAL

FOR

THORNTON STREET SANITARY SEWER PROJECT FERNDALE, WASHINGTON

Date:

TO: City of Ferndale

Gentlepersons:

This certifies that the Undersigned: has examined the location of the project site and the conditions of work; and has carefully read and thoroughly understands the contract documents entitled: **"THORNTON STREET SANITARY SEWER PROJECT",** in Ferndale, including the "Bid Procedures and Conditions", "Specifications and Conditions", "Contract Forms", and "Plans" governing the work embraced in this project and the method by which payment will be made for said work. The Undersigned hereby proposes to undertake and complete the work embraced in this project in accordance with said contract documents, and agrees to accept as payment for said work, the schedule of lump sum and unit prices as set forth in the "Bid" below.

The Undersigned acknowledges that payment will be based on the actual work performed and material used as measured or provided for in accordance with the said contract documents, and that no additional compensation will be allowed for any taxes not included in each lump sum or unit price, and that the basis for payment will be the actual work performed and measured or provided for in accordance with the said contract documents.

ITEM QUANTITY DESCRIPTION UNIT PRICE TOTAL 1 1 MOBILIZATION SUM S per LS 2 1 SPILL PREVENTION, CONTROL & COUNTERMEASURES PLAN LIMP SUM S per LS 3 1 ARCHAEOLOGICAL AND HISTORICAL SALVAGE ACCOUNT S 5,000.00 4 1 STANDBY TIME CAUSED BY ARCHAEOLOGICAL FINDINGS ACCOUNT S 5,000.00 5 600 HOUR FLAGGERS (1-07) S 7,500.00 S 5 600 HOUR FLAGGERS (1-10) S S per HR 6 45 OTHER TRAFFIC CONTROL LABOR HOUR S S per HR 7 1 PROJECT TEMPORARY TRAFFIC CONTROL LUMP SUM S S per LS 8 1 CLEARING AND GRUBBING LUMP SUM S S per LS 9 1 REMOVAL OF STRUCTURES AND OBSTRUCTION SUM S S 9 1 REMOVAL OF STRUCTURES AND OBSTRUCTION SUM S S	() SEC	TION REFERE	INCE				September 13, 2017
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¢ ¢		FOOT-INCH		¢		¢	
				Φ	per LF-IN	φ	

() SEC	TION REFERE	ENCE			September	13, 2017
ITEM NO.	QUANTITY	DESCRIPTION		UNIT PRICE	TOTAL	
11	275 LINEAR FOOT	REMOVING AND REINSTALLING WIRE FENCE AN (2-02)	D P(OST	\$	
12	70 CUBIC YARD	ROADWAY EXCAVATION INCLUDING HAUL (2-03)	\$	per LF	\$	
13	30 M GAL.	WATER (2-07)	¢	per CY	¢	
			Ф	per M GAL.	Φ	
14	34,000 SQUARE FOOT	SHORING OR EXTRA EXCAVATION CLASS B (2-09)				
			\$		\$	
15	8,990 TON	GRAVEL BASE (4-02)		per SF		
16	750 TON	CRUSHED SURFACING TOP COURSE (4-04)	<u></u>	per TON	\$	
			\$	per TON	\$	
17	850 TON	HMA CLASS 1/2" PG 64-22 (5-04)				
			\$	per TON	\$	
18	1 CALC	JOB MIX COMPLIANCE PRICE ADJUSTMENT (5-04)				
				\$0.00		\$0.00
19	1 CALC	COMPACTION PRICE ADJUSTMENT (5-04)		CALC		
				\$0.00		\$0.00
20	5 EACH	MANHOLE 48 IN. DIAM. TYPE 1 (7-05)		CALC		
			\$	per EA	\$	
				•		

() SEC	TION REFERE	ENCE			September 13, 2017
ITEM NO.	QUANTITY	DESCRIPTION		UNIT PRICE	TOTAL
21	7	MANHOLE 48 IN. DIAM. TYPE 3	-		
	EACH	(7-05)			
			\$		\$
				per EA	
22	3	MANHOLE 60 IN. DIAM. TYPE 1			
	EACH	(7-05)			
			\$		\$
				per EA	
23	3	MANHOLE ADDITIONAL HEIGHT 48 IN. DIAM. TYPE	∃ 1		
	FOOT	(7-05)			
			\$		\$
				per LF	
24	9 LINEAR	MANHOLE ADDITIONAL HEIGHT 60 IN. DIAM. TYPE (7-05)	Ξ1		
	FOOT		\$		\$
				per LF	
25	2	DROP MANHOLE CONNECTION			
	EACH	(7-05)			
			\$		\$
				per EA	
26	1	DROP MANHOLE FORCE MAIN CONNECTION			
	EACH	(7-05)			
			\$		\$
				per EA	
27	1	ADJUSTMENTS TO FINISHED GRADE			
	LUMP	(7-05)			
	50M		\$		\$
				per LS	
28	225	REMOVAL OF UNSUITABLE MATERIAL INCL. HAU	L		
	CUBIC	(7-08)			
	YARD		\$		\$
				per CY	
29	326	PVC SANITARY SEWER PIPE, 8 IN. DIAM.			
	LINEAR	(7-17)			
	FOOT		\$		\$
				per LF	
30	10	PVC SANITARY SEWER PIPE, 12 IN. DIAM.			
	LINEAR	(7-17)			
	FOOT		\$		\$
				per LF	

() SEC	TION REFERE	INCE				September 13, 2017
ITEM NO.	QUANTITY	DESCRIPTION		UNIT PRICE		TOTAL
31	160 LINEAR FOOT	PVC SANITARY SEWER PIPE, 15 IN. DIAM. (7-17)	\$		\$	
32	3,640 LINEAR FOOT	PVC SANITARY SEWER PIPE, 18 IN. DIAM. (7-17)	\$	per LF	\$	
33	4,136 LINEAR FOOT	TESTING SEWER PIPE (7-17)	¢	per LF	¢	
			Ψ	per LF	Ψ	
34	101 LINEAR FOOT	FURNISHING AND JACKING STEEL CASING PIPE (7-17)	24 IN	. DIAM.		
			\$	norl	\$	
35	1 FORCE ACCOUNT	FORCE ACCOUNT UNEXPECTED OBJECT REMO (7-17)	VAL \$	10.000.00	\$	10.000.00
36	1 FORCE ACCOUNT	EROSION/WATER POLLUTION CONTROL (8-01)	\$	FA 7 500 00	s	7 500 00
37	1 LUMP SUM	ESC LEAD (8-01)	\$	FA	\$.,
			Ψ	per LS	Ψ	
38	240 SQUARE YARD	STABILIZED CONSTRUCTION ENTRANCE (8-01)				
			\$	por SV	\$	
39	1,050 LINEAR FOOT	SILT FENCE (8-01)	¢		s	
			Ψ	per LF	Ψ	
40	910 LINEAR FOOT	HIGH VISIBILITY SILT FENCE (8-01)				
			\$	per LF	\$	
				•		

() SEC	TION REFERE	ENCE		September 13, 2017
ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL
41	6 EACH	INLET PROTECTION (8-01)		
			\$	\$
			per EA	
42	40 HOUR	STREET CLEANING (8-01)		
			\$	\$
			per HR	
43	300 SQUARE YARD	SEEDING, FERTILIZING, AND MULCHING (8-01)		
			\$ 	\$ _
			per SY	
44	1 FORCE	LANDSCAPE RESTORATION (8-02)		
	ACCOUNT		\$ 3,000.00	\$ 3,000.00
			FA	
45	1 HUNDRED	RAISED PAVEMENT MARKERS TYPE 1 (8-09)		
			\$	\$
			per HUND	
46	2 HUNDRED	RAISED PAVEMENT MARKERS TYPE 2 (8-09)		
			\$	\$
			per HUND	
47	450 TON	QUARRY SPALLS (8-15)		
			\$	\$
			per TON	
48	2,275	PAINT LINE		
	FOOT	(0-22)		
			\$ perlF	\$
			por 2.	
49	18 LINEAR FOOT	PLASTIC STOP LINE (8-22)		
			\$ portE	\$
			рег сг	
50	10 EACH	POTHOLE EXISTING UNDERGROUND UTILITY (8-30)		
			\$	\$
			per EA	

() SEC	TION REFERE	INCE			September 13, 2017
ITEM NO.	QUANTITY	DESCRIPTION		UNIT PRICE	TOTAL
51	1 FORCE ACCOUNT	REPAIR EXISTING PUBLIC & PRIVATE FACILITIES (8-31)	\$	10,000.00	\$ 10,000.00
				FA	
52	1 FORCE ACCOUNT	UNANTICIPATED SITE WORK (8-32)			
			\$	15,000.00	\$ 15,000.00
			SU	^{FA} IBTOTAL:	\$
		SALE	S TA	X (8.7%):	\$
		TOTAL BID (INCL	.UDI	NG TAX):	\$

NON-COLLUSION DECLARATION

I, by signing the proposal, hereby declare, under penalty of perjury under the laws of the United States that the following statements are true and correct:

- 1. That the undersigned person(s), firm, association or corporation has (have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this proposal is submitted.
- 2. That by signing the signature page of this proposal, I am deemed to have signed and have agreed to the provisions of this declaration.

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

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

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

Bid Proposal cont'

BIDDER IDENTIFICATION

NOTE: Signatures of this proposal must be identified above. Failure to identify the Signatories will be cause for considering the proposal irregular and for subsequent rejection of the bid.

Bid Proposal cont'

BID PROPOSAL SIGNATURE AND ADDENDUM ACKNOWLEDGMENT

The bidder is hereby advised that by signature of this proposal he/she is deemed to have acknowledged all requirements and signed all certificates contained herein. A proposal guaranty in an amount of five percent (5%) of the total bid, based upon the approximation estimate of quantities at the above prices and in the form as indicated below, is attached hereto:

CASH	IN THE AMOUNT OF
CASHIER'S CHECK	DOLLARS
CERTIFIED CHECK	(\$) PAYABLE TO THE CITY OF FERNDALE
PROPOSAL BOND	IN THE AMOUNT OF 5% OF THE BID.

Receipt is hereby acknowledged by addendum(s) No.(s) _____, & _____, & _____,

SIGNATURE OF AUTHORIZED OFFICIAL(S)

(PROPOSAL MUST BE SIGNED)

SIGNATURE

FIRM NAME

STATE OF WASHINGTON)

) ss. COUNTY OF WHATCOM)

On this _____ day of _____, 2017, before me personally appeared ______ to me personally known to be the person described in and who executed the above instrument and who acknowledged to me the act of signing thereof.

NOTARY PUBLIC, in and for the State of Washington, residing at:

My Commission Expires:

This proposal form is not transferable and any alteration of the firm's name entered hereon without prior permission from the City of Ferndale will be cause for considering the proposal irregular and for subsequent rejection of the bid.

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we of	,
as principal, and the	a corporation
duly organized under the laws of the State of	and
having its principal place of business at	, in
the State of Washington, as Surety, are held and firmly bound unto the City	of Ferndale, a
Municipal Corporation in the State of Washington, in the full and penal sum of fiv	e percent (5%)
of the total bid amount appearing on the bid proposal of said principal for the w	ork hereinafter
described, for the payment of which, well and truly to be made, we bind our he	eirs, executors,
administrators and assigns, and successors and assigns, jointly and severally, f	irmly by these
presents.	

The condition of this bond is such that, whereas, the principal herein is herewith submitting his or its bid proposal for, **THORNTON STREET SANITARY SEWER PROJECT**, said bid proposal, by reference thereto, being hereby made a part hereof.

NOW, THEREFORE, if the said bid proposal submitted by the said PRINCIPAL be accepted, and the contract be awarded to said PRINCIPAL, and if said PRINCIPAL shall duly make and enter into and execute said contract and shall furnish the performance bond as required by the bidding and contract documents within a period of ten (10) days from and after said award, exclusive of the day of such award, then its obligation to pay the above-mentioned penal sum as liquidated damages shall be null and void, otherwise it shall remain and be in full force and effect.

SIGNED AND SEALED this	day of	2017
SIGNLD MIND SLALLD IIIS	uuy 01	, 2017.

Principal

Ву _____

(Seal)

Surety

By

Attorney-In-Fact

The Attorney-in-fact who executes this bond on behalf of the surety company, must attach a copy of his power-of-attorney as evidence of his authority.

SPECIFICATIONS AND CONDITIONS

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INTRO.AP1 INTRODUCTION

The following Amendments and Special Provisions shall be used in conjunction with the 2016 Standard Specifications for Road, Bridge, and Municipal Construction.

AMENDMENTS TO THE STANDARD SPECIFICATIONS

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

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

1-01.AP1 Section 1-01, Definitions and Terms August 1, 2016

1-01.3 Definitions

The following new term and definition is inserted after the eighth paragraph:

Cold Weather Protection Period - A period of time 7 days from the day of concrete placement or the duration of the cure period, whichever is longer.

1-02.AP1 Section 1-02, Bid Procedures and Conditions June 1, 2017

1-02.4(1) General

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

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing by close of business on the Thursday preceding the bid opening to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.6 Preparation of Proposal

In this section, "Disadvantaged Business Enterprise" is revised to read "Underutilized Disadvantaged Business Enterprise", and "DBE" is revised to read "UDBE".

1-02.9 Delivery of Proposal

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

The Contracting Agency will not open or consider any Proposal when the Proposal or Bid deposit is received after the time specified for receipt of Proposals or received in a location other than that specified for receipt of Proposals unless an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received.

The following new paragraph is inserted before the last paragraph:

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which the normal work processes of the Contracting Agency resume.

1-02.12 Public Opening of Proposals

This section is supplemented with the following new paragraph:

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be opened at the time indicated in the call for Bids the time specified for opening of Proposals will be deemed to be extended to the same time of day on the first work day on which the normal work processes of the Contracting Agency resume.

1-02.13 Irregular Proposals

In this section, "Disadvantaged Business Enterprise" is revised to read "Underutilized Disadvantaged Business Enterprise", and "DBE" is revised to read "UDBE".

1-04.AP1 Section 1-04, Scope of the Work June 1, 2017

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda

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

Whenever reference is made in these Specifications or the Special Provisions to codes, rules, specifications, and standards, the reference shall be construed to mean the code, rule, specification, or standard that is in effect on the Bid advertisement date, unless otherwise stated or as required by law.

1-04.3 Reference Information

This section is supplemented with the following new sentence:

If a document that is provided as reference information contains material also included as a part of the Contract, that portion of the document shall be considered a part of the Contract and not as Reference Information.

1-04.4(2)A General

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

4. Provide substitution for deleted or reduced Condition of Award Work, Apprentice Utilization and Training.

1-06.AP1 Section 1-06, Control of Material August 7, 2017

This section is supplemented with the following new section and subsections:

1-06.6 Recycled Materials

The Contractor shall make their best effort to utilize recycled materials in the construction of the project; the use of recycled concrete aggregate as specified in Section 1-06.6(1)A is a requirement of the Contract.

The Contractor shall submit a Recycled Material Utilization Plan as a Type 1 Working Drawing within 30 calendar days after the Contract is executed. The plan shall provide the Contractor's anticipated usage of recycled materials for meeting the requirements of these Specifications. The quantity of recycled materials will be provided in tons and as a percentage of the Plan quantity for each material listed in Section 9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material. When a Contract does not include Work that requires the use of a material that is included in the requirements for using materials the Contractor may state in their plan that no recycled materials are proposed for use.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT Form 350-075 Recycled Materials Reporting.

1-06.6(1) Recycling of Aggregate and Concrete Materials

1-06.6(1)A General

The minimum quantity of recycled concrete aggregate shall be 25 percent of the total quantity of aggregate that is incorporated into the Contract for those items listed in Section 9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material that allow the use of recycled concrete aggregate. The percentage of recycled material incorporated into the project for meeting the required percentage will be calculated in tons based on the quantity of recycled concrete used on the entire Contract and not as individual items.

If the Contractor's total cost for Work with recycled concrete aggregate is greater than without the Contractor may choose to not use recycled concrete aggregate. If the Recycled Material Utilization Plan does not indicate the minimum usage of recycled concrete aggregate required above, or if completed project quantities do not meet the minimum usage required, the Contractor shall develop the following:

- 1. A cost estimate for each material listed in Section 9-03.21(1)E that is utilized on the Contract. The cost estimate shall include the following:
 - a. The estimated costs for the Work for each material with 25 percent recycled concrete aggregate. The cost estimate shall include for each material a copy of the price quote from the supplier with the lowest total cost for the Work.
 - b. The estimated costs for the Work for each material without recycled concrete aggregate.

The Contractor's cost estimates shall be submitted as an attachment to the Recycled Material Utilization Plan, or with the Reporting form.

1-07.AP1

Section 1-07, Legal Relations and Responsibilities to the Public August 7, 2017

1-07.1 Laws to be Observed

The second paragraph is deleted.

In the second to last sentence of the third paragraph, "WSDOT" is revised to read "Contracting Agency".

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

The last three sentences of the first paragraph are deleted and replaced with the following new sentence:

The Contractor (Prime or Subcontractor) shall include sales or use tax on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project, in the unit bid prices.

1-07.3(1) Forest Fire Prevention

This section is supplemented with the following new subsections:

1-07.3(1)A Fire Prevention Control and Countermeasures Plan

The Contractor shall prepare and implement a project-specific fire prevention, control, and countermeasures plan (FPCC Plan) for the duration of the project. The Contractor shall submit a Type 2 Working Drawing no later than the date of the preconstruction conference.

1-07.3(1)A1 FPCC Plan Implementation Requirements

The Contractor's FPCC Plan shall be fully implemented at all times. The Contractor shall update the FPCC Plan throughout project construction so that the plan reflects actual site conditions and practices. The Contractor shall update the FPCC Plan at least annually

and maintain a copy of the updated FPCC Plan that is available for inspection on the project site. Revisions to the FPCC Plan and the Industrial Fire Precaution Level (IFPL) shall be discussed at the weekly project safety meetings.

1-07.3(1)A2 FPCC Plan Element Requirements

The FPCC Plan shall include the following:

- 1. The names, titles, and contact information for the personnel responsible for implementing and updating the plan.
- 2. The names and telephone numbers of the Federal, State, and local agencies the Contractor shall notify in the event of a fire.
- 3. All potential fire causing activities such as welding, cutting of metal, blasting, fueling operations, etc.
- 4. The location of fire extinguishers, water, shovels, and other firefighting equipment.
- 5. The response procedures the Contractor shall follow in the event of a fire.

Most of Washington State is covered under the IFPL system which, by law, is managed by the Department of Natural Resources (DNR). It is the Contractor's responsibility to be familiar with the DNR requirements and to verify whether or not IFPL applies to the specific project.

If the Contractor wishes to continue a work activity that is prohibited under an industrial fire precaution level, the Contractor shall obtain a waiver from the DNR and provide a copy to the Engineer prior to continuation of work on the project.

If the IFPL requirements prohibit the Contractor from performing Work the Contractor may be eligible for an unworkable day in accordance with Section 1-08.5.

The Contractor shall comply with the requirements of these provisions at no additional cost to the Contracting Agency.

1-07.8 High-Visibility Apparel

The last paragraph is revised to read:

High-visibility garments shall be labeled as, and in a condition compliant with the ANSI/ISEA 107 (2004 or later version) and shall be used in accordance with manufacturer recommendations.

1-07.8(1) Traffic Control Personnel

In this section, references to "ANSI/ISEA 107-2004" are revised to read "ANSI/ISEA 107".

1-07.8(2) Non-Traffic Control Personnel

In this section, the reference to "ANSI/ISEA 107-2004" is revised to read "ANSI/ISEA 107".

1-07.9(2) Posting Notices

Items 1 and 2 are revised to read:

- EEOC P/E-1 (revised 11/09, supplemented 09/15) Equal Employment Opportunity IS THE LAW published by US Department of Labor. Post for projects with federal-aid funding.
- 2. FHWA 1022 (revised 05/15) **NOTICE Federal-Aid Project** published by Federal Highway Administration (FHWA). Post for projects with federal-aid funding.

Items 5, 6 and 7 are revised to read:

- WHD 1420 (revised 02/13) Employee Rights and Responsibilities Under The Family And Medical Leave Act published by US Department of Labor. Post on all projects.
- 6. WHD 1462 (revised 01/16) **Employee Polygraph Protection Act** published by US Department of Labor. Post on all projects.
- 7. F416-081-909 (revised 09/15) **Job Safety and Health Law** published by Washington State Department of Labor and Industries. Post on all projects.

Items 9 and 10 are revised to read:

- 9. F700-074-909 (revised 06/13) **Your Rights as a Worker in Washington State** by Washington State Department of Labor and Industries (L&I). Post on all projects.
- 10. EMS 9874 (revised 10/15) **Unemployment Benefits** published by Washington State Employment Security Department. Post on all projects.

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

The second sentence of the first paragraph is deleted.

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

The SPCC Plan shall address all fuels, petroleum products, hazardous materials, and other materials defined in Chapter 447 of the WSDOT Environmental Manual M 31-11.

Item number four of the fourth paragraph (up until the colon) is revised to read:

4. **Potential Spill Sources** – Describe each of the following for all potentially hazardous materials brought or generated on-site, including but not limited to materials used for equipment operation, refueling, maintenance, or cleaning:

The first sentence of item 7e of the fourth paragraph is revised to read:

BMP methods and locations where they are used to prevent discharges to ground or water during mixing and transfer of hazardous materials and fuel.

The last paragraph is deleted.

1-08.AP1 Section 1-08, Prosecution and Progress June 1, 2017

1-08.1 Subcontracting

The eighth and ninth paragraphs are revised to read:

On all projects, the Contractor shall certify to the actual amounts paid to all firms that were used as Subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the Contract. This includes all Disadvantaged, Minority, Small, Veteran or Women's Business Enterprise firms. This Certification shall be submitted to the Engineer on a monthly basis each month between Execution of the Contract and Physical Completion of the Contract using the application available at: https://wsdot.diversitycompliance.com. 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.

The Contractor shall comply with the requirements of RCW 39.04.250, 39.76.011, 39.76.020, and 39.76.040, in particular regarding prompt payment to Subcontractors. Whenever the Contractor withholds payment to a Subcontractor for any reason including disputed amounts, the Contractor shall provide notice within 10 calendar days to the Subcontractor with a copy to the Contracting Agency identifying the reason for the withholding and a clear description of what the Subcontractor must do to have the withholding released. Retainage withheld by the Contractor prior to completion of the Subcontractors work is exempt from reporting as a payment withheld and is not included in the withheld amount. The Contracting Agency's copy of the notice to Subcontractor for deferred payments shall be submitted to the Engineer concurrently with notification to the Subcontractor.

1-08.1(1) Prompt Payment, Subcontract Completion and Return of Retainage Withheld

In item number 5 of the first paragraph, "WSDOT" is revised to read "Contracting Agency".

The last sentence in item number 11 of the first paragraph is revised to read:

The Contractor may also require any documentation from the Subcontractor that is required by the subcontract or by the Contract between the Contractor and Contracting Agency or by law such as affidavits of wages paid, and material acceptance certifications to the extent that they relate to the Subcontractor's Work.

Item number 12 of the first paragraph is revised to read:

12. If the Contractor fails to comply with the requirements of the Specification and the Subcontractor's retainage or retainage bond is wrongfully withheld, the Contractor will be subject to the actions described in No. 7 listed above. The Subcontractor may also seek recovery against the Contractor under applicable prompt pay statutes in addition to any other remedies provided for by the subcontract or by law.

1-08.5 Time for Completion

In item 2c of the last paragraph, "Quarterly Reports" is revised to read "Monthly Reports".

1-09.AP1

Section 1-09, Measurement and Payment April 4, 2016

1-09.6 Force Account

The second sentence of item number 4 is revised to read:

A "specialized service" is a work operation that is not typically done by worker classifications as defined by the Washington State Department of Labor and Industries and by the Davis Bacon Act, and therefore bills by invoice for work in road, bridge and municipal construction.

1-10.AP1 Section 1-10, Temporary Traffic Control January 3, 2017

1-10.1(2) Description

The first paragraph is revised to read:

The Contractor shall provide flaggers and all other personnel required for labor for traffic control activities that are not otherwise specified as being furnished by the Contracting Agency.

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

The following new paragraph is inserted after the third paragraph:

The Contractor shall keep lanes, on-ramps, and off-ramps, open to traffic at all times except when Work requires closures. Ramps shall not be closed on consecutive interchanges at the same time, unless approved by the Engineer. Lanes and ramps shall be closed for the minimum time required to complete the Work. When paving hot mix asphalt the Contractor may apply water to the pavement to shorten the time required before reopening to traffic.

1-10.3(2)C Lane Closure Setup/Takedown

The following new paragraph is inserted before the last paragraph:

Channelization devices shall not be moved by traffic control personnel across an open lane of traffic. If an existing setup or staging of traffic control devices require crossing an open lane

of traffic, the traffic control devices shall be taken down completely and then set up in the new configuration.

2-02.AP2

Section 2-02, Removal of Structures and Obstructions August 7, 2017

2-02.3(2)A Bridge Removal This section's title is revised to read:

Bridge and Structure Removal

2-03.AP2 Section 2-03, Roadway Excavation and Embankment August 1, 2016

2-03.3(7)C Contractor-Provided Disposal Site

The second paragraph is revised to read:

The Contractor shall acquire all permits and approvals required for the use of the disposal sites before any waste is hauled off the project. The Contractor shall submit a Type 1 Working Drawing consisting of copies of the permits and approvals for any disposal sites to be used. The cost of any such permits and approvals shall be included in the Bid prices for other Work.

The third paragraph is deleted.

2-06.AP2 Section 2-06, Subgrade Preparation January 3, 2017

2-06.3(2) Subgrade for Pavement

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

The Contractor shall compact the Subgrade to a depth of 6 inches to 95 percent of maximum density as determined by the compaction control tests for granular materials.

4-04.AP4 Section 4-04, Ballast and Crush Surfacing January 3, 2017

4-04.3(5) Shaping and Compaction

The first sentence is revised to read:

Immediately following spreading and final shaping, each layer of surfacing shall be compacted to at least 95 percent of maximum density determined by the requirements of Section 2-03.3(14)D before the next succeeding layer of surfacing or pavement is placed.

7-08.AP7 Section 7-08, General Pipe Installation Requirements January 3, 2017

7-08.3(1)A Trenches

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

The embankment material shall be compacted to 95 percent of maximum density and the moisture content at the time of compaction shall be between optimum and 3 percentage points below optimum as determined by the Compaction Control Tests specified in Section 2-03.3(14)D.

8-01.AP8 Section 8-01, Erosion Control and Water Pollution Control August 1, 2016

8-01.2 Materials

This section is supplemented with the following new paragraph:

Recycled concrete, in any form, shall not be used for any Work defined in Section 8-01.

8-01.3(7) Stabilized Construction Entrance

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

Material used for stabilized construction entrance shall be free of extraneous materials that may cause or contribute to track out.

8-01.3(8) Street Cleaning

This section is revised to read:

Self-propelled street sweepers shall be used to remove and collect sediment and other debris from the Roadway, whenever required by the Engineer. The street sweeper shall effectively collect these materials and prevent them from being washed or blown off the Roadway or into waters of the State. Street sweepers shall not generate fugitive dust and shall be designed and operated in compliance with applicable air quality standards.

Material collected by the street sweeper shall be disposed of in accordance with Section 2-03.3(7)C.

Street washing with water will require the concurrence of the Engineer.

8-22.AP8 Section 8-22, Pavement Marking August 7, 2017

8-22.3(6) Removal of Pavement Markings

This section is revised to read:

Pavement markings to be removed shall be obliterated until all blemishes caused by the pavement marking removal conform to the coloration of the adjacent pavement.

Grinding to remove pavement markings in their entirety is allowed in areas designated for applications of either Hot Mix Asphalt (HMA) or Bituminous Surface Treatment (BST). Pavement marking removal shall be performed from April 1st through September 30th and only in those areas that shall be paved within the same time window as the grinding, unless otherwise allowed by the Engineer in writing.

For all cement concrete pavement and areas that will not be overlaid with hot mix asphalt or BST, grinding is allowed to a depth just above the pavement surface and then Water blasting or shot blasting shall be required to remove the remaining pavement markings.

If in the opinion of the Engineer, the pavement is materially damaged by pavement marking removal, such damage shall be repaired by the Contractor in accordance with Section 1-07.13(1). Sand or other material deposited on the pavement as a result of removing lines and markings shall be removed as the Work progresses to avoid hazardous conditions. Accumulation of sand or other material which might interfere with drainage will not be permitted.

8-22.4 Measurement

The first two sentences of the fourth paragraph are revised to read:

The measurement for "Painted Wide Lane Line", "Plastic Wide Lane Line", "Profiled Plastic Wide Lane Line", "Painted Barrier Center Line", "Plastic Barrier Center Line", "Painted Stop Line", "Plastic Stop Line", "Plastic Stop Line", "Painted Wide Dotted Entry Line", or "Plastic Wide Dotted Entry Line" will be based on the total length of each painted, plastic or profiled plastic line installed. No deduction will be made for the unmarked area when the marking includes a broken line such as, wide broken lane line, drop lane line, wide dotted lane line or wide dotted entry line.

8-22.5 Payment

The following two new Bid items are inserted after the Bid item "Plastic Crosshatch Marking", per linear foot:

"Painted Wide Dotted Entry Line", per linear foot.

"Plastic Wide Dotted Entry Line", per linear foot.

9-03.AP9 Section 9-03, Aggregates August 7, 2017

9-03.1(1) General Requirements

In this section, each reference to "Section 9-01.2(3)" is revised to read "Section 9-01.2(1)A".

This first paragraph is supplemented with the following:

Reclaimed aggregate may be used if it complies with the specifications for Portland Cement Concrete. Reclaimed aggregate is aggregate that has been recovered from plastic concrete by washing away the cementitious materials.

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

This section is revised to read:

Fine aggregate shall consist of natural sand or manufactured sand, or combinations thereof, accepted by the Engineer, having hard, strong, durable particles free from adherent coating. Fine aggregate shall be washed thoroughly to meet the specifications.

9-03.1(2)A Deleterious Substances

This section is revised to read:

The amount of deleterious substances in the washed aggregate shall be tested in accordance with AASHTO M 6 and not exceed the following values:

Material finer than No. 200 Sieve	2.5 percent by weight
Clay lumps and friable particles	3.0 percent by weight
Coal and lignite	0.25 percent by weight
Particles of specific gravity less than 2.00	1.0 percent by weight.

Organic impurities shall be tested in accordance with AASHTO T 21 by the glass color standard procedure and results darker than organic plate no. 3 shall be rejected. A darker color results from AASHTO T 21 may be used provided that when tested for the effect of organic impurities on strength of mortar, the relative strength at 7 days, calculated in accordance with AASHTO T 71, is not less than 95 percent.

9-03.1(4) Coarse Aggregate for Portland Cement Concrete

This section is revised to read:

Coarse aggregate for concrete shall consist of gravel, crushed gravel, crushed stone, or combinations thereof having hard, strong, durable pieces free from adherent coatings. Coarse aggregate shall be washed to meet the specifications.

9-03.1(4)A Deleterious

This section, including title, is revised to read:

9-03.1(4)A Deleterious Substances

The amount of deleterious substances in the washed aggregate shall be tested in accordance with AASHTO M 80 and not exceed the following values:

Material finer than No. 200	1.0^1 percent by weight
Clay lumps and Friable Particles	2.0 percent by weight
Shale	2.0 percent by weight
Wood waste	0.05 percent by weight

Coal and Lignite	0.5 percent by weight
Sum of Clay Lumps, Friable Particles, and	
Chert (Less Than 2.40 specific gravity SSD)	3.0 percent by weight

¹If the material finer than the No. 200 sieve is free of clay and shale, this percentage may be increased to 1.5.

9-03.1(4)C Grading

The following new sentence is inserted at the beginning of the last pargraph:

Where coarse aggregate size 467 is used, the aggregate may be furnished in at least two separate sizes.

9-03.1(5) Combined Aggregate Gradation for Portland Cement Concrete

This section is revised to read:

As an alternative to using the fine aggregate sieve grading requirements in Section 9-03.1(2)B, and coarse aggregate sieve grading requirements in Section 9-03.1(4)C, a combined aggregate gradation conforming to the requirements of Section 9-03.1(5)A may be used.

9-03.1(5)A Deleterious Substances

This section is revised to read:

The amount of deleterious substances in the washed aggregates $\frac{3}{8}$ inch or larger shall not exceed the values specified in Section 9-03.1(4)A and for aggregates smaller than $\frac{3}{8}$ inch they shall not exceed the values specified in Section 9-03.1(2)A.

9-03.1(5)B Grading

The first paragraph is deleted.

9-03.8(2) HMA Test Requirements

In the table in item number 3, the heading "Statistical and Nonstatistical" is revised to read "Statistical".

9-03.8(7) HMA Tolerances and Adjustments

In the table in item number 1, the column titled "Nonstatistical Evaluation" is deleted.

In the table in item 1, the last column titled "Commercial Evaluation" is revised to read "Visual Evaluation".

9-03.11(1) Streambed Sediment

The following three new sentences are inserted after the first sentence of the first paragraph:

Alternate gradations may be used if proposed by the Contractor and accepted by the Engineer. The Contractor shall submit a Type 2 Working Drawing consisting of 0.45 power maximum density curve of the proposed gradation. The alternate gradation shall closely follow the

maximum density line and have Nominal Aggregate Size of no less than 1¹/₂ inches or no greater than 3 inches.

9-03.12(4) Gravel Backfill for Drains

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

As an alternative, AASHTO grading No. 57 may be used in accordance with Section 9-03.1(4)C.

9-03.12(5) Gravel Backfill for Drywells

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

As an alternative, AASHTO grading No. 4 may be used in accordance with Section 9-03.1(4)C.

9-03.21(1)B Concrete Rubble

This section, including title, is revised to read:

9-03.21(1)B Recycled Concrete Aggregate

Recycled concrete aggregates are coarse aggregates manufactured from hardened concrete mixtures. Recycled concrete aggregate may be used as coarse aggregate or blended with coarse aggregate for Commercial Concrete. Recycled concrete aggregate shall meet all of the requirements for coarse aggregate contained in Section 9-03.1(4) or 9-03.1(5). In addition to the requirements of Section 9-03.1(4) or 9-03.1(5), recycled concrete shall:

- 1. Contain an aggregated weight of less than 1 percent of adherent fines, vegetable matter, plastics, plaster, paper, gypsum board, metals, fabrics, wood, tile, glass, asphalt (bituminous) materials, brick, porcelain or other deleterious substance(s) not otherwise noted;
- 2. Be free of components such as chlorides and reactive materials that are detrimental to the concrete, unless mitigation measures are taken to prevent recurrence in the new concrete;
- 3. Have an absorption of less than 10 percent when tested in accordance with AASHTO T 85.
- 4. Be considered mechanically fractured and therefore be considered part of the total fracture calculation as determined by the FOP for AASHTO T 335.

Recycled concrete aggregate shall be in a saturated condition prior to mixing.

Recycled concrete aggregate shall not be placed below the ordinary high water mark of any surface water of the State.

9-03.21(1)D Recycled Steel Furnace Slag

This section title is revised to read:

Steel Slag

9-03.21(1)E Table on Maximum Allowable Percent (By Weight) of Recycled Material

In the Hot Mix Asphalt column, each value of "20" is revised to read "25".

The last column heading "Steel Furnace Slag" is revised to read "Steel Slag".

The following new row is inserted after the second row:

Coarse Aggregate for Commercial Concrete	9-031(4)	0	100	0	0
Course riggiegate for commercial concrete	<i>y</i> 05.1(1)	0	100	v	v

9-14.AP9 Section 9-14, Erosion Control and Roadside Planting August 7, 2017

9-14.4(2) Hydraulically Applied Erosion Control Products (HECPs)

The first paragraph is revised to read:

All HECPs shall be made of natural plant fibers unaltered by synthetic materials, and in a dry condition, free of noxious weeds, seeds, chemical printing ink, germination inhibitors, herbicide residue, chlorine bleach, rock, metal, plastic, and other materials detrimental to plant life.

The last sentence of the third paragraph is revised to read the following two sentences:

Under no circumstances will field mixing of additives or components be acceptable, with the exception of seed and water. The product shall be hydrated in accordance with the manufacturer's recommendations.

In Table 1 of the fourth paragraph, the following new row is inserted below the table heading:

These test requirements apply to the fully mixed product, including tackifiers, dyes, or other additives that may be included in the HECP final product in its sprayable form.

The last two paragraphs are revised to read:

If the HECP contains a dye to facilitate placement and inspection of the material, it shall be nontoxic to plants, animals, and aquatic life and shall not stain concrete or painted surfaces.

The HECP shall not be harmful to plants, animals, and aquatic life.

9-14.4(4) Wood Strand Mulch

The last paragraph is revised to read:

The Contractor shall provide a test report performed in accordance with WSDOT T 125 demonstrating compliance to this specification prior to acceptance. This product shall not be harmful to plants, animals, and aquatic life.

9-14.4(7) Tackifier

The first paragraph is supplemented with the following:

Tackifiers shall include a mulch tracer added to visible aid uniform application, and shall not be harmful to plants, animals, or aquatic life.

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

The Contractor shall provide test results documenting the tackifier and mulch tracer meets the requirements for Acute Toxicity, Solvents, and Heavy Metals as required in Table 1 in Section 9-14.4(2).

9-14.4(7)A Organic Tackifier

This section is revised to read:

Organic tackifiers shall be derived from natural plant sources and shall not be harmful to plants, animals, and aquatic life.

9-14.4(7)B Synthetic Tackifier

This section is revised to read:

Synthetic tackifiers shall not be harmful to plants, animals, and aquatic life.

9-14.5(2) Biodegradable Erosion Control Blanket

The first paragraph is revised to read:

Biodegradable erosion control blankets, including netting if present, shall be made of natural plant fibers unaltered by synthetic materials. All blanket material shall effectively perform the intended erosion control function until permanent vegetation has been established, or for a minimum of 6 months, whichever comes first.

9-14.5(4)A Biodegradable Check Dams

This section is revised to read:

Biodegradable check dams shall meet the following requirements:

Wattle	Section 9-14.5(5)
Compost Sock	Section 9-14.5(6)

Coir Log Section 9-14.5(7)

The Contractor may substitute a different biodegradable check dam as long as it complies with the following and is accepted by the Engineer:

- 1. Made of natural plant fiber unaltered by synthetic material.
- 2. Netting if present shall be made of natural plant fibers unaltered by synthetic materials. Materials shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.
- 3. Straw bales shall not be used as check dams.

9-14.5(5) Wattles

This section is revised to read:

Wattles shall consist of cylinders of plant material such as weed-free straw, coir, wood chips, excelsior, or wood fiber or shavings encased within netting made of natural plant fibers unaltered by synthetic materials. Wattles shall be a minimum of 8 inches in diameter. Netting material shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials such as preservatives. Netting material shall be free from cuts, tears, or weak places and shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

If wood chip filler is used, it shall meet the material requirements as specified in Section 9-14.4(3). If straw filler is used, it shall meet the material requirements as specified in Section 9-14.4(1). If wood shavings are used, 80 percent of the fibers shall have a minimum length of 6 inches between 0.030 and 0.50 inches wide and between 0.017 and 0.13 inches thick.

Stakes for wattles shall be made of wood from untreated Douglas fir, hemlock, or pine species.

9-14.5(6) Compost Socks

This section is revised to read:

Compost socks shall consist of fabric made of natural plant fibers unaltered by synthetic materials. The compost sock shall be filled with Medium Compost as specified in Section 9-14.4(8). Compost socks shall be at least 8 inches in diameter. The sock shall be clean, evenly woven; free of encrusted concrete or other contaminating materials; free from cuts, tears, broken or missing yarns; free of thin, open, or weak areas; and free of any type of preservative. Sock fabric shall effectively perform the intended erosion control function until permanent vegetation has been established or for a minimum of 6 months, whichever comes first.

Stakes for compost socks shall be made of wood from untreated Douglas fir, hemlock, or pine species.

9-35.AP9 Section 9-35, Temporary Traffic Control Materials August 7, 2017

9-35.12 Transportable Attenuator

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

The transportable attenuator shall be mounted on, or attached to, a host vehicle that complies with the manufacturer's recommended weight range.

9-35.14 Portable Temporary Traffic Control Signal

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

A highly retroreflective yellow strip, 1 inch wide, shall be placed around the perimeter of the face of all vehicle signal backplates to project a rectangular image at night toward oncoming traffic.

SPECIAL PROVISIONS TO THE STANDARD SPECIFICATIONS

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INTRODUCTION TO THE SPECIAL PROVISIONS

(August 14, 2014 APWA GSP)

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction,* 2016 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). The Standard Specifications, as modified or supplemented by the Amendments to the Standard Specifications and these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such. The GSPs are labeled under the headers of each GSP, with the date of the GSP and its source. For example:

(March 8, 2013 APWA GSP) (April 1, 2013 WSDOT GSP) (May 1, 2013 R&E GSP) (NWR February 5, 2013)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- Standard Plans for Road, Bridge and Municipal Construction, WSDOT/APWA, current edition
- City of Ferndale Development Standards

Contractor shall obtain copies of these publications, at Contractor's own expense

1 DIVISION 1

2 **GENERAL REQUIREMENTS**

3

4 **DESCRIPTION OF WORK**

5 (March 13, 1995 WSDOT GSP)

6

18

7 This contract provides for the installation of approximately 4,000' of sanitary sewer pipe from

8 the vicinity of the Thornton/Malloy intersection, then easterly and southerly to the existing

9 sanitary sewer manhole located on the north leg of the 2nd Avenue Roundabout. Work will

10 include trench excavation; sanitary sewer pipe installation; connection to existing sanitary sewer;

11 and other work in accordance with the Contract Plans, Special Provisions, the Standard 12 Specifications, including the amondments therete, and Standard Plans.

Specifications, including the amendments thereto, and Standard Plans.

14 1-01 DEFINITIONS AND TERMS15

16 **1-01.3 Definitions**

17 (January 4, 2016 APWA GSP)

Delete the heading Completion Dates and the three paragraphs that follow it, and replace themwith the following:

21	
22	Dates
23	Bid Opening Date
24	The date on which the Contracting Agency publicly opens and reads the Bids.
25	
26	Award Date
27	The date of the formal decision of the Contracting Agency to accept the lowest
28	responsible and responsive Bidder for the Work.
29	
30	Contract Execution Date
31	The date the Contracting Agency officially binds the Agency to the Contract.
32	
33	Notice to Proceed Date
34	The date stated in the Notice to Proceed on which the Contract time begins.
35	
36	Substantial Completion Date
37	The day the Engineer determines the Contracting Agency has full and unrestricted use
38	and benefit of the facilities, both from the operational and safety standpoint, any
39	remaining traffic disruptions will be rare and brief, and only minor incidental work,
40	replacement of temporary substitute facilities, plant establishment periods, or correction
41	or repair remains for the Physical Completion of the total Contract.
42	
43	Physical Completion Date
44	The day all of the Work is physically completed on the project. All documentation
45	required by the Contract and required by law does not necessarily need to be furnished by

46 the Contractor by this date.

1 **Completion Date** 2 The day all the Work specified in the Contract is completed and all the obligations of the 3 Contractor under the contract are fulfilled by the Contractor. All documentation required 4 by the Contract and required by law must be furnished by the Contractor before 5 establishment of this date. 6 7 Final Acceptance Date 8 The date on which the Contracting Agency accepts the Work as complete. 9 10 Supplement this Section with the following: 11 12 All references in the Standard Specifications, Amendments, or WSDOT General Special 13 Provisions, to the terms "Department of Transportation", "Washington State Transportation Commission", "Commission", "Secretary of Transportation", "Secretary", "Headquarters", 14 15 and "State Treasurer" shall be revised to read "Contracting Agency". 16 17 All references to the terms "State" or "state" shall be revised to read "Contracting Agency" 18 unless the reference is to an administrative agency of the State of Washington, a State statute 19 20 or regulation, or the context reasonably indicates otherwise. 21 All references to "State Materials Laboratory" shall be revised to read "Contracting Agency 22 designated location". 23 24 All references to "final contract voucher certification" shall be interpreted to mean the 25 Contracting Agency form(s) by which final payment is authorized, and final completion and 26 acceptance granted. 27 28 Additive 29 A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, 30 which may, at the discretion of the Contracting Agency, be awarded in addition to the base 31 bid. 32 33 Alternate 34 One of two or more units of work or groups of bid items, identified separately in the Bid 35 Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work. 36 37 38 **Business Dav** 39 A business day is any day from Monday through Friday except holidays as listed in Section 40 1-08.5. 41 42 **Contract Bond** 43 The definition in the Standard Specifications for "Contract Bond" applies to whatever bond 44 form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond. 45

1	Contract Documents
2	See definition for "Contract"
3	
4	Contract Time
5	The period of time established by the terms and conditions of the Contract within which the
6	Work must be physically completed.
7	
8	Notice of Award
9	The written notice from the Contracting Agency to the successful Bidder signifying the
10	Contracting Agency's acceptance of the Bid Proposal
11	conducting rigency succeptance of the Dia rioposal.
12	Notice to Proceed
13	The written notice from the Contracting Agency or Engineer to the Contractor authorizing
14	and directing the Contractor to proceed with the Work and establishing the date on which the
15	Contract time begins
16	
17	Traffic
18	Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and
19	equestrian traffic.
20	
21	1-02 BID PROCEDURES AND CONDITIONS
22	
23	1-02.1 Pregualification of Bidders
24	1
25	Delete this Section and replace it with the following:
26	
27	1-02.1 Qualifications of Bidder
28	(January 24, 2011 APWA GSP)
29	
30	Before award of a public works contract, a bidder must meet at least the minimum
31	qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be
32	awarded a public works project.
33	
34	1-02.2 Plans and Specifications
35	(June 27, 2011 APWA GSP)
36	
37	Delete this section and replace it with the following:
38	
39	Information as to where Bid Documents can be obtained or reviewed can be found in the Call
40	for Bids (Advertisement for Bids) for the work.
41	
42	After award of the contract, plans and specifications will be issued to the Contractor at no cost
43	as detailed below:
44	
45	
46	

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	5	Furnished automatically upon award.
Contract Provisions	5	Furnished automatically upon award.
Large plans (e.g., 22" x 34")	3	Furnished only upon request.

3

4

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

5 **1-02.4(1)** General

6 (March 17, 2010 R&E GSP) 7

8 Section 1-02.4(1) is supplemented with the following: 9

10 If the Bidder finds any discrepancy in, or omission from the specifications or plans, or if there is any doubt as to their meaning, the Bidder shall promptly notify Reichhardt & Ebe 11 12 Engineering, Inc. (360) 354-3687. Any addenda issued during the time of bidding will be 13 numbered consecutively and will be incorporated into these contract documents. The Bidder 14 shall be responsible to ascertain, prior to submittal of a bid proposal that all addenda issued 15 have been received, and are acknowledged on the "Bid Proposal Signature and Addendum 16 Acknowledgment" form. Addendums will only be issued to those contractors appearing on the 17 Plan Holders List at Reichhardt & Ebe Engineering, 423 Front Street, Lynden WA. It will be 18 the responsibility of the contractor to ensure their name appears on the Plan Holders List.

19

Any interpretation or correction of the bid documents will be made only by addendum, and a copy of such addendum will be mailed or delivered to each person whose name appears on the Plan Holders List. The Contracting Agency will not be responsible for any other explanations or interpretations of the bid documents. No oral interpretations by the Contracting Agency of any provision in the bid documents will be considered binding.

25

26 **Pre-Bid Conference**

Due to the nature of the project, the Contracting Agency will hold one pre-bid conference for
 all proposal holders for this project. Subcontractors or other plan holders are encouraged to
 attend.

30

Those prospective bidders wanting to take part in the Pre-Bid Conference shall meet at the Ferndale City Hall, 2095 Main Street, Ferndale, Washington 98248. The meeting will start on **September 21, 2017 at 9:00 AM**. A jobsite visit may follow upon request. Attendance at this Pre-Bid Conference is not mandatory.

2 (March 8, 2013 APWA GSP) 3 The second sentence in the first paragraph is revised to read: 4 5 The Summary of Geotechnical Conditions and the boring logs, if and when included as 6 an appendix to the Special Provisions, shall be considered as part of the Contract. 7 8 1-02.5 **Proposal Forms** 9 (June 27, 2011 APWA GSP) 10 11 Delete this section and replace it with the following: 12 13 The Proposal Form will identify the project and its location and describe the work. It will also 14 list estimated quantities, units of measurement, the items of work, and the materials to be 15 furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call 16 for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; 17 date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's 18 name, address, telephone number, and signature; the bidder's D/M/WBE commitment, if 19 applicable; a State of Washington Contractor's Registration Number; and a Business License 20 Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, 21 preferably in black ink. The required certifications are included as part of the Proposal Form. 22 23 The Contracting Agency reserves the right to arrange the proposal forms with alternates and 24 additives, if to the advantage of the Contracting Agency. The bidder shall bid on all alternates 25 and additives set forth in the Proposal Form unless otherwise specified. 26 27 1-02.6 **Preparation of Proposal** 28 (June 27, 2011 APWA GSP) 29 30 Supplement the second paragraph with the following: 31 32 4. If a minimum bid amount has been established for any item, the unit or lump sum price 33 must equal or exceed the minimum amount stated. 34 5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by 35 the signer of the bid. 36 37 Delete the last paragraph, and replace it with the following: 38 39 The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner. 40 41 A bid by a corporation shall be executed in the corporate name, by the president or a vice 42 president (or other corporate officer accompanied by evidence of authority to sign). 43 44 A bid by a partnership shall be executed in the partnership name, and signed by a partner. A 45 copy of the partnership agreement shall be submitted with the Bid Form if any D/M/WBE 46 requirements are to be satisfied through such an agreement.

1

1-02.4(2) Subsurface Information

1 2 3	A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any D/W/MBE requirements are to be satisfied through such an agreement.
4	
5	1-02.7 Bid Deposit
6	(March 8, 2013 APWA GSP)
7	
8 9	Supplement this section with the following:
10	Bid bonds shall contain the following.
11	1 Contracting Agency-assigned number for the project
12	2 Name of the project
13	3. The Contracting Agency named as obligee:
14	4. The amount of the bid bond stated either as a dollar figure or as a percentage which
15	represents five percent of the maximum bid amount that could be awarded:
16	5. Signature of the bidder's officer empowered to sign official statements. The signature of
17	the person authorized to submit the bid should agree with the signature on the bond, and
18	the title of the person must accompany the said signature;
19	6. The signature of the surety's officer empowered to sign the bond and the power of attorney.
20	
21	If so stated in the Contract Provisions, bidder must use the bond form included in the Contract
22	Provisions.
23	
24	If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.
25	
26	(February 1, 2008, R&E GSP)
27	Section 1-02.7 is supplemented with the following:
28	
29	All bid bonds shall be made payable to the City of Ferndale.
30	
31	1-02.9 Delivery of Proposal
32	(August 15, 2012 APWA GSP, Option A)
33	
34	Delete this section and replace it with the following:
35	
36	Each proposal shall be submitted in a sealed envelope, with the Project Name and Project
37	Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as
38	otherwise required in the Bid Documents, to ensure proper handling and delivery.
39	
40	If the project has FHWA funding and requires DBE written Confirmation Documents or Good
41	Faith Effort Documentation, then to be considered responsive, the Bidder shall submit with
4Z	Didder's completed DDE Utilization Contification from 272.05(A EE example to the
43	Bidder's completed DBE Utilization Certification, form 2/2-056A EF, as required by Section
44 15	1-02.0.
43 16	The Contracting A genery will not onen or consider any Did Drongest that is received offer the
40	The Contracting Agency with not open of consider any bid Proposal that is received after the

time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other
 than that specified in the Call for Bids.

4 1-02.10 Withdrawing, Revising, or Supplementing Proposal

5 (July 23, 2015 APWA GSP) 6

7 Delete this section in its entirety, and replace it with the following:8

- 9 After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may 10 withdraw, revise, or supplement it if:
 - 1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
 - 2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
 - 3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.
- 18 If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before 19 the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened 20 Proposal package to the Bidder. The Bidder must then submit the revised or supplemented 21 package in its entirety. If the Bidder does not submit a revised or supplemented package, then 22 its bid shall be considered withdrawn. 23
- Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, Emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

28 **1-02.12** Public Opening of Proposals

- 29 (*May 4, 2012 APWA GSP*) 30
- 31 Delete this section and replace it with the following: 32

Proposals will be opened and publicly read at the time indicated in the Call for Bids, <u>after</u> the
 deadline(s) for submitting all elements of the Bid Proposal including DBE Written
 Confirmation Documents and/or Good Faith Effort Documentation, unless the Bid opening
 has been delayed or canceled. Bidders, their authorized agents, and other interested parties
 are invited to be present.

38 39

11

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1-02.13 Irregular Proposals (January 4, 2016 APWA GSP)

40 41

42 Delete this section and replace it with the following:43

- 44 1. A proposal will be considered irregular and will be rejected if:
- 45 a. The Bidder is not prequalified when so required;
- b. The authorized proposal form furnished by the Contracting Agency is not used or is

1		altered:
2	c.	The completed proposal form contains any unauthorized additions, deletions,
3		alternate Bids, or conditions:
4	d	The Bidder adds provisions reserving the right to reject or accept the award or enter
5		into the Contract
6	е	A price per unit cannot be determined from the Bid Proposal
7	f.	The Proposal form is not properly executed.
8	σ	The Ridder fails to submit or properly complete a Subcontractor list if applicable as
9	5.	required in Section 1-02 6.
10	h	The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise
11	11.	Certification if applicable as required in Section 1-02.6.
12	i	The Bidder fails to submit written confirmation from each DBE firm listed on the
13	1.	Bidder's completed DBE Utilization Certification that they are in agreement with the
14		hidders DBE participation commitment if applicable as required in Section 1-02.6
15		or if the written confirmation that is submitted fails to meet the requirements of the
16		Special Provisions:
17	i	The Bidder fails to submit DBE Good Faith Effort documentation if applicable as
18	J	required in Section 1-02.6 or if the documentation that is submitted fails to
19		demonstrate that a Good Faith Effort to meet the Condition of Award was made:
20	k	The Bid Proposal does not constitute a definite and unqualified offer to meet the
21	н.	material terms of the Bid invitation or
22	1.	More than one proposal is submitted for the same project from a Bidder under the
23		same or different names
24		
25	2. A Pror	oosal may be considered irregular and may be rejected if:
26	a.	The Proposal does not include a unit price for every Bid item;
27	b.	Any of the unit prices are excessively unbalanced (either above or below the amount
28		of a reasonable Bid) to the potential detriment of the Contracting Agency;
29	c.	Receipt of Addenda is not acknowledged:
30	d.	A member of a joint venture or partnership and the joint venture or partnership submit
31		Proposals for the same project (in such an instance, both Bids may be rejected); or
32	e.	If Proposal form entries are not made in ink.
33		The second s
34	(December	r 29, 2008 R&E GSP)
35	Item 1a is	supplemented with the following:
36		
37	"Bidde	ers do not have to be pre-qualified."
38		
39	1-02.15	Pre Award Information
40	(August 14	4, 2013 APWA GSP)
41	V O	
42	Revise this	s section to read:
43		
44	Before	awarding any contract, the Contracting Agency may require one or more of these
45	items of	or actions of the apparent lowest responsible bidder:
46	1. A c	complete statement of the origin, composition, and manufacture of any or all materials

1		to be used,
2	2.	Samples of these materials for quality and fitness tests,
3	3.	A progress schedule (in a form the Contracting Agency requires) showing the order of
4		and time required for the various phases of the work,
5	4.	A breakdown of costs assigned to any bid item,
6	5.	Attendance at a conference with the Engineer or representatives of the Engineer.
7	6.	Obtain, and furnish a copy of, a business license to do business in the city or county
8		where the work is located.
9	7.	Any other information or action taken that is deemed necessary to ensure that the bidder
10		is the lowest responsible bidder.
11		
12	(Decer	nber 29, 2008 R&E GSP)
13	Section	n 1-02.15 is supplemented with the following:
14		
15	9.	Evidence of financial resources and experience,
16	10.	Organization and equipment the Bidder has available for the performance of the contract
l / 10		by the Bidder and each proposed subcontractor.
18	1 03	Α WADD AND EXECUTION OF CONTDACT
20	1-05	AWARD AND EXECUTION OF CONTRACT
21	1-03.1	Consideration of Bids
22	(Janua	ary 23, 2006 APWA GSP)
23	,	
24	Revise	the first paragraph to read:
25		
26	Af	ter opening and reading proposals, the Contracting Agency will check them for correctness
27	of	extensions of the prices per unit and the total price. If a discrepancy exists between the price
28	per	r unit and the extended amount of any bid item, the price per unit will control. If a minimum
29 20	<u>b10</u>	amount has been established for any item and the bidder's unit or lump sum price is less
30 31	<u>una</u> or	lump sum price, to the minimum specified amount and recalculate the extension. The total
37	$\frac{01}{0f}$	extensions corrected where necessary including sales taxes where applicable and such
33	adu	ditives and/or alternates as selected by the Contracting Agency will be used by the
34	Co	intracting Agency for award purposes and to fix the Awarded Contract Price amount and the
35	am	nount of the contract bond.
36		
37	1-03.3	Execution of Contract
38	(Octob	per 1, 2005 APWA GSP)
39		
40	Revise	e this section to read:
41	a	
42	$\frac{Co}{c}$	pies of the Contract Provisions, including the unsigned Form of Contract, will be available
43	tor	signature by the successful bidder on the first business day following award. The number
44 45	01	copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 5 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

16 **1-03.4 Contract Bond**

17 (July 23, 2015 APWA GSP)

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Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

- 25 1. Be on Contracting Agency-furnished form(s);
- 26 2. Be signed by an approved surety (or sureties) that:
 - a. Is registered with the Washington State Insurance Commissioner, and
 - b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
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 3. Guarantee that the Contractor will perform and comply with all obligations, duties, and
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 - a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
- b. Of the Contractor (or the subcontractors or lower tier subcontractors of the
 Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors,
 material person, or any other person who provides supplies or provisions for carrying
 out the work;
- 4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the
 project under titles 50, 51, and 82 RCW; and
- 43 5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the
 44 bond; and
- 45 6. Be signed by an officer of the Contractor empowered to sign official statements (sole

1 proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by 2 the president or vice president, unless accompanied by written proof of the authority of 3 the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, 4 power of attorney, or a letter to such effect signed by the president or vice president). 5 6 1-03.7 Judicial Review 7 (July 23, 2015 APWA GSP) 8 9 Delete this section and replace it with the following: 10 11 Any decision made by the Contracting Agency regarding the Award and execution of the 12 Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted 13 under Washington Law. Such review, if any, shall be timely filed in the Superior Court of 14 the county where the Contracting Agency headquarters is located, provided that where an 15 action is asserted against a county, RCW 36.01.05 shall control venue and jurisdiction. 16 17 1-04 **SCOPE OF THE WORK** 18 19 1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and 20 Addenda 21 (March 13, 2012 APWA GSP) 22 Revise the second paragraph to read: 23 24 Any inconsistency in the parts of the contract shall be resolved by following this order of 25 precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth): 26 1. Addenda, 27 2. Proposal Form, 28 3. Special Provisions, 29 4. Contract Plans, 30 5. Amendments to the Standard Specifications, 31 6. Standard Specifications, 32 7. Contracting Agency's Standard Plans or Details (if any), and 33 8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction. 34 35 1-04.6 Variation in Estimated Quantities 36 (May 25, 2006 APWA GSP) 37 38 Supplement this Section with the following: 39 40 The quantities for: 41 42 Sawcut ACP 43 Gravel Base 44 **Crushed Surfacing Top Course** HMA Class 1/2" PG 64-22 45

46 Silt Fence

- 1 High Visibility Silt Fence
- 2 Inlet Protection
- 3 Removal of Unsuitable Material Including Haul
- 4 Quarry Spalls

have been entered into the Proposal only to provide a common proposal for bidders. Actual
quantities will be determined in the field as the work progresses, and will be paid at the original
bid price, regardless of final quantity. These bid items shall not be subject to the provisions of
1-04.6 of the Standard Specifications.

1-05 CONTROL OF WORK

1-05.4 Conformity with and Deviations from Plans and Stakes

14 (March 30, 2007 R&E GSP)

16 Section 1-05.4 is supplemented with the following:

Survey stakes will be provided by the Contracting Agency in accordance with this Section, as supplemented by the following:

- 1. Clearing stakes (no vertical control) will be placed at the approximate limits of clearing prior to the Contractor's clearing and grubbing operations.
- 2. Cut/fill stakes will be placed after completion of clearing and grubbing. The Contractor shall designate a qualified supervising grade checker for the project. This grade checker shall meet with the Engineer prior to the beginning of grading operations in order to develop a mutually agreeable staking and notation system for the project.
- 3. Offset stakes and grade hubs will be provided for enclosed drain lines, sanitary sewer mains, water mains, manhole structures and fire hydrants, according to the system agreed on by the grade checker Engineer.
- 4. The Engineer will not provide grade hubs within the traveled way on any section of road concurrent with the Contractor's hauling operations on that particular section of road.
- Grade hubs will be provided only for the top of the ballast course. In order to eliminate
 unnecessary destruction of grade hubs, these hubs will not be placed within the traveled
 way until grading has been completed to plus or minus 0.05 feet, based on cut stake
 information, and until the roadway where the hubs are to be placed has been compacted to
 the satisfaction of the Engineer.
- 6. Staking for curb and gutter will be set on intervals of 25 feet. Curb and gutter grades must conform to within plus or minus 0.02 feet of elevations shown on the Project Plans.
 Deviation from this specification will be cause for rejection of non-conforming work.
 Asphalt finish graded must conform to within plus or minus 0.03 feet of elevations shown on the Project Plans.

- 7. Any additional survey stakes not specified herein or any replacement of survey stakes provided, will be accomplished by the Engineer at the Contractor's expense. The City of Ferndale may require payment from the Contractor for such additional or redundant surveying in an amount not to exceed the labor and equipment costs directly assignable to the additional work. Such costs may be deducted from payments due the Contractor in accordance with the provisions of Section 1-05.4.
 - 8. Any claim by the Contractor for extra compensation by reason of alterations or reconstruction work allegedly due to error in the Engineer's line and grade will not be considered unless the original control points set by the Engineer still exist.

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- **1-05.7** Removal of Defective and Unauthorized Work
- 13 (October 1, 2005 APWA GSP) 14
- 15 Supplement this section with the following:16

17 If the Contractor fails to remedy defective or unauthorized work within the time specified in a
written notice from the Engineer, or fails to perform any part of the work required by the
Contract Documents, the Engineer may correct and remedy such work as may be identified in
the written notice, with Contracting Agency forces or by such other means as the Contracting
Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

- No adjustment in contract time or compensation will be allowed because of the delay in the
 performance of the work attributable to the exercise of the Contracting Agency's rights
 provided by this Section.
- The rights exercised under the provisions of this section shall not diminish the Contracting
 Agency's right to pursue any other avenue for additional remedy or damages with respect to
 the Contractor's failure to perform the work as required.

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1-05.11 Final Inspection

Delete this section and replace it with the following:

1-05.11 Final Inspections and Operational Testing

(October 1, 2005 APWA GSP)

1-05.11(1) Substantial Completion Date

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When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially
complete and ready for its intended use, the Engineer, by written notice to the Contractor, will
set the Substantial Completion Date. If, after this inspection the Engineer does not consider the
work substantially complete and ready for its intended use, the Engineer will, by written notice,
so notify the Contractor giving the reasons therefor.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion
 Date and the Contractor considers the work physically complete and ready for final inspection.

32 1-05.11(2) Final Inspection and Physical Completion Date
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34 When the Contractor considers the work physically complete and ready for final inspection, 35 the Contractor by written notice, shall request the Engineer to schedule a final inspection. The 36 Engineer will set a date for final inspection. The Engineer and the Contractor will then make a 37 final inspection and the Engineer will notify the Contractor in writing of all particulars in which 38 the final inspection reveals the work incomplete or unacceptable. The Contractor shall 39 immediately take such corrective measures as are necessary to remedy the listed deficiencies. 40 Corrective work shall be pursued vigorously, diligently, and without interruption until physical 41 completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected. 42

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the
written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor,
take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

- ¹ The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.
- Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting
 Agency, in writing, of the date upon which the work was considered physically complete. That
 date shall constitute the Physical Completion Date of the contract, but shall not imply
 acceptance of the work or that all the obligations of the Contractor under the contract have
 been fulfilled.
- 89 1-05.11(3) Operational Testing

10 It is the intent of the Contracting Agency to have at the Physical Completion Date a complete 11 12 and operable system. Therefore when the work involves the installation of machinery or other 13 mechanical equipment; street lighting, electrical distribution or signal systems; irrigation 14 systems; buildings; or other similar work it may be desirable for the Engineer to have the 15 Contractor operate and test the work for a period of time after final inspection but prior to the 16 physical completion date. Whenever items of work are listed in the Contract Provisions for 17 operational testing they shall be fully tested under operating conditions for the time period 18 specified to ensure their acceptability prior to the Physical Completion Date. During and 19 following the test period, the Contractor shall correct any items of workmanship, materials, or 20 equipment which prove faulty, or that are not in first class operating condition. Equipment, 21 electrical controls, meters, or other devices and equipment to be tested during this period shall 22 be tested under the observation of the Engineer, so that the Engineer may determine their 23 suitability for the purpose for which they were installed. The Physical Completion Date cannot 24 be established until testing and corrections have been completed to the satisfaction of the 25 26 Engineer.

- The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.
- Operational and test periods, when required by the Engineer, shall not affect a manufacturer's
 guaranties or warranties furnished under the terms of the contract.
- 34 1-05.13 Superintendents, Labor and Equipment of Contractor
- 35 (August 14, 2013 APWA GSP)
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- 37 Delete the sixth and seventh paragraphs of this section.38
- 39 1-05.14 Cooperation with Other Contractors
- 40 Section 1-05.14 is supplemented with the following:
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- 42 **Cascade Natural Gas** (Gas): Utility Construction
- 43 Project Limits: Approximately STA 129+80 to STA140+55
- 44 Cascade Natural Gas (CNG) crews will be on-site during all sanitary sewer work that impacts
- 45 CNG utilities. The CNG crews will adjust and/or secure their equipment that is impacted by 46 the sanitary sewer work.

1 Samson Rope Technologies, Inc: Local Business Project Limits: Approximately STA 129+80 to STA140+55 2 3 Thornton Street is the only access for Samson Rope Technologies, Inc. located at 2090 4 Thornton Street. Passenger cars and truck traffic can be expected during construction. 5 Access must be provided to passenger cars and truck traffic (WB67) during construction. 6 Samson Rope estimates 6-10 trucks per day access their facilities. 7 8 1-05.15 **Method of Serving Notices** 9 (March 25, 2009 APWA GSP) 10 11 Revise the second paragraph to read: 12 13 All correspondence from the Contractor shall be directed to the Project Engineer. All 14 correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under 15 16 the Contract, must be in paper format, hand delivered or sent via mail delivery service to 17 the Project Engineer's office. Electronic copies such as e-mails or electronically delivered 18 copies of correspondence will not constitute such notice and will not comply with the 19 requirements of the Contract. 20 21 Add the following new section: 22 23 1-05.16 Water and Power 24 (October 1, 2005 APWA GSP) 25 26 The Contractor shall make necessary arrangements, and shall bear the costs for power and 27 water necessary for the performance of the work, unless the contract includes power and water 28 as a pay item. 29 30 Add the following new section: 31 32 1-05.17 **Oral Agreements** 33 (October 1, 2005 AWPA GSP) 34 35 No oral agreement or conversation with any officer, agent, or employee of the Contracting 36 Agency, either before or after execution of the contract, shall affect or modify any of the terms 37 or obligations contained in any of the documents comprising the contract. Such oral agreement 38 or conversation shall be considered as unofficial information and in no way binding upon the 39 Contracting Agency, unless subsequently put in writing and signed by the Contracting Agency. 40

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1-06 CONTROL OF MATERIALS

1-06.4 Handling and Storing Materials

(February 1, 2008 R&E GSP)

- Section 1-06.4 is supplemented with the following:
- 8 The Contractor shall make arrangements for storage of equipment and materials. 9
 - No staging area is provided by the Contracting Agency.

12 1-06.6 Recycled Materials

13 (January 4, 2016 APWA GSP) 14

- 15 Delete this section, including its subsections, and replace it with the following:
- The Contractor shall make their best effort to utilize recycled materials in the construction of
 the project. Approval of such material use shall be as detailed elsewhere in the Standard
 Specifications.
- Prior to Physical Completion the Contractor shall report the quantity of recycled materials
 that were utilized in the construction of the project for each of the items listed in Section 903.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass,
 steel furnace slag and other recycled materials (e.g. utilization of on-site material and
 aggregates from concrete returned to the supplier). The Contractor's report shall be provided
 on DOT form 350-075 Recycled Materials Reporting.
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28 1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

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30 1-07.1 Laws to Be Observed

31 (October 1, 2005 APWA GSP) 32

- 33 Supplement this section with the following:
- In cases of conflict between different safety regulations, the more stringent regulation shallapply.
- The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).
- The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital or doctor's care persons including employees who may have here injured on the
- hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the

- Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.
- 4 The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the 5 Contractor's plant, appliances, and methods, and for any damage or injury resulting from their 6 failure, or improper maintenance, use, or operation. The Contractor shall be solely and 7 completely responsible for the conditions of the project site, including safety for all persons 8 and property in the performance of the work. This requirement shall apply continuously, and 9 not be limited to normal working hours. The required or implied duty of the Engineer to 10 conduct construction review of the Contractor's performance does not, and shall not, be 11 intended to include review and adequacy of the Contractor's safety measures in, on, or near 12 the project site. 13
- 14 (August 4, 2011 R&E GSP)
- 15 Confined Space
- 16 Confined spaces are known to exist at the following locations:
- *** All existing storm drain facilities affected by the project and all proposed storm drain
 facilities***
- The Contractor shall be fully responsible for the safety and health of all on-site workers and compliant with Washington Administrative Code (WAC 296-809).
- 22

The Contractor shall prepare and implement a confined space program for each of the confined spaces identified above. The Contractors Confined Space program shall be sent to the contracting agency at least <u>5</u> days prior to the Contractor beginning work in or adjacent to the confined space. No work shall be performed in or adjacent to the confined space until the plan is submitted to the Engineer as required. The Contractor shall communicate with the Project Engineer to ensure a coordinated effort for providing and maintaining a safe worksite for both the Contracting Agency's and Contractor's workers when working in or near a confined space.

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- All costs to prepare and implement the confined space program shall be included in the bid prices for the various items associated with the confined space work.
- 34 1-07.2 State Taxes
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- 36 Delete this section, including its sub-sections, in its entirety and replace it with the following: 37
- 38 **1-07.2 State Sales Tax**
- 39 (June 27, 2011 APWA GSP)
- 40

The Washington State Department of Revenue has issued special rules on the State sales tax.
Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should
contact the Washington State Department of Revenue for answers to questions in this area.
The Contracting Agency will not adjust its payment if the Contractor bases a bid on a
misunderstood tax liability.

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The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

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1-07.2(1) State Sales Tax — Rule 171

15 WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, 16 roads, etc., which are owned by a municipal corporation, or political subdivision of the state, 17 or by the United States, and which are used primarily for foot or vehicular traffic. This includes 18 storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work 19 20 performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in 21 the various unit bid item prices, or other contract amounts, including those that the Contractor 22 pays on the purchase of the materials, equipment, or supplies used or consumed in doing the 23 work. 24

1-07.2(2) State Sales Tax — Rule 170

26 27 WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or 28 existing buildings, or other structures, upon real property. This includes, but is not limited to, 29 the construction of streets, roads, highways, etc., owned by the state of Washington; water 30 mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; 31 32 telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above 33 streets or roads, unless such power lines become a part of a street or road lighting system; and 34 installing or attaching of any article of tangible personal property in or to real property, whether 35 or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

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1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

1-07.6 Permits and Licenses

8 (February 1, 2008 R&E GSP)

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Department of Ecology Permits For Construction

The Contractor shall transfer the NPDES Construction Stormwater General Permit issued for this project to the Contractor's name. The transfer will be a "Complete Transfer". Prior to the Contractor beginning any work at the site, the Contractor shall provide the Engineer with documents showing that the "Complete Transfer" has been approved.

All costs involved with the satisfying the NPDES Construction Stormwater General Permit requirements shall be incidental to the various bid items.

20 1-07.15 Temporary Water Pollution/Erosion Control

21 (February 1, 2008 R&E GSP) 22

23 Section 1-07.15 is supplemented with the following:24

Erosion Control shall include but not be limited to preventing storm water which has come in contact with disturbed or excavated areas from entering the storm drainage system. The contractor will not allow flow from existing ditches or ground water to come in contact with disturbed or excavated areas. The contractor shall be required to take any means necessary to prevent, control and stop water pollution or erosion within the project as shown on the Plans.

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1-07.16 Protection and Restoration of Property

- 1-07.16(4) Archaeological and Historical Objects
- The third paragraph of Section 1-07.16(4) is deleted and replaced with the following:
- (September 12, 2017 R&E GSP)

If the Contractor can demonstrate that no Work can be performed in any other area of the project site, payment will be made to the Contractor for standby time required due to archaeological findings.

42 (*December 6, 2004 WSDOT GSP*)

43 Section 1-07.16(4) is supplemented with the following:

45 The project area potentially contains archaeological or historical objects that may have 46 significance from a historical or scientific standpoint. To protect these objects from damage or destruction, the Contracting Agency, at its discretion and expense, may monitor the Contractor's operations, conduct various site testing and perform recovery and removal of such objects when necessary.

The Contractor may be required to conduct its operations in a manner that will accommodate such activities, including the reserving of portions of the work area for site testing, exploratory operations and recovery and removal of such objects as directed by the Engineer. If such activities are performed by consultants retained by the Contracting Agency, the Contractor shall provide them adequate access to the project site.

Added work necessary to uncover, fence, dewater, or otherwise protect or assist in such testing, exploratory operations and salvaging of the objects as ordered by the Engineer shall be paid by force account as provided in Section 1-09.6. If the discovery and salvaging activities require the Engineer to suspend the Contractor's work, any adjustment in time will be determined by the Engineer pursuant to Section 1-08.8.

(September 12, 2017 R&E GSP)

To provide a common basis for all bidders, the Contracting Agency has entered an amount for the items "Archaeological and Historical Salvage" and "Standby Time Caused by Archaeological Findings" in the Proposal to become a part of the total bid by the Contractor.

1-07.16(5) Payment

25 Section 1-07.16(5) is supplemented with the following: 26

> Payment for the item "Archaeological and Historical Salvage" shall be full compensation for all labor, tools, equipment, materials, and subcontractor work needed to complete the work as directed by the Engineer. This item shall be paid in accordance with Section 1-09.6 Force Account.

(September 12, 2017 R&E GSP)

Payment for the item "Standby Time Caused by Archaeological Findings" shall be full compensation for all labor, tools, equipment, materials, and subcontractor work needed to complete the work as directed by the Engineer. This item shall be paid in accordance with Section 1-09.6 Force Account.

39 1-07.15 Temporary Water Pollution/Erosion Control

- 40 (February 1, 2008 R&E GSP)
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42 Section 1-07.15 is supplemented with the following:

Erosion Control shall include but not be limited to preventing storm water which has come in contact with disturbed or excavated areas from entering the storm drainage system. The contractor will not allow flow from existing ditches or ground water to come in contact with

- 1 disturbed or excavated areas. The contractor shall be required to take any means necessary to 2 prevent, control and stop water pollution or erosion within the project as shown on the Plans.
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1-07.17 **Utilities and Similar Facilities**

(April 2, 2007 WSDOT GSP)

- 7 Section 1-07.17 is supplemented with the following: 8
- 9 Locations and dimensions shown in the Plans for existing facilities are in accordance with available information obtained without uncovering, measuring, or other verification. 10 11
 - The following addresses and telephone numbers of utility companies known or suspected of having facilities within the project limits are supplied for the Contractor's convenience:
- 15 Puget Sound Energy, 1660 Park Lane, Burlington, WA 98233 16 Jane Major, (360)-766-5571 17
 - Frontier Communications, 595 Pease Road, Burlington, WA 98233 Barb Robinson, (360) 757-7624
 - Comcast Cable, 400 Sequoia Drive, Bellingham, WA 98226 Bill Inama (360) 527-8241
- 23 Thomas Hall (253) 439-8955 24
 - Cascade Natural Gas, 1910 Racine Street, Bellingham, WA 98229 Brandon Haugnes, (360)-733-5986
 - Black Rock Cable, Inc., 3229 Northshore Rd., Bellingham, WA 98226 Randy Wilson, (360) 734-7930
- City of Ferndale Public Works, 2095 Main Street, Ferndale, WA 98248 32 Bo Westford, (360)-384-4006
- 34 1-07.18 Public Liability and Property Damage Insurance
- 35 36 Delete this section in its entirety, and replace it with the following:
- 37 38 1-07.18 Insurance
- 39 (January 4, 2016 APWA GSP)
- 40
- 41 **1-07.18(1)** General Requirements
- A. The Contractor shall procure and maintain the insurance described in all subsections of 42
- 43 section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of
- 44 not less than A-: VII and licensed to do business in the State of Washington. The

Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

7 8 9 C. If any insurance policy is written on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy 10 shall state that coverage is claims made, and state the retroactive date. Claims-made form 11 coverage shall be maintained by the Contractor for a minimum of 36 months following the 12 Completion Date or earlier termination of this Contract, and the Contractor shall annually 13 provide the Contracting Agency with proof of renewal. If renewal of the claims made form 14 of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase 15 an extended reporting period ("tail") or execute another form of guarantee acceptable to the 16 Contracting Agency to assure financial responsibility for liability for services performed. 17

- D. The Contractor's Automobile Liability, Commercial General Liability and Excess or
 Umbrella Liability insurance policies shall be primary and non-contributory insurance as
 respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage.
 Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting
 Agency shall be excess of the Contractor's insurance and shall not contribute with it.
- 23

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- E. The Contractor shall provide the Contracting Agency and all additional insureds with written
 notice of any policy cancellation, within two business days of their receipt of such notice.
- G. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency
- H. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.
- 38
- I. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.
- 40

41 **1-07.18(2)** Additional Insured 42 All insurance policies with the e

- All insurance policies, with the exception of Workers Compensation, and of Professional
 Liability and Builder's Risk (if required by this Contract) shall name the following listed entities
 as additional insured(s) using the forms or endorsements required herein:
- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers

- 1 The above-listed entities shall be additional insured(s) for the full available limits of liability
- 2 maintained by the Contractor, irrespective of whether such limits maintained by the Contractor
- are greater than those required by this Contract, and irrespective of whether the Certificate of
- Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those
 maintained by the Contractor.
- 5 6
- 7 For Commercial General Liability insurance coverage, the required additional insured
- 8 endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and
- 9 CG 20 37 10 01 for completed operations.
- 10

11 **1-07.18(3) Subcontractors**

- 12 The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that
- 13 complies with all applicable requirements of the Contractor-provided insurance as set forth
- herein, except the Contractor shall have sole responsibility for determining the limits of coveragerequired to be obtained by Subcontractors.
- 16
- 17 The Contractor shall ensure that all Subcontractors of every tier add all entities listed in
- 18 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that
- 19 section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for angoing anarctions and CC 20 27 10 01 for completed energians
- for ongoing operations and CG 20 37 10 01 for completed operations.
- 21

Upon request by the Contracting Agency, the Contractor shall forward to the ContractingAgency evidence of insurance and copies of the additional insured endorsements of each

24 Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

2526 1-07.18(4) Verification of Coverage

- 27 The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and
- 28 endorsements for each policy of insurance meeting the requirements set forth herein when the
- 29 Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand
- 30 such verification of coverage with these insurance requirements or failure of Contracting Agency
- 31 to identify a deficiency from the insurance documentation provided shall not be construed as a 32 waiver of Contractor's obligation to maintain such insurance.
- 32 33
- 34 Verification of coverage shall include:
- ³⁵ 1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
- Copies of all endorsements naming Contracting Agency and all other entities listed in
 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
- 40 3. Any other amendatory endorsements to show the coverage required herein.
- 4. A notation of coverage enhancements on the Certificate of Insurance shall <u>not</u> satisfy these
 42 requirements actual endorsements must be submitted.
- 43
- 44 Upon request by the Contracting Agency, the Contractor shall forward to the Contracting
- 45 Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is

- 1 required on this Project, a full and certified copy of that policy is required when the Contractor
- 2 delivers the signed Contract for the work.
- 3

4 **1-07.18(5)** Coverages and Limits

- 5 The insurance shall provide the minimum coverages and limits set forth below. Contractor's
- 6 maintenance of insurance, its scope of coverage, and limits as required herein shall not be
- 7 construed to limit the liability of the Contractor to the coverage provided by such insurance, or
- 8 otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.
- 9
- 10 All deductibles and self-insured retentions must be disclosed and are subject to approval by the
 - 11 Contracting Agency. The cost of any claim payments falling within the deductible or self-
 - 12 insured retention shall be the responsibility of the Contractor. In the event an additional insured
 - 13 incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or
 - 14 self-insured retention shall be the responsibility of the Contractor.
 - 15

16 1-07.18(5)A Commercial General Liability

- 17 Commercial General Liability insurance shall be written on coverage forms at least as broad as
- 18 ISO occurrence form CG 00 01, including but not limited to liability arising from premises,
- 19 operations, stop gap liability, independent contractors, products-completed operations, personal
- 20 and advertising injury, and liability assumed under an insured contract. There shall be no
- 21 exclusion for liability arising from explosion, collapse or underground property damage.
- 22
- The Commercial General Liability insurance shall be endorsed to provide a per project general
 aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.
- 25
- Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's
 completed operations for at least three years following Substantial Completion of the Work.
- 28
- 29 Such policy must provide the following minimum limits:
- 30\$1,000,000Each Occurrence
- 31 \$2,000,000 General Aggregate
- 32 \$2,000,000 Products & Completed Operations Aggregate
- 33\$1,000,000Personal & Advertising Injury each offence
- 34 \$1,000,000 Stop Gap / Employers' Liability each accident
 35

36 1-07.18(5)B Automobile Liability

- 37 Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be
- 38 written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the
- transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48
- 40 endorsements.41
- 42 Such policy must provide the following minimum limit:
- 43 \$1,000,000 Combined single limit each accident
- 44
- 45

1 1-07.18(5)C Workers' Compensation

2 The Contractor shall comply with Workers' Compensation coverage as required by the Industrial3 Insurance laws of the State of Washington.

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Section 1-07.18 is supplemented with the following:

7 (April 1, 2013)

8 **Relations With Railroad**

Railroad Company, as used in the following specifications, shall be the railroad company or
 companies, or railway company or companies specified in these Special Provisions. The
 following provisions, though referring to a single Railroad Company, shall be applicable to
 each of the following railroad companies or railway companies:

14 ***BNSF Railway Company***

Protection of Railroad Property

The Contractor shall exercise care in all operations and shall, at the Contractor's expense, 17 protect the property of the Railroad Company and the Company's appurtenances, 18 19 property in its custody, or persons lawfully upon its right of way, from damage, 20 destruction, interference or injury caused by the Contractor's operations. The Contractor 21 shall prosecute the work to not interfere with the Railroad Company or its appurtenances, 22 or any of the Railroad Company's trains or facilities, and shall complete the work to a 23 condition that shall not interfere with or menace the integrity or safe and successful 24 operations of the Railroad Company or its appurtenances, or any of the Railroad 25 Company's trains or facilities. 26

- The Contractor shall not transport equipment, machinery, or materials across the Railroad
 Company's tracks, except at a public crossing, without the written consent of the Railroad
 Company.
- The Contractor shall keep the right of way and ditches of the Railroad Company open and clean from any deposits or debris resulting from its operations. The Contractor shall be responsible for the cost to clean and restore ballast of the Railroad Company which is disturbed or becomes fouled with dirt or materials when such deposits or damage result from the Contractor's operations, except as provided elsewhere.
- The Contractor's work shall be conducted in such a manner that there will be a minimum of interference with the operation of railroad traffic. The Railroad Company will specify what periods will be allowed the Contractor for executing any part of the work in which the Railroad Company's tracks will be obstructed or made unsafe for operation of railroad traffic.
- In the event that an emergency occurs in connection with the work specified, the Railroad
 Company reserves the right to do any and all work that may be necessary to maintain
 railroad traffic. If the emergency is caused by the Contractor, the Contractor shall pay
 the Railroad Company for the cost of such emergency work.

1 2 3	Protective services to protect the Railroad Company's facilities, property, and movement of its trains or engines, including railroad flagging and other devices, may be required by the Railroad Company as a result of the Contractor's operations.
4 5 6 7 8 9	The nature and extent of protective services, personnel and other measures required will in all cases be determined by the Railroad Company. Nothing in these specifications will limit the Railroad Company's right to determine and assign the number of personnel, the classes of personnel for protective services, nor other protective measures it deems necessary.
10 11 12 13 14 15 16 17 18	When, in the opinion of the Railroad Company, the services of flaggers or inspectors are necessary for the protection of the Railroad Company's facilities by reason of the Contractor's operations, the Railroad Company will furnish such flaggers or inspectors as may be required. The Contractor shall notify the Railroad Company a minimum of ***10 business days*** in advance of whenever the Contractor is about to perform work within Railroad Company property or within 25 feet of the tracks to enable the Railroad Company to provide flagging or other protective services.
19 20 21	The Railroad Company's contact is: *** Karl Jay, phone: 360-922-1401; e-mail address: karl.jay@bnsf.com***
22 23 24 25	No act of the Railroad Company in supervising or approving any work shall reduce or in any way affect the liability of the Contractor for damages, expense, or cost which may result to the Railroad Company from the construction of this Contract.
26 27 28 29	Unless otherwise provided, all personnel assigned by the Railroad Company, other than those engaged in performing work by the Railroad Company as listed under Construction Work by Railroad Company, will be considered protective personnel.
30 31 32 33 34	In general, the Railroad Company will furnish protective services whenever any of the Contractor's operations take place within or near railroad right of way and, in the opinion of the Railroad Company's representative, could endanger railroad facilities or create a hazard to railroad operations.
35 36 37 38 39 40	The Railroad Company's policy for assignment of railroad flaggers requires that the flagging position is established for fixed work days and times. Any railroad flagging performed outside of these parameters may be subject to overtime costs. The Contractor shall verify with the Railroad Company what categories of railroad flagging constitute overtime work and obtain prior authorization from the Project Engineer before
41 42 43	coordinating with the Railroad Company for flagging requiring overtime payments. The Contractor shall submit to the Railroad Company and the Project Engineer, in
44 45 46	writing, an itinerary of work within the Railroad Company's right of way or otherwise requiring a Railroad Company flagger for the following week. If such work spans multiple weeks, the itinerary shall be provided in advance of each work week.

1	There will be no cost to the Contractor for the railroad protective services, unless:
3	• Such services result from the Contractor's failure to comply with the terms and
4 5	Right of Entry Agreements with the Railroad Company.
6	
7	• The Contractor fails to obtain authorization from the Project Engineer prior to
8	coordinating with the Railroad Company for any flagging requiring overtime
9	payments.
10	
11	• The Contractor arranges for assignment of a railroad flagger and alters Project
12	work so that a flagger is no longer needed, and adequate advance notice is not
13	provided to the Railroad Company of such change in the need for a flagger (<i>i.e.</i>
14	one is not required)
15	one is not required).
17	Construction Work by Railroad Company
18	The work by the Railroad Company as described below will be performed by the Railroad
19	Company with its own forces at no cost to the Contractor:
20	r , , , , , , , , , , , , , , , , , , ,
21	***NONE***
22	
23	All work which is performed by the Railroad Company at the Contractor's request and
24	which is for the Contractor's benefit or convenience shall be at the Contractor's expense
25	and the Contractor shall reimburse the Railroad Company for all costs for such work.
26	
27	The Contractor shall cooperate with the Railroad Company and so conduct operations
28	that the necessary reconstruction of its facilities and the removal of existing facilities can
29	be accomplished without interruption of service.
30	Contraction of any 2 Diality of Frating A management
31 22	No work shall be commoneed within the Bailroad Commony's Property until the
32	Contractor has executed delivered and received in return the fully executed Contractor's
34	Right-of-Entry Agreement from the Railroad Company and has obtained all of the
35	insurance required by the Railroad Company as specified therein All work within the
36	Railroad Company's right of way or within 25 feet of a public railroad grade crossing
37	shall be in accordance with Railroad's Contractor Requirements and the Contractor's
38	Right of Entry Agreement (See Appendix ***BNSF Pipeline License Agreement ***).
39	
40	The Contractor, it subcontractors or agents, shall at its own expense, obtain and maintain
41	in force all insurance required by Railroad until the completion date of the contract as
42	described in Section 1-08.5 except as stated herein.
43	
44	When all the work involving construction activities within or immediately adjacent to the
45	railroad right of way is completed, the Contractor may make a written request to the
46	Engineer to be relieved of the responsibility to continue all or part of the insurance

specified above. If the Engineer deems the portion of the work in that area is complete, 2 the Engineer may approve the Contractor's request. However, if for any reason the 3 Contractor resumes or starts any new work in that area (including being ordered to do so 4 by the Engineer), the insurance shall be reinstated by the Contractor before the work is started. If the insurance must be reinstated because of the Contractor's operations or failure of the Contractor to perform all the contract requirements, the costs shall be the responsibility of the Contractor. If the insurance must be reinstated because of changes to the contract, the costs will be considered in accordance with Section 1-04.4. 9

(August 7, 2006)

11 Contractor's Right of Entry and Insurance Requirements - BNSF

12 No work shall commence within BNSF Railway Company (BNSF) right of way until the 13 Contractor has executed, delivered, and received in return the fully executed Contractor's 14 Right-of-Entry Agreement from BNSF, and has obtained all of the insurance required by the 15 Railroad. All work within BNSF's right of way shall be in accordance with BNSF's 16 Contractor Requirements and the Contractor's Right of Entry Agreement (See Appendices).

18 The Contractor, its Subcontractors or agents, shall at its own expense, obtain and maintain in force all insurance required by BNSF until the completion date of the contract as described 19 20 in Section 1-08.5 except as stated herein.

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22 When all the work involving construction activities within or immediately adjacent to the 23 Railroad right of way is completed, the Contractor may make a written request to the 24 Engineer to be relieved of the responsibility to continue the insurance required by BNSF. If the Engineer deems the portion of the work in that area is complete, the Engineer may 25 26 approve the Contractor's request. However, if for any reason the Contractor resumes or 27 starts any new work in that area (including being ordered to do so by the Engineer), the 28 insurance shall be reinstated by the Contractor before the work is started. If the insurance 29 must be reinstated because of the Contractor's activities or failure of the Contractor to 30 perform all the contract requirements, the costs shall be the responsibility of the Contractor. 31 If the insurance must be reinstated because of changes to the contract, the costs will be 32 considered in accordance with Section 1-04.4.

- 33
- 34 1-07.23 **Public Convenience and Safety** 35

36 **1-07.23(1)** Construction under Traffic

- 37 (January 2, 2012 WSDOT GSP)
- 38
- 39 Section 1-07.23(1) is supplemented with the following: 40

41 Work Zone Clear Zone

42 The Work Zone Clear Zone (WZCZ) applies during working and nonworking hours. The 43 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 44 45 operations that are actively in progress shall be in accordance with adopted and approved Traffic Control Plans, and other contract requirements. 46

47

- 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.
- 5

6 During actual hours of work, unless protected as described above, only materials 7 absolutely necessary to construction shall be within the WZCZ and only construction 8 vehicles absolutely necessary to construction shall be allowed within the WZCZ or 9 allowed to stop or park on the shoulder of the roadway.

10

11 The Contractor's nonessential vehicles and employees private vehicles shall not be 12 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.

- 15 Minimum WZCZ distances are measured from the edge of traveled way and will be 16 determined as follows:
- 17

Regulatory Posted Speed	Distance From Traveled Way (Feet)
35 mph or less	10 *
40 mph	15
45 to 55 mph	20
60 mph or greater	30

18 19

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* or 2-feet beyond the outside edge of sidewalk

Minimum Work Zone Clear Zone Distance

- 21 22 (August 7, 2006 WSDOT GSP)
- Lane closures are subject to the following restrictions:
- 24

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer
 may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any
 change in the closure hours.

No lane closures will be allowed on a holiday or holiday weekend, or after 12:00 PM (noon)
on a day prior to a holiday or holiday weekend. Holidays that occur on Friday, Saturday,
Sunday or Monday are considered a holiday weekend.

- 33 (December 8, 2008 R&E GSP)
- 34 Section 1-07.23(1) is supplemented with the following:
- 35 36 Constr

36 Construction vehicles using a closed traffic lane shall travel only in the normal direction of 37 traffic flow unless expressly allowed in an approved traffic control plan. Construction vehicles 38 shall be equipped with flashing or rotating amber lights

38 shall be equipped with flashing or rotating amber lights.

39

- 1 Work over an open lane of traffic will not be allowed, unless a plan for the protection of the 2 traveling public from objects falling onto the traveled way is approved by the Engineer. This 3 protection shall remain in place during construction and meet minimum vertical clearance for 4 the highway.
- 5 6 **Controlled Access**

No special access or egress will be allowed the Contractor other than normal legal movements
or as shown in the plans.

9

10 **Pedestrian Access**

11 The Contractor shall keep all pedestrian routes and access point (including sidewalks and 12 crosswalks when located within the project limits) open and clear at all times unless permitted 13 otherwise by the Engineer in an approved traffic control plan.

1415 Signs and Traffic Control Devices

All signs and traffic control devices for the permitted closures shall only be installed during
 the hours specified on the plans. Construction signs, if placed earlier than the specified hours
 of closure, shall be turned or covered so as not to be visible to motorists.

20 Hours of Darkness

The Contractor shall, at no additional cost to the Contracting Agency, make all arrangements for operations during hours of darkness. A portable illumination system, which will adequately illuminate the entire work area shall be provided. Flagger stations and advance warning signs shall be illuminated with a minimum **150-watt** floodlight and to the satisfaction of the Engineer. Flares are for emergency use and are not considered a proper method of illumination.

27

28 Hour Adjustment

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer
 may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any
 change in the closures hours.

33 Advance Notification

34 The Contractor shall be responsible for notifying private property owners, or tenants, five (5) 35 working days in advance of scheduled interruptions of access to private roads or driveways. 36 The Contractor shall notify the Engineer three (3) working days in advance of scheduled interruptions of access to private road or driveways. The Contractor shall only interrupt access 37 38 to one half of any private road or driveway. The Contractor shall notify private property 39 owners, or tenants, by having a representative of the Contractor personally contact the private property owner or tenant. If the property owner or tenant is not available, the Contractor shall 40 41 leave a door hanger notice indicating the commencement date of work, duration of work, the type of work being done, and the Contractor's and Engineer's phone number and address for 42 43 questions and concerns. The Engineer shall be provided adequate time to review, comment, 44 and approve the door hanger notice prior to the Contractor placing any notices. Access shall 45 be restored as soon as possible, but not later than the end of each working day. Any exception will only be allowed with the approval of the private property owner, or tenant, and the 46

Engineer. All costs involved with public notification shall be incidental to the various bid
 items.
 items.

The Contractor shall notify the Engineer in writing 5 working days in advance of any lane closure, sidewalk closure, or both.

7 **Public Notification**

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8 The Contractor shall notify the local fire, police, emergency service, and city engineering 9 departments; transit companies; and the affected school district(s) in writing a minimum of 5 10 working days prior to each closure. The Contractor shall furnish copies of these notifications 11 to the Engineer. 12

13 1-07.24 Rights of Way

14 (July 23, 2015 APWA GSP)

16 Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are
 indicated in the Plans. The Contractor's construction activities shall be confined within these
 limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way
and easements, both permanent and temporary, necessary for carrying out the work.
Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

33 Whenever easements or rights of entry have not been acquired prior to advertising, these 34 areas are so noted in the Plans. The Contractor shall not proceed with any portion of the 35 work in areas where right of way, easements or rights of entry have not been acquired until 36 the Engineer certifies to the Contractor that the right of way or easement is available or that 37 the right of entry has been received. If the Contractor is delayed due to acts of omission on 38 the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the 39 Contractor will be entitled to an extension of time. The Contractor agrees that such delay 40 shall not be a breach of contract.

41

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This
includes entry onto easements and private property where private improvements must be
adjusted.

1 The Contractor shall be responsible for providing, without expense or liability to the 2 Contracting Agency, any additional land and access thereto that the Contractor may desire 3 for temporary construction facilities, storage of materials, or other Contractor needs. 4 However, before using any private property, whether adjoining the work or not, the 5 Contractor shall file with the Engineer a written permission of the private property owner, 6 and, upon vacating the premises, a written release from the property owner of each property 7 disturbed or otherwise interfered with by reasons of construction pursued under this contract. 8 The statement shall be signed by the private property owner, or proper authority acting for 9 the owner of the private property affected, stating that permission has been granted to use the 10 property and all necessary permits have been obtained or, in the case of a release, that the 11 restoration of the property has been satisfactorily accomplished. The statement shall include 12 the parcel number, address, and date of signature. Written releases must be filed with the 13 Engineer before the Completion Date will be established. 14

15 1-07.26 Personal Liability of Public Officers

16 (February 1, 2008 R&E GSP) 17

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18 Section 1-07.26 is revised to read:

Neither the Mayor, the Ferndale City Council, employees of the City, or the Engineer shall be personally liable for any acts or failure to act in connection with the Contract, it being understood that in such matters, they are acting solely as agents of the City of Ferndale.

24 1-08 PROSECUTION AND PROGRESS

26 Add the following new section:

1-08.0 Preliminary Matters

(May 25, 2006 APWA GSP)

31 Add the following new section: 32

1-08.0(1) Preconstruction Conference

34 (October 10, 2008 APWA GSP)

Prior to the Contractor beginning the work, a preconstruction conference will be held between
 the Contractor, the Engineer and such other interested parties as may be invited. The purpose
 of the preconstruction conference will be:

- To review the initial progress schedule;
 To establish a working understanding among the various parties associated or
- 41 affected by the work;
 42 3. To establish and review procedures for progress payment, notifications, approvals,
 43 submittals, etc.;
- 44 4. To establish normal working hours for the work;
- 45 5. To review safety standards and traffic control; and
- 46 6. To discuss such other related items as may be pertinent to the work.

1	The Contractor shall prepare and submit at the preconstruction conference the following:
2	1. A breakdown of all lump sum items;
3	2. A preliminary schedule of working drawing submittals; and
4	3. A list of material sources for approval if applicable.
5	
6 7	Add the following new section:
8	1-08.0(2) Hours of Work
9	(December 8, 2014 APWA GSP)
10	
11	Except in the case of emergency or unless otherwise approved by the Engineer, the normal
12	working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and
13	6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires
14	different than the normal working hours stated above, the request must be submitted in
15	writing prior to the preconstruction conference, subject to the provisions below. The
16	working hours for the Contract shall be established at or prior to the preconstruction
17	conference.
18	
19	All working hours and days are also subject to local permit and ordinance conditions (such a
20 21	noise ordinances).
22	
23	If the Contractor wishes to deviate from the established working hours, the Contractor shall
24	submit a written request to the Engineer for consideration. This request shall state what
25	nours are being requested, and why. Requests shall be submitted for review no fater than senses on the working device prior to the dev(g) the Contractor is requesting to change the
26	bours
27	nours.
28	If the Contracting Agency approves such a deviation, such approval may be subject to certain
29	other conditions, which will be detailed in writing. For example:
30	1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting
31	Agency for the costs in excess of straight-time costs for Contracting Agency
32	representatives who worked during such times. (The Engineer may require
33	designated representatives to be present during the work. Representatives who may
34	be deemed necessary by the Engineer include, but are not limited to: survey crews;
35	personnel from the Contracting Agency's material testing lab; inspectors; and other
36	Contracting Agency employees or third party consultants when, in the opinion of the
37	Engineer, such work necessitates their presence.)
38	2. Considering the work performed on Saturdays, Sundays, and holidays as working
39	days with regard to the contract time.
40	5. Considering multiple work shifts as multiple working days with respect to contract
41	time even though the multiple shifts occur in a single 24-hour period.
4Z	4. If a 4-10 work schedule is requested and approved the non-working day for the week
45	will be charged as a working day.
44 15	5. If Davis Dacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll
4J 16	recorded property on certified payron
40	

1 1-08.1 Subcontracting

2 Section 1-08.1 is supplemented with the following:3

Prior to any subcontractor or lower tier subcontractor beginning work, the Contractor shall
 submit to the Engineer a certification that a written agreement between the Contractor and the
 subcontractor or between the subcontractor and any lower tier subcontractor has been
 executed.

- 9 A subcontractor or lower tier subcontractor will not be permitted to perform any work under 10 the contract until the following documents have been completed and submitted to the 11 Engineer:
- 12 13

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- 1. Request to Sublet Work (Form 421-012), and
- 2. Contractor and Subcontractor or Lower Tier Subcontractor Certification.

16 The Contractor's records pertaining to the requirements of this Special Provision shall be open 17 to inspection or audit by representatives of the Contracting Agency during the life of the 18 contract and for a period of not less than three years after the date of acceptance of the contract. 19 The Contractor shall retain these records for that period. The Contractor shall also guarantee 20 that these records of all subcontractors and lower tier subcontractors shall be available and 21 open to similar inspection or audit for the same time period. 22

23 **1-08.3(2)** A Type A Progress Schedule

24 (March 13, 2012 APWA GSP)

26 Revise this section to read:

The Contractor shall submit **\$\$3\$\$** copies of a Type A Progress Schedule no later than <u>at the</u> <u>preconstruction conference</u>, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

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1-08.4 Prosecution of Work

- 37 Delete this section in its entirety, and replace it with the following:
- ³⁸ **1-08.4 Prosecution of Work**
- 39
- 40 Delete this section and replace it with the following:

41 **1-08.4 Notice to Proceed and Prosecution of Work**

- 42 (July 23, 2015 APWA GSP)
- 43
- 44 Notice to Proceed will be given after the contract has been executed and the contract bond
- 45 and evidence of insurance have been approved and filed by the Contracting Agency. The
- 46 Contractor shall not commence with the work until the Notice to Proceed has been given by
the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

8 When shown in the Plans, the first order of work shall be the installation of high visibility 9 fencing to delineate all areas for protection or restoration, as described in the Contract. 10 Installation of high visibility fencing adjacent to the roadway shall occur after the placement 11 of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon 12 construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No 13 other work shall be performed on the site until the Contracting Agency has accepted the 14 installation of high visibility fencing, as described in the Contract.

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(February 1, 2008 R&E GSP)

Section 1-08.4 is supplemented with the following:

Project Meetings

The Engineer shall be responsible for preparation of agenda, preparation of minutes and distribution of documentation. One set of the documentation will be sent to each participant. All meetings will be held at on-site, unless otherwise agreed upon.

Progress Meetings

Regular Progress Meetings shall be schedule by the Engineer. Progress Meetings shall be held weekly or as otherwise schedule by the Engineer.

The Progress Meeting agenda shall include, but not be limited to:

- 1. Review minutes of previous meeting, amend minutes if necessary, and accept minutes.
- 2. Review unresolved questions and issues from previous Progress Meetings and further consider those questions and issues.
- 3. Review new questions and issues regarding delays, coordination with other agencies, changed conditions or work scope, interferences, utilities, and requests for information (RFI's).
 - 4. Review corrective measures to regain projected schedule
- 5. Review status of submittals, RFI's, change issues, as-built documentation, and other correspondence.
 - 6. Review effects of proposed changes on progress schedule and coordination
- Contractor to present updated look-ahead / as-built schedule describing activities to occur in the upcoming three weeks, and to document the as-built schedule for work accomplished since the prior meeting. Contractor to present the updated schedule at each regular weekly progress meeting.

4445 Coordination Meetings

46 Coordination Meetings will commence after the NTP has been issued. The purpose of the 47 Coordination Meetings is to coordinate the Contractor's Work with the work being done

- concurrently at the Site by others. Coordination meetings will be scheduled in conjunction
 with progress meetings when appropriate.
 - Additional Meetings

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9 10 Additional meetings will be scheduled as necessary for the completion of various portions of the Work. Meetings will include pre-installation, pre-testing or other purpose as required by the specifications, conditions on the jobsite, or as requested by the Engineer or the project team.

- All costs involved with the various meetings shall be incidental to the various bid items.
- 11 12 September 15, 2008 R&E GSP) 13 **Order of Work** 14 15 Section 1 Sanitary Work 16 The Contractor shall substantially complete the following work as shown on the Plans prior to connecting the existing sanitary sewer force main into sanitary sewer manhole S4: 17 18 19 • Installation of the 18" sanitary sewer pipe from approximately STA 137+30 to STA 20 168 + 2121 • Connection to the existing sanitary sewer manhole at approximately STA 168+21 • Installation of sanitary sewer manholes S4 to S15 22 23 • Installation of drop manhole force main connection at sanitary sewer manhole S4 24 Testing and acceptance of the sanitary sewer main system from approximately STA 137+30 to STA 168+21, which includes but is not limited to connection to the 25 26 existing sanitary sewer manhole, sanitary sewer manholes S4 to S15, drop manhole 27 force main connection, 18" sanitary sewer pipe, and side sewers. 28 29 Other work on this Section includes, but is not limited to: 30 31 • Installing traffic control devices (assume WSDOT TC1, One-Lane, Two-Way Traffic Control shall be used) 32 • Installing erosion control measure 33 34 • Removal of structures and obstructions 35 • Structure excavation 36 • Utility (sanitary sewer manholes and sanitary sewer main) installation 37 • Backfilling and compaction 38 • Grading 39 40 Section 2 Sanitary Work 41 The Contractor shall provide a minimum of 15 working day notice to the Contracting Agency prior to the planned start date for Section 2 work. To limit the impact to Samson Rope and 42 local residents, the following sanitary work as shown on the Plans shall be substantially 43 44 completed within 4 continuous working days: 45 46 • Installation of sanitary sewer manholes S4 and S5

1 2	 Installation of the 18" sanitary sewer pipe run along Thornton from approximately STA 137+30 to STA 140+55
3	• Connecting the side sewers in Section 2
4 5 6	Other work on this Section includes, but is not limited to:
7 8	 Installing traffic control devices (assume WSDOT TC1, One-Lane, Two-Way Traffic Control shall be used)
9	Installing erosion control measure
10	• Placing temporary fill along the shoulder
11	Removal of structures and obstructions
12	• Removing, storing, and relocating existing fence
13	Structure excavation
14	• Utility (sanitary sewer manholes and sanitary sewer main) installation
15	• Backfilling and compaction
16	• Grading
17 18	Removing temporary fill along the shoulder
19	1-08.5 Time for Completion
20 21	(March 13, 1995 WSDOT GSP)
22 23	Section 1-08.5 is supplemented with the following:
24 25	This project shall be physically completed within <u>40</u> working days.
26 27	(September 12, 2016 APWA GSP, Option A)
28 29	Revise the third and fourth paragraphs to read:
30 31	Contract time shall begin on the first working day following the Notice to Proceed Date.
32	Fach working day shall be charged to the contract as it occurs until the contract work is
33	physically complete If substantial completion has been granted and all the authorized
34	working days have been used, charging of working days will cease. Each week the Engineer
35	will provide the Contractor a statement that shows the number of working days: (1) charged
36	to the contract the week before; (2) specified for the physical completion of the contract; and
37	(3) remaining for the physical completion of the contract. The statement will also show the
38	nonworking days and any partial or whole day the Engineer declares as unworkable. Within
39	10 calendar days after the date of each statement, the Contractor shall file a written protest of
40	any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in
41 42	sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed.
42 13	By not filing such detailed protest in that period, the Contractor shall be deemed as having
чэ ДД	accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4
45 45	days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked
46	would ordinarily be charged as a working day then the fifth day of that week will be charged
	as a working day whether of not the Contractor works on that day.

1	Revise the sixth paragraph to read:
2	
3	The Engineer will give the Contractor written notice of the completion date of the contract
4	after all the Contractor's obligations under the contract have been performed by the
5	Contractor. The following events must occur before the Completion Date can be established:
07	1. The physical work on the project must be complete, and 2. The Contractor must formial all decomposited by the contractor decomposited
/	2. The Contractor must furnish all documentation required by the contract and required
8	by law, to allow the Contracting Agency to process final acceptance of the contract.
9	The following documents must be received by the Project Engineer prior to
10	establishing a completion date:
11	a. Certified Payrolls (per Section 1-07.9(5)).
12	b. Material Acceptance Certification Documents
13	c. Monthly Reports of Amounts Credited as DBE Participation, as required by
14	the Contract Provisions.
15	d. Final Contract Voucher Certification
16	e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the
17	Contractor and all Subcontractors
18	f. <u>Property owner releases per Section 1-07.24</u>
19	
20	1-08.7 Maintenance during Suspension
21	(October 1, 2005 APWA GSP)
22	
23	Revise the second paragraph to read:
24	
25	At no expense to the Contracting Agency, the Contractor shall provide through the construction
20	area a safe, smooth, and unobstructed roadway, sidewark, and path for public use during
21	suspension (as required in Section 1-07.25 or the Special Provisions). This may include a
28	temporary road or detour.
29	1.09.0 Liquidated Domogra
31	(NWR February 5, 2007)
32	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
33	Section 1-08.9 is supplemented with the following:
34	
35	Delayed completion of the Section 1 Sanitary Work will result in impacts to the traveling
36	public, increase fuel consumption, increase vehicle operating costs, increase pollution, and
37	cause other inconveniences and harm far in excess of those resulting from delay of most
38	projects.
39	
40	Accordingly, the Contractor agrees:
41	1. To pay \$1,000 liquidated damages per each working day prorated to the nearest day
42	that the Section 2 Sanitary Work is not completed as specified in the Subsection
43	Notice to Proceed and Prosecution of the Work and Time for Completion of the
44	Special Provision PROSECUTION AND PROGRESS.
45	
46	2. To authorize the Engineer to deduct these liquidated damages from any money due
47	or coming due to the Contractor.

1 (August 14, 2013 APWA GSP)

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3 Revise the fourth paragraph to read:4

5 When the Contract Work has progressed to Substantial Completion as defined in the 6 Contract, the Engineer may determine that the work is Substantially Complete. The Engineer 7 will notify the Contractor in writing of the Substantial Completion Date. For overruns in 8 Contract time occurring after the date so established, the formula for liquidated damages 9 shown above will not apply. For overruns in Contract time occurring after the Substantial 10 Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the 11 12 Contract Work. The Contractor shall complete the remaining Work as promptly as possible. 13 Upon request by the Project Engineer, the Contractor shall furnish a written schedule for 14 completing the physical Work on the Contract. 15

16 1-09 MEASUREMENT AND PAYMENT
 17

18 1-09.2 Weighing Equipment 19

20 **1-09.2(1)** General Requirements for Weighing Equipment

21 (February 1, 2008 R&E GSP) 22

23 Section 1-09.2(1) is supplemented with the following:

Truck certified weight tickets must be machine-printed with gross, tare and net weights.
Additional information required on each weight ticket: Truck Number, Driver's Name, Date,
Load Time and Date, Load Site, Unload Time and Date, Unload Site. No handwritten weight
tickets will be accepted.

- At the Engineer's request, the Contractor shall provide the Engineer with a list of hauling
 vehicles and the licensed legal or permitted gross weight for each vehicle.
- 33 **1-09.6** Force Account
- 34 (October 10, 2008 APWA GSP)
- 35

24

36 Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting Agency does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by Engineer.

- 43 44 (February 1, 2008 R&E GSP)
- 45 Section 1-09.6 is supplemented with the following:
- 46
- 47 No claim for force account shall be allowed except upon written order by the Engineer prior

1 2 3 4 5 6	to the performance of the work. The Contractor shall submit the required force account documentation to the Engineer on a daily basis unless agreed otherwise. The Contractor and the Engineer shall review all work or material to be paid for under force account on a daily basis unless agreed otherwise. The Contractor may propose corrections to the force account quantities and shall supply supporting documentation to the Engineer within 2 working days, unless agreed otherwise, of having reviewed the force account quantities with the Engineer.
7	
8	1-09.9 Payments
9	(March 13, 2012 APWA GSP)
10	
11	Supplement this section with the following:
12	
13	Lump sum item breakdowns are not required when the bid price for the lump sum item is less
14	than \$20,000.
15	
16	(March 13, 2012 APWA GSP)
17	Delete the first four paragraphs and replace them with the following:
18	
19	The basis of payment will be the actual quantities of Work performed according to the Contract
20	and as specified for payment.
21	
22	The Contractor shall submit a breakdown of the cost of lump sum bid items at the
23	Preconstruction Conference, to enable the Project Engineer to determine the Work performed
24	on a monthly basis. A breakdown is not required for lump sum items that include a basis for
25	incremental payments as part of the respective Specification. Absent a lump sum breakdown,
26	the Project Engineer will make a determination based on information available. The Project
27	Engineer's determination of the cost of work shall be final.
28	č
29	Progress payments for completed work and material on hand will be based upon progress
30	estimates prepared by the Engineer. A progress estimate cutoff date will be established at the
31	preconstruction conference.
32	r ···· ····
33	The initial progress estimate will be made not later than 30 days after the Contractor
34	commences the work and successive progress estimates will be made every month thereafter
35	until the Completion Date Progress estimates made during progress of the work are tentative
36	and made only for the purpose of determining progress payments. The progress estimates are
37	subject to change at any time prior to the calculation of the final payment
38	subject to enange at any time prior to the eared auton of the final payment.
39	The value of the progress estimate will be the sum of the following:
40	1 Unit Price Items in the Bid Form — the approximate quantity of accentable units of work
40 41	completed multiplied by the unit price
π1 //2	2 Jump Sum Items in the Bid Form — based on the approved Contractor's lump sum
<u>1</u> 2 <u>1</u> 3	breakdown for that item or absent such a breakdown based on the Engineer's
-τ-) ΛΛ	determination
 15	3 Materials on Hand <u>100 nercent of invoiced cost of material delivered to Job site or</u>
т.) Л6	other storage area approved by the Engineer
-10	other storage area approved by the Engliteer.

4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

- 1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
- 2. The amount of progress payments previously made; and
- 3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

14 **1-09.11(3)** Time Limitation and Jurisdiction

15 (July 23, 2015 APWA GSP)

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Delete this section and replace it with the following:

- 18 19 For the convenience of the parties to the Contract it is mutually agreed by the parties that any 20 claims or causes of action which the Contractor has against the Contracting Agency arising 21 from the Contract shall be brought within 180 calendar days from the date of final acceptance 22 (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that any 23 such claims or causes of action shall be brought only in the Superior Court of the county 24 where the Contracting Agency headquarters is located, provided that where an action is 25 asserted against a county, RCW 36.01.05 shall control venue and jurisdiction. The parties 26 understand and agree that the Contractor's failure to bring suit within the time period 27 provided, shall be a complete bar to any such claims or causes of action. It is further 28 mutually agreed by the parties that when any claims or causes of action which the Contractor 29 asserts against the Contracting Agency arising from the Contract are filed with the 30 Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency 31 to have timely access to any records deemed necessary by the Contracting Agency to assist in 32 evaluating the claims or action.
- 33

34 1-09.13 Claims Resolution

35

36 **1-09.13(3)** A Administration of Arbitration

- 37 (October 1, 2005 APWA GSP)
- 38
- 39 Revise the third paragraph to read:
- 40

41 The Contracting Agency and the Contractor mutually agree to be bound by the decision of the 42 arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the

- 42 aroutator, and judgment upon the award rendered by the aroutator may be entered in the 43 Superior Court of the county in which the Contracting Agency's headquarters are located. The
- 44 decision of the arbitrator and the specific basis for the decision shall be in writing. The
- 45 arbitrator shall use the contract as a basis for decisions.

1-10 **TEMPORARY TRAFFIC CONTROL**

1-10.1 General

3 4 5 6 (March 17, 2010 R&E GSP)

Section 1-10.1 is supplemented with the following:

During grading operations, the elevation difference between the portion of the traveled way open to traffic and the adjoining portion of roadway shall be tapered at 10:1 or greater to allow cross traffic.

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11 In addition, for any modifications to the access provisions, the Contractor shall furnish 12 satisfactory documentation that the affected property owners concur with the proposed change. 13 The Contractor shall be responsible to coordinate with and make the necessary arrangements 14 to accommodate the access requirements of the affected property owners and the public 15 services.

- 17 If a modification to traffic control is deemed necessary by the Engineer, the contractor shall immediately implement any requested modification(s). The need for flashing warning lights 18 19 shall be as determined by the Engineer. The cost of modifications to the tragic control plans 20 as directed by the Engineer shall be considered incidental to the Contract. 21
 - The Contractor shall determine and place signs in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and the Plans. A traffic control plan shall be submitted to the Engineer for review and approval prior to the beginning of construction.
- 24 25

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26 1-10.2 **Traffic Control Management**

27 (*February 4, 2008 R&E GSP*) 28

- 29 Section 1-10.2 is supplemented with the following:
- 31 Before beginning work on the project, the Contractor shall designate a Traffic Control 32 Supervisor. The Contractor shall provide the Engineer with a list of names and phone numbers 33 of not more than six supervisory employees that may be called for traffic control, as needed, 34 during working or non-working hours. The Contractor shall have at least one of these 35 employees available at any time.
- 36
- 37 If the Contractor's employees are not available in a timely manner to take care of emergency 38 traffic control work, Contracting Agency forces will perform this work on behalf of the 39 Contractor. If Contracting Agency forces provide emergency traffic control, the costs to the 40 Contracting Agency will be deducted from progress payments due the Contractor in 41 accordance with Section 1-10.1 of the Standard Specifications.
- 42
- 43 1-10.2(1) General
- 44 (December 1, 2008 WSDOT GSP)
- 45
- 46 Section 1-10.2(1) is supplemented with the following:
- 47

- 1 Only training with WSDOT TCS card and WSDOT training curriculum is recognized in the State
- 2 of Washington. The Traffic Control Supervisor shall be certified by one of the following:
- 3
- 4 The Northwest Laborers-Employers Training Trust
- 5 27055 Ohio Ave.
- 6 Kingston, WA 98346
- 7 (360) 297-3035
- 8
- 9 Evergreen Safety Council
- 10 401 Pontius Ave. N.
- 11 Seattle, WA 98109
- 12 1-800-521-0778 or
- 13 (206) 382-4090
- 14
- 15 The American Traffic Safety Services Association
- 16 15 Riverside Parkway, Suite 100
- 17 Fredericksburg, Virginia 22406-1022
- 18 Training Dept. Toll Free (877) 642-4637
- 19 Phone: (540) 368-1701
- 20

21 1-10.2(2) Traffic Control Plans

- 22 (December 1, 2016 R&E GSP)
- 23 24

25

Section 1-10.2(2) is supplemented with the following:

The Work Zone Traffic Control Plans (TC-1 – TC-18) WSDOT Standard Plans are included
 in the contract documents as an appendix. These standard plans and the Traffic Control Plans
 included in the Contract Documents shall be considered as the project TCP's. The contractor
 may choose to submit alternate TCP's for approval as outlined in this section.

Any modifications to existing plans or new traffic plans shall be submitted to the Engineer for
 review and approval a minimum of five (5) working days prior to institution of the plan.

34 1-10.3 Traffic Control Labor, Procedures and Devices

36 1-10.3(3) Traffic Control Devices

- 37 (February 4, 2008 R&E GSP)
- 38 39

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Section 1-10.3 is supplemented with the following:

As may be indicated in the Signing Plan or Traffic Control Plan, the Contractor may be required to install signs, warning lights, or both, on barricades.

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1 1-10.4 Measurement

2 (August 2, 2004 WSDOT GSP) 3

4 1-10.4(3) Reinstating Unit Items With Lump Sum Traffic Control

5 6 Section 1-10.4(3) is supplemented with the following:

7 (August 2, 2004 WSDOT GSP)

8 9 The bid proposal contains the item "Project Temporary Traffic Control," lump sum and the 10 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. 11

12 13 "Flaggers" "Other Traffic Control Labor" 14 15

DIVISION 2 EARTHWORK

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2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP

5 6 **2-01.1 Description**

7 (February 4, 2008 R&E GSP)

9 Section 2-01.1 is supplemented with the following:

This item also includes any clearing and grubbing necessary for the construction of driveways, storm drain system, and the reconstruction of intersecting roads shown on the plans.

14 Clearing and Grubbing work includes removal and disposal of topsoil to a depth of 6-inches 15 and trees as shown on the plans. In addition to natural materials, clearing and grubbing shall 16 also include removing and disposing of all refuse and any remaining structures, obstructions, 17 trees and/or tree stumps within the right-of-way excluding contiguous pavement or structures 18 identified under "Removal of Structures and Obstructions", as directed by the Engineer. 19

20 2-01.2 Disposal of Useable Material and Debris

21 (February 4, 2008 R&E GSP) 22

23 Section 2-01.2 is supplemented with the following:

Unless otherwise provided in the specifications, all material removed under this item shall become the property of the Contractor.

28 2-01.2(1) Disposal Method No. 1 - Open Burning

29 (February 4, 2008 R&E GSP)

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26 27

- Section 2-01.2(1) is supplemented with the following:
- 33 Disposal method No. 1 shall not be permitted within the project limits.

35 2-01.2(3) Disposal Method No. 3 - Chipping

- 36 (March 17, 2010 R&E GSP)
- 37 Section 2-01.2(3) is supplemented with the following:38
- 39 Revise the fourth sentence to read:
- 4041 "All chips shall become the property of the Contractor and shall be removed".
- 42

2-01.3 Construction Requirements

2-01.3(1) Clearing

(February 4, 2008 R&E GSP)

- Section 2-01.3(1) is supplemented with the following:
- 8. The Contractor shall clear all areas staked and flagged by the Engineer prior to the placement of cut/fill stakes, offset stakes or grade hubs.
 - 9. Tree trimming shall be sequenced so that overhanging limbs are removed prior to commencing construction activities. Construction activities include equipment staging, materials storage, and worker-vehicle parking.
- 10. When tree roots are encountered during construction activities, the Contractor shall carefully expose all roots greater than1 inch diameter, either by hand or gently with the machine bucket, and then cut cleanly with lopper or saw. Pulling and wrenching of the roots shall not be allowed.

2-01.3(2) Grubbing

- 20 Section 2-01.3(2) is supplemented with the following:
 - f. Stumps shall be removed except where doing so would damage water, sewer lines or other utilities. Voids left by stump removal shall be backfilled with a granular material and compacted in accordance with Section 2-03.3(14)C. Unless otherwise noted, all materials removed shall become the property of the Contractor and shall be disposed of outside the project limits.
 - g. If equipment outriggers are placed between the proposed sidewalk and the trees, the Contractor shall place plywood or large wood chips to spread out the weight of the outriggers.
- **2-01.5** Payment
- 32 (February 4, 2008 R&E GSP)
- 34 Section 2-01.5 is supplemented with the following:35

"Clearing and Grubbing," lump sum. No additional payment shall be made for haul. Any
 other clearing and grubbing not specifically identified as being paid for elsewhere will be
 considered incidental to this bid item and no other payment shall be made.

- **2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS**
- **2-02.1 Description**
- 43 (September 15, 2008 R&E GSP)
 44
- 45 Section 2-02.1 is supplemented with the following:

1 2	Also included will be existing asphalt concrete pavement, chip seal, cement concrete curbs, gutter, sidewalk, driveways, retaining walls, culverts, ecology blocks, guardrail and posts,
3 4	plugging drainage pipes, landscaping structures, fire hydrants, fences, and other structures necessary to complete the work indicated on the plans or as directed by the Engineer
5	Equipment, labor, and materials necessary to perform the work as specified shall be considered
6 7	a portion of this work. All material shall be hauled offsite to a permitted, Contractor provided disposal site in accordance with Section 2.03.3(7)C. No payment will be made for haul
8	disposar site in accordance with Section 2-05.5(7)C. The payment will be made for hadi.
9	2-02.3 Construction Requirements
10	(February 4, 2008 R&E GSP)
11	
12	Section 2-02.3 is supplemented with the following:
13	
14	Utility Removal
15	Cavities left by removal of features by other parties, i.e., utility poles or other obstructions, shall be beel filled and compared by the Contractor in accordance with Section 2.02.2(14)C
10	shall be backfilled and compacted by the Contractor in accordance with Section 2-03.3(14)C.
17	Use of Explosives
19	Explosives shall not be used in the demolition
20	Explosives shall not be used in the demontion.
21	(September 13, 2017 R&E GSP)
22	Romoving/Roinstalling Wire Fonce and Post
23 24	This work shall consist of removing and reinstalling existing wire fence including posts
25	anchors, and braces. Wire fencing and posts shall be removed in their entirety and stored by
26	the Contractor to prevent any damage. No close cutting of posts will be permitted.
27	
28	Voids left by post removal, which will not be obliterated by the Contractor's operations, shall
29	be backfilled in 6 inch lifts of granular material with each lift compacted with a minimum of
30	three passes of a mechanical tamper.
31 22	2 02 2(2) Demovel of Devement Sidewalks, Curbs and Cuttors
32	(March 9, 2008 R&F GSP)
34	(<i>March</i>), 2000 R&E OSI)
35	Section 2-02.3(3) is supplemented with the following:
36	
37	Delete Item 1. No on-site burial of pavement, sidewalks, curbs and gutters, is allowed.
38	
39	Item 3 is supplemented with the following: "At locations where the existing concrete is
40	to remain, the horizontal sawcut line shall not vary more than 1/8 inch along the edge of a
41	10-foot straightedge placed on the surface parallel to the horizontal sawcut line."
42	
43 11	Kemoval of Asphalt Concrete Pavement and Portland Cement Concrete Pavement
44 15	The approximate uncknesses of the pavement are:
45 46	Please refer to the "Geotechnical Engineering Reports" contained in the appendix
10	require refer to the Geoteenment Engineering reports contained in the appendix.

1	Removal of Cement Concrete Curb, Gutter and Sidewalk
2	The Contractor shall use a sawcut to delineate the curb, gutter and sidewalk to be removed
3	from curb, gutter and sidewalk to remain. The Contractor shall take care to avoid damaging
4	adjacent curb, gutter and sidewalk to remain. Any damage caused to the curb, gutter and
5	sidewalk to remain as a result of the Contractor's operations shall be repaired to the
6	satisfaction of the Engineer at no additional cost to the Contracting Agency
7	substaction of the Englicer at no additional cost to the contracting righter.
8	2.02.4 Measurement
9	(February A 2008 R&F GSP)
10	(<i>Teornary</i> 4, 2000 R&E OST)
10	Section 2.02.4 is supplemented with the following:
17	Section 2-02.4 is suppremented with the following.
12	Saw out ACP will be measured by the linear foot inch along the line and slone of the cut prior
13	to sowertting and as staked by the Engineer. Saw out if used for the payament repair, shall not
14	to sawcutting and as staked by the Engineer. Saw-cut, it used for the pavement repair, shall not
15	be measured.
10	$(\mathbf{C}, \mathbf{L}, L$
1/ 10	(September 15, 2017 K&E GSP)
18	
19	Removing and reinstalling wire tence and post will be measured by the linear foot along the
20	line and slope of the fence prior to removal and as staked by the Engineer.
21	
22	2-02.5 Payment
23	(February 4, 2008 R&E GSP)
24	
25	Section 2-02.5 is supplemented with the following:
26	
27	The lump sum contract price for "Removal of Structures and Obstructions" shall be full
28	compensation for all tools, equipment, materials, and labor to excavate and dispose of the
29	above materials, including Haul and disposal fees. Removal of any structures and obstructions
30	readily apparent by visual inspection from the ground surface and not identified elsewhere will
31	be considered incidental to this bid item.
32	
33	The unit contract price per linear foot-inch for "Saw-cut ACP" as indicated on the Bid Proposal
34	shall be full compensation for all labor, including hand removal if required, material, tools and
35	equipment required to complete the Bid Items in accordance with Section 1-04.1.
36	
37	(September 13, 2017 R&E GSP)
38	
39	"Removing and Reinstalling Wire Fence and Post", per linear foot.
40	The unit Contract price per linear foot for "Removing and Reinstalling Wire Fence and Post"
41	shall be full payment for all costs for the specified Work including brace post installation,
42	storing, and all other requirements, unless covered in a separate Bid Item in this section.
43	
44	
45	
46	

2-03 ROADWAY EXCAVATION AND EMBANKMENT

2 3 **2-03.1 Description**

4 (July 28, 2015 R&E GSP) 5

6 Section 2-03.1 is supplemented with the following: 7

8 The work described in this section, regardless of the nature or type of the materials encountered 9 includes excavating and grading the roadway and areas for curb, gutter and sidewalk, 10 driveways, excavating material placed in the temporary ditch, excavating in borrow pits, 11 excavating below grade, removing slide materials and disposing of all excavated material. Any 12 excavation or embankment required to maintain positive drainage to or from drainage ditches 13 or swales will be considered incidental to this bid item. This item also includes any excavation 14 required to construct new driveway grades.

15

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16 Excess material shall become the property of the contractor for disposal. This work may 17 include temporary stockpiling of material as dictated by the contractors operations. No specific 18 stockpile sites are provided within the project limits, however on-site stockpiling may be 19 permitted as approved by the Engineer. The costs for stockpiling shall be included in the bid 20 items in this section.

21

22 2-03.3(7)C Contractor-Provided Disposal Site

23 Section 2-03.3(7)C is supplemented with the following:

24

Before completing any filling outside of the project limits, the Contractor, or property owner
 desiring to receive the fill, shall acquire all permits and approvals required for the use of the
 disposal site.

28

29 **2-03.5 Payment**

30 Section 2-03.5 is supplemented with the following:

31

The unit contract price per cubic yard for "Roadway Excavation Including Haul" shall be compensation for all labor, materials, tools and equipment necessary to excavate, shape, load, or otherwise dispose of surplus or unsuitable material off-site as specified herein. This item shall include the cost of compacting and proof rolling the subgrade.

37 **2-04 HAUL**

38

36

39 2-04.4 Measurement

- 40 (February 5, 2008 R&E GSP) 41
- 42 Section 2-04.4 is revised to read: 43

44 No specific unit of measurement shall apply. All costs involved for haul shall be incidental45 to and included in the various bid items.

1 2-04.5 Payment

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2 (February 5, 2008 R&E GSP) 3

Section 2-04.5 is deleted in its entirety.

6 2-07 WATERING

8 2-07.4 Measurement

9 (September 15, 2008 R&E GSP)

11 Section 2-07.4 is supplemented with the following:

13 The Contractor shall provide water distribution records including truck tickets and operator 14 time records if requested by the Engineer. The contractor will not be allowed to use City 15 water from fire hydrant without first renting a backflow preventer and meter from the City. 16 Use of City water must be pre-approved by the Public Works Department. If Contracting 17 Agency water is used, water meter records will be recorded and used as the basis for payment.

19 2-09 STRUCTURE EXCAVATION20

21 **2-09.3 Construction Requirements**

Select excavated material, as approved by the Engineer, shall be used as backfill. If the Engineer determines that native material is not suitable for trench backfill, import gravel shall be used and payment shall be made per Section 4-02.5.

27 2-09.3(4) Construction Requirements, Structure Excavation, Class B

- 28 Section 2-09.3(4) is supplemented with the following:
- 29

All trenches shall be backfilled and completed by the end of the day. No payment shall be
 made for backfill of native materials. Gravel base shall be used for backfill unless the
 Engineer approves the use of native material

1 2	DIVISIO BASES	DN 4				
3	4 02	CDAVEL BASE				
4 5	4-02	GRAVEL DASE				
6	4-02-2 N	4-02 2 Matarials				
7	(February 5, 2008 R&F GSP)					
8	Section 4	1-02.2 is supplemented with the following				
9						
10	Mat	erial shall meet the requirements of Section 9-03.10 Gravel Base as modified. Refer to				
11	revised Section 9-03 10 Aggregate for Gravel Base					
12						
13	4-02.4 N	Ieasurement				
14	(January	31, 2011 R&E GSP)				
15	The first	paragraph of Section 4-02.4 is revised to read:				
16						
17	"Gra	avel Base" shall be measured by the ton and shall include haul.				
18						
19	4-02.5 P	ayment				
20	(Februar	y 5, 2008 R&E GSP)				
21	Section 4	-02.5, delete the second paragraph and replace with the following:				
22						
23	"Gra	avel Base," per ton.				
24	_					
25	Proc	of rolling of material at the direction of the Engineer will be considered incidental to this				
26	b1d 1	item.				
27	4.04 D 43					
28	4-04 BA	LLAST AND CRUSHED SURFACING				
29		f				
30 21	4-04.4 N	$\frac{1}{1} = \frac{1}{2} = \frac{1}$				
21	(redition	y 3, 2008 R&E (ISP)				
32 22	Section 4	-04.4, the second paragraph is revised to read.				
33	"Cra	ushed Surfacing Top Course" shall be measured by the top and shall include haul				
35	CIU	ished Surfacing Top Course, shall be measured by the ton and shall merude hau.				
36	4-04 5 P	avment				
37	(Februar	y 5 2008 R&F GSP)				
38	Section 4	1-04 5 the second paragraph is revised to read:				
39		o i.e, the second purugruph is revised to read.				
40	"Cn	ished Surfacing Top Course." per ton.				
41	21	5 r r r r r r				

1 DIVISION 5

2 SURFACE TREATMENTS AND PAVEMENTS

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6 7

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5-04 HOT MIX ASPHALT

5 (June 19, 2017 APWA GSP)

Delete WSDOT Amended Section 5-04, Hot Mix Asphalt, and replace it with Section 5-04, Hot Mix Asphalt as printed in the Standard Specifications for Road, Bridge and Municipal Construction, 2016 edition.

9 10

11 **5-04.2 Materials**

- 12 (January 3, 2011)
- 13 Section 5-04.2 is supplemented with the following:
- 14
- 15 ESAL's
- 16 The number of ESAL's for the design and acceptance of the HMA shall be *** \$\$1\$\$ *** 17 million.
- 17 r 18
- 19 The Contractor may choose to utilize RAP in excess of 20 percent of the total weight of the
- 20 HMA. If greater than 20 percent of the total weight of HMA is RAP, the Contractor shall
- sample and test the RAP during stockpile construction in accordance with WSDOT FOP for
- AASHTO T 308 for the determination of the asphalt binder content and WSDOT FOP for
- 23 WAQTC/AASHTO T 27/T 11 for gradation of the aggregates. The RAP shall be sampled and
- tested at a frequency of one sample for every 1,000 tons produced. The asphalt content and
- 25 gradation test data shall be reported to the Contracting Agency prior to or when submitting the
- 26 mix design. The Contractor shall include the RAP as part of the mix design as defined in these27 Specifications.
- 28

29 **5-04.3 Construction Requirements**

- 30 (February 25, 2008 R&E GSP)
- 31 Section 5-04.3 is supplemented with the following:
- 3233 All castings within paved area

All castings within paved areas shall be adjusted to finished grade after the final lift of paving as
 shown on the plans and paid per Section 7-05.5.

3536 5-04.3(3) Hot Mix Asphalt Pavers

38 **5-04.3(3)A** Material Transfer Device / Vehicle

- 39 (January 16, 2014 APWA GSP)
- 40

- 41 The first paragraph of this section is revised to read:
- 42
- Additionally, a material transfer device or vehicle (MTD/V) is not required at the following
- 44 locations **\$\$Project Limits\$\$**.
- 45

1 5-04.3(5)A Preparation Of Existing Paved Surfaces

- 2 (March 9, 2010 R&E GSP)
- 3 Section 5-04.3(5)A is supplemented with the following:
- 4 5

6

7

- Tack coat shall be uniformly applied to cover the face of the gutter abutting the HMA with a thin film of residual asphalt free of streaks and bare spots.
- 8 The Contractor shall limit the amount of tack coat placed to that amount that will be fully 9 covered by the asphalt overlay at the end of each work shift.
- 10 11 (NWR February 9, 2004)
- 12 The Contractor shall ensure that the asphalt for tack coat does not enter into State waters, 13 including wetlands.
- 14

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- In accordance with Section 1-07.15(1) Spill Prevention, Control and Countermeasures Plan (SPCC), as part of the SPCC the Contractor shall address the mitigating measures to be taken in the event that the paving operation is suspended or terminated prior to the asphalt for tack coat being fully covered.
- 20 **5-04.3(7)A2** Statistical or Nonstatistical Evaluation 21
- Delete this section and replace it with the following:

24 **5-04.3(7)A2** Nonstatistical Evaluation

25 (January 16, 2014 APWA GSP) 26

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Be submitted to the Project Engineer on WSDOT Form 350-042
- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2) and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with WSDOT Test Method T 718 or based on historic anti-strip and aggregate source compatibility from WSDOT lab testing. Anti-strip evaluation of HMA mix designs utilized that include RAP will be completed without the inclusion of the RAP.
- At or prior to the preconstruction meeting, the contractor shall provide one of the following
 mix design verification certifications for Contracting Agency review;
- The proposed mix design indicated on a WSDOT mix design/anti-strip report that is within one year of the approval date
 - The proposed HMA mix design submittal (Form 350-042) with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The proposed mix design by a qualified City or County laboratory mix design report that
 is within one year of the approval date.

42

- 1 The mix design will be performed by a lab accredited by a national authority such as 2 Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction 3 Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program 4 (AAP) and shall supply evidence of participation in the AASHTO Material Reference 5 Laboratory (AMRL) program. 6 7 At the discretion of the Engineer, agencies may accept mix designs verified beyond the one 8 year verification period with a certification from the Contractor that the materials and sources 9 are the same as those shown on the original mix design. 10 11 5-04.3(8)A1 General 12 (January 16, 2014 APWA GSP) Delete this section and replace it with the following: 13 14 15 Acceptance of HMA shall be as defined under nonstatistical or commercial evaluation. 16 17 Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the 18 contract documents. 19 20 The mix design will be the initial JMF for the class of HMA. The Contractor may request a 21 change in the JMF. Any adjustments to the JMF will require the approval of the Project 22 Engineer and must be made in accordance with Section 9-03.8(7). 23 24 Commercial evaluation may be used for Commercial HMA and for other classes of HMA in 25 the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, 26 prelevel, and pavement repair. Other nonstructural applications of HMA accepted by 27 commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of 28 HMA accepted by commercial evaluation will be at the option of the Project Engineer. 29 Commercial HMA can be accepted by a contractor certificate of compliance letter stating the 30 material meets the HMA requirements defined in the contract. 31 32 5-04.3(8)A4 Definition of Sampling Lot and Sublot 33 (January 16, 2014 APWA GSP) 34 Section 5-04.3(8)A4 is supplemented with the following: 35 36 For HMA in a structural application, sampling and testing for total project quantities less than 37 400 tons is at the discretion of the engineer. For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one 38 39 acceptance test shall be performed: 40 If test results are found to be within specification requirements, additional testing i. 41 will be at the engineers discretion. If test results are found not to be within specification requirements, additional 42 ii. 43 testing as needed to determine a CPF shall be performed. 44 45 5-04.3(8)A5 Test Results
- 46 (January 16, 2014 APWA GSP)

1 2 The first paragraph of this section is deleted.

3 **5-04.3(8)A6** Test Methods

- 4 (*May 30, 2013 R&E GSP*)
- 5 Delete this section and replace it with the following;
- 6 7
- Testing of HMA for compliance of Va will be at the option of the Contracting Agency. If
- 8 tested, compliance of Va will be use WSDOT Standard Operating Procedure SOP 731. Testing
- 9 for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308. Testing
- 10 for compliance of gradation will be by WAQTC FOP for AASHTO T 27/T 11.
- 11

12 **5-04.3(9) Spreading And Finishing**

- 13 (February 25, 2008 R&E GSP)
- 14 Section 5-04.3(9) is supplemented with the following:
- 1516 During grading operations, the elevation difference between the portion of the traveled way open
- to traffic and the adjoining portion of roadway shall be tapered at 10:1 or greater to allow cross
 traffic.
- 19

20 **5-04.3(10)B4 Test Results**

- 21 (May 30, 2013 R&E GSP)
- 22 Delete this section and replace it with the following;
- 23

The results of all acceptance testing performed in the field and the Composite Pay Factor
 (CPF) of the lot after three sublots have been tested will be provided to the Contractor within 2

- 26 working days. The Contractor may request a sublot be retested. To request a retest, the
- 27 Contractor shall submit a written request within 7 calendar days after the specific test results
- provided. The sample will be tested for a complete gradation analysis, asphalt binder content,
- and the results of the retest will be used for the acceptance of the HMA in place of the original
- 30 sublot sample test results. The cost of testing will be deducted from any monies due or that
- may come due the Contractor under the Contract at the rate of \$250 per sample.

33 **5-04.3(12)** Joints 34

35 **5-04.3(12)A** Transverse Joints

- 36 (February 25, 2008 R&E GSP)
- 37 Section 5-04.3(12)A1 is supplemented with the following:
- 38
- All joints of new hot mix asphalt to an existing pavement shall be sealed with an appropriateasphalt joint sealer.
- 41

42 **5-04.3(14)** Planing Bituminous Pavement

- 43 (March 9, 2010 R&E GSP)
- 44 Section 5-04.3(14) is supplemented with the following:
- 45
- 46 Transverse Joints

1 Unless specifically directed by the Engineer, all connections to existing asphalt shall be by a vertical sawcut abutting the pavements together and heated prior to mat construction. All joints 2 3 of new hot mix asphalt to an existing pavement shall be sealed with an appropriate asphalt joint 4 sealer. The Contractor shall construct and maintain a temporary hot mix asphalt wedge in 5 accordance with Section 5-04.3(12) across the entire width of the transverse edge when traffic is 6 allowed prior to paving. The wedge shall be constructed before opening the lane to traffic. The 7 8 9 Contractor shall remove the wedge immediately prior to paving.

Beveled Edge Planing

10 A beveled edge shall be constructed in areas with a planed depth of more than 0.20 foot that will 11 not be paved during the same work shift.

12

13 The Contractor shall use a beveled cutter on the mandrel of the planing equipment, or other 14 approved method(s), to eliminate the vertical edge(s). The beveled edge(s) shall be constructed 15 at a 4:1 slope.

16

17 HMA Price Adjustments for Quality of HMA Compaction 5-04.5(1)B

- 18 (January 16, 2014 APWA GSP)
- 19 Delete this section and replace it with the following:
- 20

21 The maximum CPF of a compaction lot is 1.00.

22

23 For each compaction lot of HMA when the CPF is less than 1.00, a Nonconforming Compaction

24 Factor (NCCF) will be determined. THE NCCF equals the algebraic difference of CPF minus

25 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the

26 product of the NCCF, the quantity of HMA in the lot in tons and the unit contract price per ton

27 of the mix.

1 DIVISION 7

DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

4 5

6

7-05 MANHOLES, INLETS, AND CATCH BASINS

7 **7-05.1 Description**

- 8 Section 7-05.1 is supplemented with the following:
- 9

10 This item also includes frames and grates in designated areas. Thru-curb inlet frame and grate shall be used at locations with 6 inch high cement concrete traffic curb and gutter as noted on 11 12 the Plans. The adjusting of any new storm drain catch basin frame, manhole ring and cover, 13 for the purpose of matching new finish grades shall be incidental to the cost of installation. 14 Existing manholes, inlets, and catchbasins within the Project boundary which are nearest to 15 the point of connection into the storm drain system and other manholes, inlets, and catchbasins 16 which are impacted by construction activities will be cleaned by the Contractor. This work is 17 incidental to the various bid items in this Section.

19 **7-05.2 Materials**

- 20 Section 7-05.3 is supplemented with the following:
- 21 (June 10, 2009 R&E GSP)
- 22 23

18

Sewer Manhole Covers

24 "Never-Seez Anti-Seize & Lubricating Compound" shall be applied to all lock down bolts
25 prior to installation. "Never-Seez Anti-Seize & Lubricating Compound" application shall be
26 in accordance with manufacturer's recommendations. This work is incidental to the various
27 bid items.

28

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29 (July 27, 2015 R&E GSP) 30

Manholes shall be pre-channeled.

33 7-05.3 Construction Requirements

34 Section 7-05.3 is supplemented with the following:

35

36 Sanitary Sewer Manholes

Where necessary to complete the filling of the existing sewer manhole channel and the installation of the sewer manhole channel and sanitary sewer pipe at the sanitary sewer manhole located at approximately STA 129+80, the Contractor shall pump existing sanitary sewer flows around the area of work and/or pump directly into tanker trucks. The required time of pumping shall be sufficient to allow the work to be completed at the manhole.

- 42
- Pumps used for the temporary diversion of sanitary sewer flows shall be capable of passingsolids and other materials typically found in wastewater flows.
- 45
- 46 The Contractor shall give a minimum of 5 working day notice to the Contracting Agency prior

to the start of this work. At the time of notice, the Contractor shall provide a Sanitary Sewer
 Pump Around Plan for review and approval by the Contracting Agency.

The Sanitary Sewer Pump Around Plan shall show method of completing this work, and the
sequence of demolition and removal. The plan shall detail the containment, collection, and
disposal of all debris. The Contractor shall not begin this work until receiving the Engineer's
approval of the Sanitary Sewer Pump Around Plan.

9 The Contractor may at their option choose to complete this work at night. If night work is 10 elected, the Contractor shall be responsible for all necessary lighting, extra equipment and 11 personnel needed to complete the work. The Contractor shall be responsible for all overtime 12 pay for employees as a result of night work. The Contractor is cautioned that City of Ferndale 13 employees are not on duty for night work. Should City of Ferndale employees be needed to 14 aid in the night work, the Contractor will be billed overtime rates by the Contracting Agency 15 per hour for City employees.

According to available information, the highest expected flow for the sanitary sewer line along **Thornton is approximately 1.17 cubic feet per second (525 gpm).** Typical flow rates will vary. At each location where pumping is required, at least two pumps shall be supplied, both individually capable of pumping the necessary flows the required distances and against the required elevation head. One shall be designated as the primary pump, and the second shall be a back-up pump.

Tanker trucks shall empty their loads back into the City of Ferndale's wastewater collection system at a sanitary sewer manhole located on Maple Street, between 2nd and 3rd Avenue.

Should the Contractor elect to pump from an existing sanitary sewer manhole to a sanitary
sewer manhole downstream, the elevation differences and distances between the sanitary sewer
manholes shall be addressed in the Sanitary Sewer Pump Around Plan. The Contractor shall
confirm this distance and elevation difference in the field and size the pumps accordingly.

The Contractor shall designate a person to oversee the pumps during their operation. This person shall be on site at all times while the pump around is occurring and shall continually monitor the pump operation. The individual shall be familiar with the operation of the pumps and shall be capable switching between pumps if necessary, refueling the pumps, etc.

- The Contractor shall take all necessary precautions to prevent an uncontrolled spill of untreated
 wastewater.
 - 39 40

16

Roadway must remain open to the passage of traffic during all pumping operations.

41

42 **7-05.3(1)** Adjusting Manholes and Catch Basins to Grade

43 (February 5, 2008 R&E GSP) 44

- 45 Section 7-05.3(1), paragraph 1 is revised to read:
- 46

1 Where shown in the Plans or where directed by the Engineer, the existing manholes, catch 2 basins, inlets, water valve boxes, or water meter boxes shall be adjusted to the grade as staked 3 or otherwise designated by the Engineer. 4 5 7-05.4 Measurement 6 (July 12, 2010 R&E GSP) 7 8 Section 7-05.4 is supplemented with the following: 9 10 Measurement for the various inlets, manholes, vaults, and catch basins as indicated in the Bid 11 Proposal, shall be per each. The following items shall be incidental and included in the unit price per each: 12 13 14 Structure Excavation Class B 1. 15 2. Dewatering if required Gaskets, fittings, inlets, frames and grates 16 3. 17 4. Bedding Compaction 18 5. Connection to existing culverts, structures and drain lines 19 6. 20 Other work and materials, not specifically identified as being paid elsewhere 7. 21 8. Sanitary Sewer Pump Around Plan 22 9. Temporary pumping and transportation of sewer flows, including pumps and trucks 23 24 No specific unit of measure shall apply for the item "Adjustments to Finished Grade." 25 26 Measurement for HMA required for Adjustments to Finished Grades shall be per ton in accordance with Section 5-04. 27 28 29 (September 1, 2017 R&E GSP) 30 31 Drop manhole force main connections will be measured per each. 32 33 7-05.5 Payment 34 (July 12, 2010 R&E GSP) 35 36 Section 7-05.5 is supplemented with the following: 37 38 "Adjustments to Finished Grade", lump sum. The lump sum price for "Adjustments to Finished Grade" as indicated in the Bid Proposal 39 Form shall be full compensation for all labor, tools, equipment, and materials necessary to 40 adjust existing structures to finished grades within the project limits. 41 42 43 (September 1, 2017 R&E GSP) 44 "Drop Manhole Force Main Connection", per each. The price paid per drop force main 45 connection is in addition to the price paid for manholes and shall be full pay for 46

furnishing and installing the drop connection, including fittings, brackets, and ductile iron pipe.

3 4 7-08 GENERAL PIPE INSTALLATION REQUIREMENTS 5

6 **7-08.2 Materials**

7 Section 7-08.2 is supplemented with the following:

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All trenches within or beneath the roadbed prism shall be backfilled with suitable native material as approved by the Engineer. If suitable native material is unavailable, trenches shall be backfilled with Gravel Base in accordance with Section 4-02.

11 12

13 Detectable marking tape shall be specifically manufactured for marking and locating 14 underground utilities. Tape shall be solid aluminum foil, visible on the up-printed side, 15 encased in protective high visibility, inert polyethylene plastic jacket, six inches minimum width. Aluminum foil thickness shall be 0.35 mils minimum or thicker if necessary to enable 16 17 detection from the ground surface by a metal detector when the tape is buried at a depth of 3 18 feet. Laminate thickness shall be 5 mils minimum. Tape shall have permanent black lettering 19 minimum 1 inch high printed contiguously the entire length of the tape identifying the facility 20 (SEWER, for example). Color shall be in accordance with APWA Uniform Color Code for 21 Temporary Marking of Underground Facilities and in ANSI Z535.1, Safety Color Code. 22 Clips for joining sections of tape shall be tin or nickel-coated and furnished by the tape 23 manufacturer. Tape shall be Terra Tape, Sentry Line Detectable as manufactured by Reef 24 Industries, Detectable tape as manufactured by Mutual Industries, or Detectable Tape as manufactured by Presco. 25 26

27 28 29 29 Section 7-08.3 is supplemented by the

Section 7-08.3 is supplemented by the following:

Roadway must remain open to the passage of traffic during the pipe installation.

33 **7-08.3(2)**G Jointing of Dissimilar Pipe

34 Section 7-08.3(2)G is supplemented with the following: 35

Existing storm drains shall be jointed to proposed pipe by use of factory-fabricated adapter couplings or a pipe collar or as shown in the Plans. The Contractor shall cut existing storm drains. The Contractor shall remove the portions of the storm drain to provide for the installation of the required fitting at the point of connection. All damage caused by the Contractor's operation to existing storm drains to remain in place shall be repaired by the Contractor at no expense to the Contracting Agency. The Contractor shall determine the exact length of the existing storm drains that must be removed.

43 44 **7**-

44 **7-08.5 Payment**45 The fifth paragraph of this section is revised to read:

46

31

32

47 Plugging pipes shall be incidental to "Removal of Structures and Obstructions."

- 1 (July 12, 2010 R&E GSP)
- 2 Section 7-08.5 is supplemented with the following:
- 3 4

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- "Removal of Unsuitable Material Including Haul", per cubic yard.
- 5 The unit contract price per cubic yard for "Removal of Unsuitable Material Including Haul" 6 shall be full pay for all work to remove unsuitable material, haul and disposal of unsuitable 7 material, as specified in Section 7-08.3(1)A.
 - Payment for "Quarry Spalls" required for trenches as shown on the Plans shall be per ton.

11 7-17 SANITARY SEWERS

12 13 **7-17.1 Description**

14 (June 10, 2009 R&E GSP)

16 Section 7-17.1 is supplemented with the following:

This work shall consist of furnishing and installing a steel casing for sanitary sewer by jacking, augering, or a combination of both methods.

21 7-17.2 Materials

22 Section 7-17.2 is supplemented with the following:

24 inch diameter steel casing shall conform to ASTM A 53, Grade B. The casing shall be thick enough to withstand the forces exerted by the jacking operations as well as those exerted by the earth during installation.

28 7-17.3 Construction Requirements

29 30

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43 44 Section 7-17.3 is supplemented with the following:

32 Steel Casing Installation

Prior to installation, the Contractor shall submit a construction procedures outline to the Engineer at least 15 working days prior to the anticipated construction. The shoring and jacking plan shall be prepared by and bear the seal and signature of a licensed professional engineer. The shoring and jacking plan shall include the following:

- 1. Plan and elevation views showing:
 - a. Dimensions of pit.
 - b. Shoring, bracing, struts, walers, or sheet pile.
 - c. Size and type of casing.
- 2. Proposed method of jacking showing:
- 45 46 a. The jacking system.

- b. A detail of the separator-cushion at the end of the casing against which the 1 2 jacking force will be applied. 3 The support system behind the jack. c. 4 d. The support system under the jack and the bottom of the pit. 5 6 Construction shall not begin until the construction procedures and plan drawings have been 7 approved by the Engineer. Approval by the Engineer shall not relieve the Contractor of 8 responsibility for the sufficiency of the shoring and jacking pit plans nor waive or modify any 9 of the provisions of the Contract. 10 The casing shall be installed without damaging traveled lanes, shoulders, BNSF facilities, or 11 12 other highway facilities in accordance with an approved traffic control plan. Jacking and 13 augering operations shall be conducted to prevent caving ahead of the casing. The auger head 14 shall not proceed more than 4 inches ahead of the casing being jacked. If the material encountered during the Contractor's operations makes augering ahead of the casing 15 16 impractical, the auger shall be withdrawn into the casing and jacking operations shall precede 17 the augering. 18 19 Removal of the material from the pits by washing or sluicing will not be permitted. After the 20 casing is in place, the casing interior shall be cleaned until free from grease, dirt, rust, moisture, 21 or other deleterious material. 22 23 All welding on steel casing sections shall be performed by a certified welder as prescribed by 24 the AWS D1.1, Structural Welding Code, latest edition. The quality of welding shall conform to AWS D1.1-80 Section 3, Workmanship. A copy of the welder's certificate shall be included 25 26 in the shoring and jacking plan. 27 28 The space between the conduit and the casing shall be plugged with sand bags and shall be filled with a grout sealant at least 1 foot thick at each end of the casing. Casings abandoned 29 30 due to encountered obstruction shall be grout sealed in the same manner. Grout shall obtain a minimum 3000 psi compressive strength in 7 days. 31 32 33 In lieu of sandbags and grout, unopened sacks of prepackaged concrete meeting the 34 requirements of Section 6-023(2)B may be used to seal the casing. 35 36 **Unexpected Object Removal** 37 Removal of unexpected objects such as stumps, buried pavement, building foundations, and other items defined by the Engineer that are encountered during the jacking operation shall be 38 39 considered incidental to the jacking operation unless the Engineer determines that the object cannot be removed by on site equipment or methods. 40 41
- The cost of removing unexpected objects that require equipment or methods other than those
 available on site will be paid by force account.
- 45 Requests for extensions of time due to this work will be evaluated in accordance with Section46 1-08.8.

1 7-17.3(1) Protection of Existing Sewerage Facilities

2 (June 10, 2009 R&E GSP)

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4 Section 7-17.3(1) is supplemented with the following: 5

If the connection to the existing system involves sewer service disruption, the Contractor shall be responsible for notifying the residents and utility owner affected by the shutoff. The Engineer will advise which parties are to be notified.

10 The Contractor may be required to perform the connection during times other than normal 11 working hours. The types of connections for the sewer main are varied. For the installation 12 of these connections, the surfaced portion of the roadway shall not be penetrated unless the 13 connection point is directly under it.

15 Sewer Force Main Plan

16 The Contractor shall submit a sewer force main plan with working drawings and calculations 17 to the Engineer for approval, showing the method of removing the existing sewer force main, 18 or portions of the sewer force main as specified.

The sewer force main plan shall show proposed relocation of the sewer force main, proposed materials for the sewer force main, and the sequence of demolition and removal. The plan shall detail the containment, collection, and disposal of all debris.

23

The Contractor shall not begin removal operations until receiving the Engineer's approval of
 the sewer force main plan.

27 Maintaining Service

Where existing services are to be transferred from old to new sewer mains, the Contractor shall plan and coordinate its work with that of the Utility so that service will be resumed with the least possible inconvenience to customers.

32 Measurement

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34 Section 7-17.4 is supplemented with the following: 35

Measurement for Sanitary Sewer Pipe, as indicated on the Bid Proposal, shall be per linear foot. The following items shall be incidental and included in the unit price per linear foot:

- 3839 1. Structure Excavation Class B
- 40 2. Dewatering if required
- 41 3. Detectable marking tape
- 42 4. Pipe bedding as shown on the Plans
- 43 5. Compaction
- 44 6. Installation of sanitary sewer pipe
- 45 7. Coupling bands, fittings, and associated gaskets
- 46 8. Removing/adding concrete to manhole channels
- 47

- 9. 1 Connection to existing structures 2 Connection to existing side sewers 10 3 Sewer Force Main Plan 11. 4 12. Other work and materials, not specifically identified as being paid elsewhere 5 6 Steel casing will be measured by the linear foot along the invert of the installed casing. Casing 7 jacked beyond the limits shown in the Plans will be considered as being done for the 8 Contractor's benefit and will not be measured for payment. 9 10 Payment Section 7-17.5 is supplemented with the following: 11 12 13 The unit Contract price per linear foot for sewer pipe of the kind and size specified shall be 14 full pay for connections to existing mains and manholes. 15 16 "Furnishing and Jacking Steel Casing Pipe 24 In. Diam." per linear foot. 17 The unit contract price per linear foot for "Furnishing and Jacking Steel Casing 24 In. Diam." 18 shall be full pay for performing the work as specified, including furnishing and jacking the 19 casing, spacers, end seals, constructing the jacking and receiving pits, and removing and 20 disposing of all excavated materials. 21 22 "Force Account Unexpected Object Removal", by force account as provided in Section 1-09.6. 23 For the purpose of providing a common proposal for all bidders, the Contracting Agency has 24 entered an amount for the item "Force Account Unexpected Object Removal" in the bid 25 proposal to become a part of the total bid by the Contractor. 26 27 7-18 SIDE SEWERS 28 29 7-18.1 Description 30 (*March 15, 2010 R&E GSP*) 31 32 Section 7-18.1 is supplemented with the following:
 - Realignment and repair of the existing sanitary sewer services may be necessary to connect to new sanitary sewer main.

37 **7-18.3(1)** General

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- Connections to the existing sewer main shall not be made without first making the necessary
 scheduling arrangements with the Engineer in advance. Work shall not be started until all the
 materials, equipment, and labor necessary to properly complete the work are assembled on the
 site.
- 43
- 44 Existing side sewers shall be cut by the Contractor, unless otherwise specified in the Special 45 Conditions. The Contractor shall remove the portions of pipe to provide for the installation of
- 46 the required fittings at the points of connection. Damage caused by the Contractor's operations

- to existing joints in piping to remain in-service shall be repaired by the Contractor at no
 additional expense to the Contracting Agency.
- Once work is started on a side sewer, it shall proceed continuously without interruption and as
 rapidly as possible until completed. No shutoff will be permitted overnight, over weekends,
 or on holidays.
- 8 If the connection to the existing side sewer system involves turning off the side sewer, the 9 Contractor shall be responsible for notifying the residents affected by the shutoff. The 10 Engineer will advise which property owners are to be notified.
- The Contractor may be required to perform the connection during times other than normal
 working hours.
- 15 The types of connections for the side sewers are varied. For the installation of these side 16 sewers, the surfaced portion of the roadway shall not be penetrated unless the connection point 17 is directly under it.

19 **7-18.5 Payment**

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- Section 7-18.5 is supplemented with the following:
- Potholing required to determine the connection point at the right of way shall be paid under
 the bid item "Pothole Existing Underground Utility."

1 DIVISION 8

2 MISCELLANEOUS CONSTRUCTION

3 4

8-01 EROSION CONTROL AND WATER POLLUTION CONROL

5 6 **8-01.1 Description**

6 8-01.1 Description 7 (March 18, 2010 R&E GSP) 8 The first paragraph of Sectio 9

The first paragraph of Section 8-01.1 is supplemented with the following:

10 Furnish all labor, materials and equipment necessary for installation seed, fertilizer, mulch, 11 binding agents, including but not limited to the preparation of the ground surface, application 12 of fertilizer, installation of seed, and chemicals as necessary in areas shown on the plans or as directed by the Engineer in accordance with these specifications. The extent and location of 13 14 seeding work includes all areas in this project, except new plant beds and paved areas, which 15 are disturbed by construction, grading, pavement removal, utility installation and any other of the Contractor's operations or as directed by the Engineer in accordance with these 16 17 specifications.

18

19 8-01.3 Construction Requirements

20

21 8-01.3(1) General

Section 8-01.3(1) is supplemented with the following:

The Contractor shall install orange silt fence along the site preservation lines shown in the Plans or as instructed by the Engineer.

25 26

24

27 Wetland and Sensitive Area Protection

The Engineer will designate the vegetation to be protected by a site preservation line, highvisibility fencing, or individual flagging.

30

Existing wetland and other environmentally sensitive areas, where shown in the Plans or designated by the Engineer, shall be protected through the life of the Contract. When applicable, a site preservation line has been established as a boundary between work zones and sensitive environmental areas. This is especially important due to the proximity of the existing sensitive environmental areas (e.g., wetlands, streams and buffers on site).

36

The Contractor shall install high visibility fence as shown in the Plans or designated by the Engineer in accordance with this section. The areas to be protected include critical environmental areas, buffer zones, and other areas of vegetation to be preserved. The Contractor shall keep areas identified by the site preservation lines free of construction equipment, construction materials, debris, and runoff. No access, to include but not limited to excavation, clearing, staging, or stockpiling shall be performed inside the protected area.

43

44 **8-01.3(2)** Seeding, Fertilizing, and Mulching

- 45 (March 18, 2010 R&E GSP) 46
- 47 Section 8-01.3(2) is supplemented with the following:
- 48

"Seeding, Fertilizing, and Mulching" will be paid in the areas shown on the Plans. This will
generally consist of areas of the access road slope where no established lawns or landscaping
currently exist. "Seeding, Fertilizing, and Mulching" shall be placed on all exposed soils
along the access road slopes or any area directed by Engineer. "Seeding, Fertilizing, and
Mulching" shall also be placed on all fill and cut areas outside roadway surface width, within
the project limits and as shown on the Plans.

8

9 The intent of "Seeding, Fertilizing, and Mulching" is to produce viable roadside vegetation 10 toward the end of preventing erosion. If seeding has not germinated satisfactorily at the time of final acceptance, this work will be considered defective according to Section 1-05.7 of the 11 12 Standard Specifications. The Engineer may require the Contractor to post security equal to 13 200% of the amount bid for "Seeding, Fertilizing, and Mulching" in order to secure 14 performance of this germination specification. This security shall be in a form acceptable to the Contracting Agency and may be required prior to release of retainage of this project. Said 15 16 security shall not be released until satisfactory germination has occurred. Any erosion, which 17 in the opinion of the Engineer, occurs directly as a result of insufficient seed germination shall 18 be repaired by the Contractor at no additional expense to the Contracting Agency. Any such 19 repairs shall be completed prior to project acceptance or release of security as identified herein. 20 Satisfactory germination is defined as a minimum of 300 stems per square foot. Any area in 21 which two consecutive one square foot plots sampled fall below this standard will be 22 considered defective and shall be corrected by the Contractor.

23

The dates for seeding outlined in Section 8-01.3(2)F of the Standard Specifications will be considered guidelines rather than requirements for this item. The Contractor shall use professional judgment and consider factors such as weather and soil moisture to obtain satisfactory germination.

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Immediately after hydroseeding, the Contractor shall remove hydroseed overspray from all
 features other than the intended seeding area.

Binding Agents

Tacking agents and soil binders shall be provided in accordance with Section 8-01.3(2)E.

35 **8-01.3(2)D** Mulching

36 (March 18, 2010 R&E GSP)

Section 8-01.3(2)D is supplemented with the following:

Wood Cellulose mulch shall be applied at a rate of 2,000 pounds per acre. To improve
germination of seeds, this rate may be increased with approval by the Engineer.

- 43 8-01.4 Measurement
- 44 (March 18, 2010, 2008 R&E GSP)

45 Section 8-01.4 is supplemented with the following: 46

47 Seeding, fertilizing, liming, mulching, mowing, and tackifier will be measured by the square
48 yard by ground slope measurement or through the use of design data.

1 2	No separate measurement will be made for fertilizer, mulch, soil amendments, binding agents, or water where applied for "Seeding, Fertilizing, and Mulching".
3 4	No specific unit of measure shall apply to the lump sum item "ESC Lead."
5	
6	8-01.5 Payment
7 8 9	(<i>March 18, 2010 R&E GSP</i>) Section 8-01.5 is supplemented with the following:
10 11	The first item, "ESC Lead", is revised to read:
12 13	"ESC Lead", lump sum.
13 14 15	The sixth item, "Inlet Protection" of Section 8-01.5 is revised to read:
15 16 17	"Inlet Protection", per each. The unit contract price per each for inlet protection shall include all costs for removal and disposal of accumulated debris, inlet protection maintenance, and
18	inlet protection removal and disposal.
19 20 21	The eighth item, "Stabilized Construction Entrance" of Section 8-01.5 is revised to read:
22 23 24	"Stabilized Construction Entrance", per square yard. The unit contract price per square yard for stabilized construction entrance shall include all costs associated with constructing, operating, maintaining, and removing the stabilized construction entrance.
25 26 27	The eleventh and twelfth item, "Silt Fence" and "High Visibility Silt Fence" of Section 8-01.5 is revised to read:
28 29 30 31	"Silt Fence" and "High Visibility Silt Fence" per linear foot. The unit contract price per liner foot for silt fence and high visibility silt fence shall include all costs for removal and disposal of accumulated debris, silt fence maintenance, and silt fence removal and disposal.
32 33 34 35	The unit contract price per square yard for "Seeding, Fertilizing, and Mulching" shall be full compensation for all labor, materials (fertilizer, mulch, soil amendments, binding agents), and water, tools and equipment necessary to perform the work as specified herein. All other items
36 37 38	in this Section, not specified on the Bid Proposal form shall be included in the cost of "Seeding, Fertilizing, and Mulching". The unit price shall be full compensation for multiple applications in areas required by the Engineer as the work progresses
39 40	8-02 ROADSIDE RESTORATION
41 42	8-02 5 Payment
43	(February 7, 2008 R&E GSP)
44 45	Section 8-02.5 is supplemented with the following:
16	Desimant for "Londogone Destaration" shall be on a faree account basis of ner Section 1.00

Payment for "Landscape Restoration" shall be on a force account basis as per Section 1-09.
For the purpose of providing a common proposal for all bidders, and for that purpose only, the

- Contracting Agency has established the amount of force account for this item and has entered
 the amount in the bid proposal to become a part of the total bid by the Contractor.
- 4 The following new Section is created:

5 **8-30 POTHOLE EXISTING UNDERGROUND UTILITY**

8-30.1 Description

8 9 When directed by the Engineer or shown on the Plans, this work shall consist of potholing 10 existing underground utilities. The Contractor shall perform utility investigations or coordinate with utility companies as required. At the direction of the Engineer, the Contractor 11 12 shall perform exploratory excavations or provide hand potholing as required to collect as-built 13 utility information. The Contractor shall verify the depth and location of existing underground 14 utilities. The Contractor shall immediately notify the Engineer if field conditions differ from that shown on the Plans. The Contractor shall give the owner advance notice of four (4) 15 16 working days, prior to conducting such investigations.

18 8-30.4 Measurement19

Measurement for potholing existing underground utilities will be by the unit for each pothole.

22 8-30.5 Payment

- 23 Payment will be made in accordance with Section 1-04.1, for the following bid items:
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- 25 "Pothole Existing Underground Utility", per each.
- The unit contract price per each for "Pothole Existing Underground Utility" shall be full compensation for all equipment, labor, and materials to locate the existing utility, verify the utilities' vertical and horizontal location, and restoring the disturbed area.
- 30 The following new Section is created:

8-31 REPAIR EXISTING PUBLIC AND PRIVATE FACILITIES 32

33 8-31.1 Description34

This work shall consist of the repair of existing public and private facilities, and the correction, repair, removal, or construction of items as directed by the Engineer. This shall not exempt the contractor from protecting known existing facilities, or from the responsibility for repair of such known existing facilities.

39

40 **8-31.3 Construction Requirements**

- 41
 42 The contractor shall obtain written or verbal approval from the Engineer, prior to proceeding
 43 with any repair of existing or private facilities. Work performed without approval from the
 44 Engineer will not be compensated.
- 45
- 46 The Contractor and the Contracting Agencies' representative or Engineer shall reconcile the

hours of work for labor and equipment on a daily basis for the purpose of tracking all work
under this item. The Contractor shall supply the Engineer with material invoices for all
materials incorporated into this work in a timely manner. Invoices shall be original or copies
of original invoices from the material supplier.

8-31.4 Measurement

Work performed under the item "Repair Existing Public and Private Facilities" shall be measured in accordance with Section 1-09.6 Force Account.

8-31.5 Payment

Payment for the item "Repair Existing Public and Private Facilities" shall be full compensation for all labor, tools, equipment, materials and subcontractor work needed to complete individual items of work as directed by the engineer. This item shall be paid in accordance with Section 1-09.6 Force Account.

18 8-32 UNANTICIPATED SITE WORK

20 8-32.1 Description

Unanticipated site work shall be performed at locations designated by the Engineer, and at locations proposed by the Contractor and approved by the Engineer.

25 8-32.3 Construction Requirements

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The Contractor and the Contracting Agencies' representative or Engineer shall reconcile the hours of work for labor and equipment on a daily basis for the purpose of tracking all work under this item. The Contractor shall supply the Engineer with material invoices for all materials incorporated into this work in a timely manner. Invoices shall be original or copies of original invoices from the material supplier.

33 8-32.4 Measurement34

Work performed under the item "Unanticipated Site Work" shall be measured in accordance with Section 1-09.6 Force Account.

38 **8-32.5 Payment** 39

Payment will be made in accordance with Section 1-04.1, for the following bid item:
"Unanticipated Site Work," by force account as provided in Section 1-09.6. To provide a
common proposal for all bidders, the Contracting Agency has entered an amount in the
proposal to become a part of the Contractor's total bid.
1 DIVISION 9

2 MATERIALS 3

4 9-03 AGGREGATES

6 9-03.10 Aggregate for Gravel Base

7 (December 28, 2009 R&E GSP)

9 Section 9-03.10 is revised to read:

Gravel base shall consist of granular material, either naturally occurring or processed. It shall be essentially free from various types of wood waste or other extraneous or objectionable materials. It shall have such characteristics of size and shape that it will compact readily and the maximum particle size shall not exceed ½ of the depth of the layer being placed.

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Gravel base shall meet the following requirements for grading and quality when placed in
 hauling vehicles for delivery to the roadway or during manufacture and placement into a
 temporary stockpile. The exact point of acceptance will be determined by the Engineer.

- /		
20	Sieve Size	Percent Passing
21	4" square	100
22	1-1/2" square	70-100
23	1/2" square	35-80
24	U.S. No. 4	15-50
25	U.S. No. 40	20 max
26	U.S. No. 200	5.0 max
27		

- Sand Equivalent shall be 40 min.
- 30 All percentages are by weight.
- 31 Gravel base material retained on a No. 4 sieve shall contain not more than 0.20 percent by 32 weight of wood waste.

3334 9-14 EROSION CONTROL AND ROADSIDE PLANTING

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36 9-14.2 Seed

37 Section 9-14.2 is supplemented with the following:

- 38
- Grass seed for Seeding, Fertilizing, and Mulching shall be a blended seed mixture of non-leafy
 grasses of a commercial grade for home lawn use. The composition, proportion, and quality
 shall be subject to the advance approval of the Engineer. Grass seed mixtures for playgrounds,
 pastures, roadside seeding, or other non-residential use shall not be allowed. The approved
- 42 pastures, toadside seeding, of other non-residential use shall not be anowed. The a
- 43 grass seed mixture shall be applied to the rate of five pounds per 1,000 square feet.44

45 **9-14.3 Fertilizer**

46 Section 9-14.3 is supplemented with the following:

1	The Contractor shall supply a commercially available starter fertilizer designed by the
2	manufacturer for use in new lawn installation applications. The fertilizer formula and
3	application rate shall provide the following types and amounts of nutrients at a minimum:
4	

- Total Nitrogen as N One pound per thousand square feet Available Phosphoric Acid as P_2O_5 One pound per thousand square feet 5 6
- 7 Soluble Potash as K_20 - One pound per thousand square feet.
- 8 50-60 percent of the total nitrogen shall be derived from ureaform or ureformaldehyde. The
- 9 remainder may be derived from any source.

(August 7, 2017) Standard Plans

The State of Washington Standard Plans for Road, Bridge and Municipal Construction M21-01 transmitted under Publications Transmittal No. PT 16-048, effective August 7, 2017 is made a part of this contract.

The Standard Plans are revised as follows:

<u>A-30.15</u> DELETED

<u>A-40.10</u>

Section View, PCCP to HMA Longitudinal Joint, callout, was – "Sawed Groove ~ Width 3/16" (IN) MIN. to 5/16" (IN) MAX. ~ Depth 1" (IN) MIN. ~ see Std. Spec. 5-04.3(12)B" is revised to read; "Sawed Groove ~ Width 3/16" (IN) MIN. to 5/16" (IN) MAX. ~ Depth 1" (IN) MIN. ~ see Std. Spec. Section 5-04.3(12)A2"

<u>A-50.10</u>

Sheet 2 of 2, Plan, with Single Slope Barrier, reference C-14a is revised to C-70.10

<u>A-50.20</u>

Sheet 2 of 2, Plan, with Anchored Barrier, reference C-14a is revised to C-70.10

<u>A-50.30</u>

Sheet 2 of 2, Plan (top), reference C-14a is revised to C-70.10

<u>A-60.30</u>

Note 4, was – "If the ACP and membrane is to be removed from the bridge deck, see GSP 023106 for deck preparation before placing new membrane." Is revised to read; "If the ACP and membrane is to be removed from the bridge deck, see GSP 6-02.3(10)D.OPT6.GB6 for deck preparation before placing new membrane."

<u>B-10.20</u>

Substitute "step" in lieu of "handhold" on plan

<u>B-25.20</u>

Note 4, was – "Bolt-Down capability is required on all frames, grates and covers, unless specified in the Contract. Provide two holes in the Frame that are vertically aligned with the grate slots. The frame shall accept the 5/8" x 11 NC x 2" allen head cap screw by being tapped, or other approved mechanism. The location of bolt-down holes varies among manufacturers. See BOLT-DOWN DETAIL, **Standard Plan B-30.10.** Is revised to read; "Bolt-Down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) Allen head cap screw by being tapped, or other approved mechanism. The location of bolt-down holes varies by manufacturer." See BOLT-DOWN DETAIL, **Standard Plan B-30.10.**

Add Note 7. See Standard Specification Section 8-04 for Curb and Gutter requirements

<u>B-30.70</u>

Note 2, was – "Bolt-Down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide 3 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 5/8" -1 NC x 2" Allen head cap screw by being tapped, or other approved mechanism. Location of bolt down holes varies by manufacturer." Is revised to read; "Bolt-Down capability is required on all frames, grates and covers, unless specified otherwise in the Contract. Provide 3 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC x 2" (in) Allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer."

RING PLAN, callout, was – "DRILL AND TAP 5/8" – 11NC HOLE FOR 1 1/2" X 5/8" STAINLESS STEEL SOCKET HEAD CAP SCREW (TYP.)" is revised to read; "SEE NOTE 2"

<u>B-90.40</u> Valve Detail - DELETED

<u>C-16b</u> DELETED

C-22.14

Note 3, formula, was: "Elevation G = (Elevation S – D x (0.1) + 28" is revised to read: "Elevation G = (Elevation S – D x (0.1) + 28/12"

<u>C-22.16</u>

Note 3, formula, was: "Elevation G = (Elevation S – D x (0.1) + 31" is revised to read: "Elevation G = (Elevation S – D x (0.1) + 31/12"

<u>C-22.41</u> DELETED

<u>C-25.18</u> DELETED

D-10.10

Wall Type 1 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT Bridge Design Manual (BDM) and the revisions stated in the 11/3/15 Bridge Design memorandum.

<u>D-10.15</u>

Wall Type 2 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

<u>D-10.20</u>

Wall Type 3 may be used in all cases. The last sentence of Note 6 on Wall Type 3 shall be revised to read: The seismic design of these walls has been completed using a site adjusted (effective) peak ground acceleration of 0.32g.

D-10.25

Wall Type 4 may be used in all cases. The last sentence of Note 6 on Wall Type 4 shall be revised to read: The seismic design of these walls has been completed using a site adjusted (effective) peak ground acceleration of 0.32g.

<u>D-10.30</u>

Wall Type 5 may be used in all cases.

<u>D-10.35</u>

Wall Type 6 may be used in all cases.

<u>D-10.40</u>

Wall Type 7 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the 11/3/15 Bridge Design memorandum.

<u>D-10.45</u>

Wall Type 8 may be used if no traffic barrier is attached on top of the wall. Walls with traffic barriers attached on top of the wall are considered non-standard and shall be designed in accordance with the current WSDOT BDM and the revisions stated in the revisions stated in the 11/3/15 Bridge Design memorandum.

D-15.10

STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

<u>D-15.20</u>

STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

<u>D-15.30</u>

STD Plans D-15 series "Traffic Barrier Details for Reinforced Concrete Retaining Walls" are withdrawn. Special designs in accordance with the current WSDOT BDM are required in place of these STD Plans.

<u>F-10.12</u>

Section Title, was – "Depressed Curb Section" is revised to read: "Depressed Curb and Gutter Section"

<u>F-10.40</u>

"EXTRUDED CURB AT CUT SLOPE", Section detail - Deleted

<u>F-10.42</u>

DELETE - "Extruded Curb at Cut Slope" View

<u>G-22.10</u>

Sheet 2, Elevation, Three-Post Installation, Dimension, upper right, was – ".035" is revised to read: "0.35X"

<u>G-24.60</u>

Sheet 1, View A, Dimension @ Bottom of sign, is = 3" is revised to read: 6".

<u>G-60.10</u>

Sheet 3, TYPICAL TRUSS DETAILS, BASE ~ TOP, callout, was – "15/16"(IN) DIAM. HOLES FOR FOUR, 7/8" (IN) DIAM. BOLTS (ASTM A 325)" is revised to read: "15/16"(IN) DIAM. HOLES FOR FOUR, 7/8" (IN) DIAM. BOLTS (ASTM F3125, GRADE A325)"

<u>G-90.10</u>

TOP VIEW, callout, was – "Vertical Brace ~ W4 x 13 steel (TYP.)(See Note 4)" is revised to read; "Vertical Brace ~ W4 x 13 steel (TYP.)(See Note 3)"

<u>G-95.10</u>

Sheet 2, Detail "B", Plan View, callout, was – "5/8" DIAM. ASTM A 325 H.S. BOLT W/HEAVY HEX NUT AND WASHER, GALV. (TYP.) TIGHTEN PER STD. SPEC. 6-03.3(33)" is revised to read: "5/8" DIAM. ASTM F 3125, GRADE A325 H.S. BOLT W/HEAVY HEX NUT AND WASHER, GALV. (TYP.) TIGHTEN PER STD. SPEC. 6-03.3(33)"

<u>H-70.20</u>

Sheet 2, Spacing Detail, Mailbox Support Type 1, reference to Standard Plan I-70.10 is revised to H-70.10

<u>I-30.30</u>

<u>8" Diameter Wattle Spacing Table, lower left corner, was – "Slope:1H : 1V, Maximum Spacing:10' – 0"" is revised to read: "Slope:1H : 1V, Maximum Spacing:8' – 0"".</u>

<u>J-3</u> DELETED

<u>J-3b</u> DELETED

J-3C DELETED

J-10.21

Note 18, was – "When service cabinet is installed within right of way fence, see Standard Plan J-10.22 for details." Is revised to read; "When service cabinet is installed within right of way fence, or the meter base is mounted on the exterior of the cabinet, see Standard Plan J-10.22 for details."

J-10.22

Key Note 1, was – "Meter base per serving utility requirements~ as a minimum, the meter base shall be safety socket box with factory-installed test bypass facility that meets the requirements of EUSERC drawing 305." Is revised to read; "Meter base per serving utility requirements~ as a minimum, the meter base shall be safety socket box with factory-installed test bypass facility that meets the requirements of EUSERC drawing 305. When the utility requires meter base to be mounted on the side or back of the service cabinet, the meter base enclosure shall be fabricated from type 304 stainless steel."

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)."

Key Note 14, was – "Hinged dead front with $\frac{1}{4}$ turn fasteners or slide latch." Is revised to read; "Hinged dead front with $\frac{1}{4}$ turn fasteners or slide latch. ~ Dead front panel bolts shall not extend into the vertical limits of the breaker array(s)."

Key Note 15, was – "Cabinet Main Bonding Jumper. Buss shall be 4 lug tinned copper. See Cabinet Main bonding Jumper detail, Standard Plan J-3b." is revised to read; "Cabinet Main Bonding Jumper Assembly ~ Buss shall be 4 lug tinned copper ~ See Standard Plan J-10.20 for Cabinet Main Bonding Jumper Assembly details."

<u>J-20.10</u>

Add Note 5, "5. One accessible pedestrian signal assembly per pedestrian pushbutton post."

J-20.11

Sheet 2, Foundation Detail, Elevation, callout – "Type 1 Signal Pole" is revised to read: "Type PS or Type 1 Signal Pole"

Sheet 2, Foundation Detail, Elevation, add note below Title, "(Type 1 Signal Pole Shown)" Add Note 6, "6. One accessible pedestrian signal assembly per pedestrian pushbutton post."

J-20.26

Add Note 1, "1. One accessible pedestrian pushbutton station per pedestrian pushbutton post."

<u>J-20.16</u>

View A, callout, was - LOCK NIPPLE, is revised to read; CHASE NIPPLE

J-21.10

Sheet 1, Elevation View, Round Concrete Foundation Detail, callout – "ANCHOR BOLTS $\sim \frac{3}{4}$ " (IN) x 30" (IN) FULL THREAD ~ THREE REQ'D. PER ASSEMBLY" IS REVISED TO READ: "ANCHOR BOLTS ~ 3/4" (IN) x 30" (IN) FULL THREAD ~ FOUR REQ'D. PER ASSEMBLY" Sheet 1 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3" CLR.. Delete "(TYP.)" from the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar. Sheet 1 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar. Sheet 2 of 2, Elevation view (Round), add dimension depicting the distance from the top of the foundation to find 2 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the 2 1/2" CLR. dimension, depicting the distance from the bottom of the foundation to find 2 # 4 reinf. Bar. Sheet 2 of 2, Elevation view (Square), add dimension depicting the distance from the top of the foundation to find 1 #4 reinforcing bar shown, to read; 3" CLR. Delete "(TYP.)" from the $2\frac{1}{2}$ " CLR. dimension, depicting the distance from the bottom of the foundation to find 1 # 4 reinf. Bar. Detail F, callout, "Heavy Hex Clamping Bolt (TYP.) ~ 3/4" (IN) Diam. Torque Clamping Bolts (see Note 3)" is revised to read; "Heavy Hex Clamping Bolt (TYP.) $\sim 3/4$ " (IN) Diam. Torque Clamping Bolts (see Note 1)"

Detail F, callout, "3/4" (IN) x 2' - 6" Anchor Bolt (TYP.) ~ Four Required (See Note 4)" is revised to read; "3/4" (IN) x 2' - 6" Anchor Bolt (TYP.) ~ Three Required (See Note 2)"

J-21.15

Partial View, callout, was – LOCK NIPPLE ~ 1 $\frac{1}{2}$ " DIAM., is revised to read; CHASE NIPPLE ~ 1 $\frac{1}{2}$ " (IN) DIAM.

<u>J-21.16</u>

Detail A, callout, was – LOCKNIPPLE, is revised to read; CHASE NIPPLE

J-22.15

Ramp Meter Signal Standard, elevation, dimension 4' - 6" is revised to read; 6'-0" (2x) Detail A, callout, was – LOCK NIPPLE ~ 1 $\frac{1}{2}$ " DIAM. is revised to read; CHASE NIPPLE ~ 1 $\frac{1}{2}$ " (IN) DIAM.

J-26.20

Sheet 1, NOTES, Note 5, was - "Connecting/clamping bolts AASHTO M 164 (ASTM A325)" is revised to read: "Connecting/clamping bolts ASTM F3125 GRADE A325"

Was - "NUTS AASHTO M 291 (ASTM A263) GRADE DH" is revised to read: "NUTS ASTM A563 GRADE DH"

J-28.43

KEY notes, note 1, was – "CLAMPING BOLTS, 7/8" (IN) DIAM. HEX HEAD BOLT AND NUT, TWO PLATE WASHERS, ONE HARDENED ROUND WASHER, 87 FT-LBS TORQUE (THREE CLAMPING BOLT ASSEMBLIES PER SLIP BASE) (PER ASTM A325)" is revised to read: "CLAMPING BOLTS, 7/8" (IN) DIAM. HEX HEAD BOLT AND NUT, TWO PLATE WASHERS, ONE HARDENED ROUND WASHER, 87 FT-LBS TORQUE (THREE CLAMPING BOLT ASSEMBLIES PER SLIP BASE) (PER ASTM F3125 GRADE A325)"

J-40.10

Sheet 2 of 2, Detail F, callout, " $12 - 13 \times 1 \frac{1}{2}$ " S.S. PENTA HEAD BOLT AND 12" S. S. FLAT WASHER" is revised to read; " $12 - 13 \times 1 \frac{1}{2}$ " S.S. PENTA HEAD BOLT AND 1/2" (IN) S. S. FLAT WASHER"

J-60.14

All references to J-16b (6x) are revised to read; J-60.11

<u>K-80.30</u>

In the NARROW BASE, END view, the reference to Std. Plan C-8e is revised to Std. Plan K-80.35

<u>M-11.10</u>

Layout, dimension (from stop bar to "X"), was - 23' is revised to read; 24'

The following are the Standard Plan numbers applicable at the time this project was advertised. The date shown with each plan number is the publication approval date shown in the lower right-hand corner of that plan. Standard Plans showing different dates shall not be used in this contract.

A-10.10-008/7/07	A-40.00-008/11/09	A-50.30-0011/17/08
A-10.20-0010/5/07	A-40.10-0312/23/14	A-50.40-0011/17/08
A-10.30-0010/5/07	A-40.15-008/11/09	A-60.10-0312/23/14
A-20.10-008/31/07	A-40.20-041/18/17	A-60.20-0312/23/14
A-30.10-0011/8/07	A-40.50-0212/23/14	A-60.30-0011/8/07
A-30.30-016/16/11	A-50.10-0011/17/08	A-60.40-008/31/07
A-30.35-0010/12/07	A-50.20-019/22/09	
B-5.20-021/26/17	B-30.50-021/26/17	B-75.20-016/10/08
B-5.40-021/26/17	B-30.70-034/26/12	B-75.50-016/10/08
B-5.60-021/26/17	B-30.80-006/8/06	B-75.60-006/8/06
B-10.20-012/7/12	B-30.90-021/26/17	B-80.20-006/8/06

B-10.40-011/26/17	B-35.20-006/8/06	B-80.40-006/1/06
B-10.60-006/8/06	B-35.40-006/8/06	B-82.20-006/1/06
B-10.70-001/26/17	B-40.20-006/1/06	B-85.10-016/10/08
B-15.20-012/7/12	B-40.40-021/26/17	B-85.20-006/1/06
B-15.40-012/7/12	B-45.20-017/11/17	B-85.30-006/1/06
B-15.60-021/26/17	B-45.40-017/21/17	B-85.40-006/8/06
B-20.20-023/16/12	B-50.20-006/1/06	B-85.50-016/10/08
B-20.40-033/16/12	B-55.20-011/26/17	B-90.10-006/8/06
B-20.60-033/15/12	B-60.20-006/8/06	B-90.20-006/8/06
B-25.20-013/15/12	B-60.40-006/1/06	B-90.30-006/8/06
B-25.60-011/26/17	B-65.20-014/26/12	B-90.40-011/26/17
B-30.10-021/26/17	B-65.40-006/1/06	B-90.50-006/8/06
B-30.20-031/26/17	B-70.20-006/1/06	B-95.20-012/3/09
B-30.30-021/26/17	B-70.60-011/26/17	B-95.40-006/8/06
B-30.40-021/26/17		
C-17/12/16	C-67/15/16	C-23.60-047/21/17
C-1a7/14/15	C-6a10/14/09	C.24.10-016/11/14
C-1b7/14/15	C-6c7/15/16	C-25.20-067/14/15
C-1c7/12/16	C-6d7/15/16	C-25.22-057/14/15
C-1d10/31/03	C-6f7/15/16	C-25.26-037/14/15
C-21/6/00	C-76/16/11	C-25.80-047/15/16
C-2a6/21/06	C-7a6/16/11	C-40.14-027/2/12
C-2b6/21/06	C-82/10/09	C-40.16-027/2/12
C-2c6/21/06	C-8a7/25/97	C-40.18-037/21/17
C-2d6/21/06	C-8b2/29/16	C-70.10-016/17/14
C-2e6/21/06	C-8e2/21/07	C-75.10-016/11/14
C-2f3/14/97	C-8f6/30/04	C-75.20-016/11/14
C-2g7/27/01	C-107/15/16	C-75.30-016/11/14
C-2h3/28/97	C-16a7/21/17	C-80.10-016/11/14
C-2i3/28/97	C-20.10-047/21/17	C-80.20-016/11/14
C-2j6/12/98	C-20.11-007/21/17	C-80.30-016/11/14
C-2k7/12/16	C-20.14-036/11/14	C-80.40-016/11/14
C-2n7/12/16	C-20.15-026/11/14	C-80.50-004/8/12
C-207/13/01	C-20.18-026/11/14	C-85.10-004/8/12
C-2p10/31/03	C-20.19-026/11/14	C-85.11-004/8/12
C-37/2/12	C-20.40-067/21/17	C-85.14-016/11/14
C-3a10/4/05	C-20.41-017/14/15	C-85.15-016/30/14
C-3b6/27/11	C-20.42-057/14/15	C-85.16-016/17/14
C-3c6/27/11	C-20.45.017/2/12	C-85-18-016/11/14
C-4b7/15/16	C-22.14-047/15/16	C-85.20-016/11/14
C-4e7/15/16	C-22.16-067/21/17	C-90.10-007/3/08
C-4f7/2/12	C-22.40-067/21/17	
	C-22.45-037/21/17	
D-2.04-0011/10/05	D-2.48-0011/10/05	D-3.17-025/9/16
D-2.06-011/6/09	D-2.64-011/6/09	D-412/11/98
D-2.08-0011/10/05	D-2.66-0011/10/05	D-66/19/98
D-2.14-0011/10/05	D-2.68-0011/10/05	D-10.10-0112/2/08
D-2.16-0011/10/05	D-2.80-0011/10/05	D-10.15-0112/2/08
D-2.18-0011/10/05	D-2.82-0011/10/05	D-10.20-007/8/08

D-2.20-0011/10/05	D-2.84-0011/10/05	D-10.25-007/8/08
D-2.32-0011/10/05	D-2.86-0011/10/05	D-10.30-007/8/08
D-2.34-011/6/09	D-2.88-0011/10/05	D-10.35-007/8/08
D-2.36-036/11/14	D-2.92-0011/10/05	D-10.40-0112/2/08
D-2.42-0011/10/05	D-3.09-005/17/12	D-10.45-0112/2/08
D-2.44-0011/10/05	D-3.10-015/29/13	D-15.10-0112/2/08
D-2.60-0011/10/05	D-3.11-036/11/14	D-15.20-035/9/16
D-2 62-00 11/10/05	D-3 15-02 6/10/13	D-15 30-01 12/02/08
D-2.46-016/11/14	D-3.16-025/29/13	
E-12/21/07	E-48/27/03	
E-25/29/98	E-4a8/27/03	
F-10.12-036/11/14	F-10.62-024/22/14	F-40.15-036/29/16
F-10.16-0012/20/06	F-10.64-034/22/14	F-40.16-036/29/16
F-10.18-017/11/17	F-30.10-036/11/14	F-45.10-027/15/16
F-10.40-036/29/16	F-40.12-036/29/16	F-80.10-047/15/16
F-10.42-001/23/07	F-40.14-036/29/16	
G-10.10-009/20/07	G-25.10-046/10/13	G-90.10-037/11/17
G-20.10-026/23/15	G-30.10-046/23/15	G-90.11-004/28/16
G-22.10-037/10/15	G-50.10-026/23/15	G-90.20-057/11/17
G-24.10-0011/8/07	G-60.10-036/18/15	G-90.30-047/11/17
G-24.20-012/7/12	G-60.20-026/18/15	G-90.40-024/28/16
G-24.30-012/7/12	G-60.30-026/18/15	G-95.10-016/2/11
G-24.40-062/29/16	G-70.10-036/18/15	G-95.20-026/2/11
G-24.50-047/11/17	G-70.20-047/21/17	G-95.30-026/2/11
G-24.60-046/23/15	G-70.30-047/21/17	
H-10.10-007/3/08	H-32.10-009/20/07	H-70.10-012/7/12
H-10.15-007/3/08	H-60.10-017/3/08	H-70.20-012/16/12
H-30.10-0010/12/07	H-60.20-017/3/08	H-70.30-022/7/12
I-10.10-018/11/09	I-30.20-009/20/07	I-40.20-009/20/07
I-30.10-023/22/13	I-30.30-016/10/13	I-50.20-016/10/13
I-30.15-023/22/13	I-30.40-016/10/13	I-60.10-016/10/13
I-30.16-003/22/13	I-30.60-005/29/13	I-60.20-016/10/13
I-30.17-003/22/13	I-40.10-009/20/07	I-80.10-027/15/16
J-107/18/97	J-26.20-006/11/14	J-40.38-015/20/13
J-10.10-036/3/15	J-27.10-017/21/16	J-40.39-005/20/13
J-10.15-016/11/14	J-27.15-003/15/12	J-40.40-014/28/16
J-10.16-006/3/15	J-28.10-015/11/11	J-45.36-007/21/17
J-10.17-006/3/15	J-28.22-008/07/07	J-50.05-007/21/17
J-10.18-006/3/15	J-28.24-016/3/15	J-50.10-006/3/11
J-10.20-016/1/16	J-28.26-0112/02/08	J-50.11-017/21/17
J-10.21-006/3/15	J-28.30-036/11/14	J-50.12-017/21/17
J-10.22-005/29/13	J-28.40-026/11/14	J-50.15-017/21/17
J-10.25-007/11/17	J-28.42-016/11/14	J-50.16-013/22/13
J-15.10-016/11/14	J-28.43-006/11/14	J-50.20-006/3/11
J-15.15-027/10/15	J-28.45-037/21/16	J-50.25-006/3/11

J-20.10-036/30/14	J-28.50-037/21/16	J-50.30-006/3/11
J-20.11-026/30/14	J-28.60-027/21/16	J-60.05-017/21/16
J-20.15-036/30/14	J-28.70-037/21/17	J-60.11-005/20/13
J-20.16-026/30/14	J-29.10-017/21/16	J-60.12-005/20/13
J-20.20-025/20/13	J-29.15-017/21/16	J-60.13-006/16/10
J-20.26-017/12/12	J-29.16-027/21/16	J-60.14-006/16/10
J-21.10-046/30/14	J-30.10-006/18/15	J-75.10-027/10/15
J-21.15-016/10/13	J-40.05-007/21/16	J-75.20-017/10/15
J-21.16-016/10/13	J-40.10-044/28/16	J-75.30-027/10/15
J-21.17-016/10/13	J-40.20-034/28/16	J-75.40-026/1/16
J-21.20-016/10/13	J-40.30-044/28/16	J-75.41-016/29/16
J-22.15-027/10/15	J-40.35-015/29/13	J-75.45-026/1/16
J-22.16-037/10/15	J-40.36-027/21/17	J-90.10-024/28/16
J-26.10-037/21/16	J-40.37-027/21/17	J-90.20-024/28/16
J-26.15-015/17/12		J-90.21-014/28/16
K-70.20-016/1/16		
K-80.10-016/1/16		
K-80.20-0012/20/06		
K-80.30-002/21/07		
K-80.35-002/21/07		
K-80.37-002/21/07		
L-10.10-026/21/12	L-40.10-026/21/12	L-70.10-015/21/08
L-20.10-037/14/15	L-40.15-016/16/11	L-70.20-015/21/08
L-30.10-026/11/14	L-40.20-026/21/12	
M-1.20-036/24/14	M-12.10-007/11/17	M-40.10-036/24/14
M-1.40-026/3/11	M-15.10-012/6/07	M-40.20-0010/12/07
M-1.60-026/3/11	M-17.10-027/3/08	M-40.30-017/11/17
M-1.80-036/3/11	M-20.10-026/3/11	M-40.40-009/20/07
M-2.20-037/10/15	M-20.20-024/20/15	M-40.50-009/20/07
M-2.21-007/10/15	M-20.30-042/29/16	M-40.60-009/20/07
M-3.10-036/3/11	M-20.40-036/24/14	M-60.10-016/3/11
M-3.20-026/3/11	M-20.50-026/3/11	M-60.20-026/27/11
M-3.30-036/3/11	M-24.20-024/20/15	M-65.10-025/11/11
M-3.40-036/3/11	M-24.40-024/20/15	M-80.10-016/3/11
M-3.50-026/3/11	M-24.50-006/16/11	M-80.20-006/10/08
M-5.10-026/3/11	M-24.60-046/24/14	M-80.30-006/10/08
M-7.50-011/30/07	M-24.65-007/11/17	
M-9.50-026/24/14	M-24.66-007/11/17	
M-9.60-002/10/09		

M-11.10-02.....7/11/17

CONTRACT FORMS (This Page Intentionally Left Blank)

CONTRACT FOR: THORNTON STREET SANITARY SEWER PROJECT FERNDALE, WASHINGTON

This Contract, made and entered into this _____ day of _____, 2017 by and between the City of Ferndale, hereinafter called the "Owner" and ______, hereinafter called the "Contractor".

WITNESSETH:

That in consideration of the terms and conditions contained herein and attached and made a part of this Contract, the parties hereto covenant and agree as follows:

1. The Contractor shall do all of the work and furnish all of the labor, materials, tools and equipment for the construction of the improvements and shall perform any changes in the work, all in full compliance with the contract documents entitled "THORNTON STREET SANITARY SEWER PROJECT, Ferndale, Washington".

The "Bid Proposal", "Specifications and Conditions", "Contract Forms", and the "Plans" sections contained in said contract documents are hereby referred to and by reference made a part hereof.

- 2. The Owner hereby promises and agrees with the Contractor to employ, and does employ the Contractor to furnish the labor, materials, tools and equipment, and to and cause to be done the above-described work, and to complete and finish the same in accordance with the said contract documents and the terms and conditions herein contained, and hereby contracts to pay for the same, according to the said contract documents, including the schedule of estimated quantities, and unit and lump sum prices in the Bid Proposal, the approximate sum of ______, the total amount of bid, subject to the actual quantity of work performed, at the time and in the manner and upon the conditions provided for in this contract.
- 3. The Contractor for himself, and for his agents, successors, assigns, subcontractors and/or employees, does hereby agree to the full performance of all the covenants herein contained upon the part of the Contractor.
- 4. The Owner hereby appoints and the Contractor hereby accepts Reichhardt & Ebe Engineering, Inc., hereinafter referred to as the Engineer, as the City's representative for the purpose of administering the provisions of this Contract, including the Owner's right to receive and act on all reports and documents related to this Contract, to request and receive additional information from the Contractor, to assess the general performance of the Contractor under this Contract, to determine if the contracted services are being performed in accordance with Federal, State or local laws, and to administer any other right granted to the Owner under this Contract. The Owner expressly reserves the right to terminate this

Contract as provided in the contract documents, and also expressly the reserves the right to commence civil action for the enforcement of this contract.

- 5. This Contract contains terms and conditions agreed upon by the parties. The parties agree that there are no other understandings, oral or otherwise, regarding the subject matter of this Contract.
- 6. The Contractor agrees to comply with all applicable Federal, State, City or municipal standards for the licensing, certification, operation of facilities and programs, and accreditation and licensing of individuals.
- 7. The Contractor shall not assign or subcontract any portion of the work provided for under the terms of this Contract without obtaining prior written approval of the Engineer. All terms and conditions of this Contract shall apply to any approved subcontract or assignment related to this Contract.
- 8. The parties intend that an independent Contractor-Owner relationship will be created by this Contract. The Owner is interested only in the results to be achieved, the implementation of the work will lie solely with the Contractor. The Contractor will be solely and entirely responsible for its acts and for the acts of its agents, employees, servants, subcontractors, or otherwise during the performance of this Contract. In the performance of the work herein contemplated, the Contractor is an independent Contractor with regard to the performance of the details of the work; however, the components of and the results of the work contemplated herein must meet the approval of the Engineer and shall be subject to the Engineer's general rights of inspection and review to secure the satisfactory completion thereof.
- 9. The Contractor agrees and covenants to indemnify, defend, and save harmless, the Owner and the City of Ferndale and those persons who were, now are, or shall be duly elected or appointed officials or members of employees thereof, hereinafter referred to as the "Owner" or "City" against and from any loss, damage, costs, charge, expense, liability, claims, demands or judgments, of whatsoever kind or nature, whether to persons or to property, arising wholly or partially out of any act, action, neglect, omission, or default on the part of the Contractor, his agents, successors, assignees, subcontractors and/or employees, except only such injury or damage as shall have been caused by or resulted from the sole negligence of the City. In case any suit or cause of action shall be brought against the Owner or the City on account of any act, action, neglect, omission, or default on the part of the Contractor, his agents, subcontractors and/or employees the Contractor, his agents, successors, assignees, and other expenses, assignees, subcontractors and/or employees the contractor hereby agrees and covenants to assume the defense thereof and to pay any and all costs, charges, attorney's fees and other expenses and any and all judgments that may be incurred or obtained against the City.

In the event the Owner is required to institute legal action and/or participate in the legal action to enforce this Indemnification and Hold Harmless Clause, the Contractor agrees to pay the Owner or City's legal fees, costs and disbursements incurred in establishing the right to indemnification. If the claim, suit, or action for injuries, death, or damages as provided for in the preceding paragraphs of this specification is caused by or results from the concurrent negligence of (a) the indemnitee or the indemnitee's agents or employees and (b) the indemnitor or the indemnitor's agents for employees the indemnity provisions provided for in the preceding paragraphs of this specification shall be valid and enforceable only to the extent of the indemnitor's negligence.

Contractor hereby specifically and expressly waives any immunity under Industrial Insurance, Title 51 RCW and acknowledges that this waiver was mutually negotiated by the parties herein. In the event of litigation between the parties to enforce the rights under this paragraph, reasonable attorney's fees shall be allowed to the prevailing party.

- 10. This Contract has been and shall be construed as having been made and delivered within the State of Washington and it is mutually understood and agreed by each party hereto that this Contract shall be governed by the laws of the State of Washington, both as to interpretation and performance. Any action in law, suit and equity or judicial proceedings for the enforcement of this contract, or any provisions thereof, shall be instituted and maintained in the courts of competent jurisdiction located in City of Ferndale, Washington.
- 11. The failure of the Owner to insist upon strict performance of any of the covenants and agreements of this Contract or to exercise any option herein conferred in any one or more instances shall not be construed to be a waiver or relinquishment of any such, or any other covenants or agreements, but the same shall be and remain in full force and effect.
- 12. It is understood and agreed by the parties hereto that if any part of this agreement is determined to be illegal, the validity of the remaining portions shall be construed as if the agreement did not contain the particular illegal part.
- 13. No change or addition to this Contract shall be valid or binding upon either party unless such change or addition shall be in writing, executed by both parties.
- 14. In the event that funding from State, Federal, or other sources is withdrawn, reduced, or limited in any way after the effective date of this Agreement, and prior to its normal completion, the Owner may summarily terminate this Agreement as to the funds withdrawn, reduced, or limited notwithstanding any other termination provisions of this Agreement. If the level of funding withdrawn, reduced or limited is so great that the Owner deems that the continuation of the programs covered by this Agreement is no longer in the best interest of the City, the Owner may summarily terminate this Agreement in whole notwithstanding any other termination of this Agreement. Termination under this section shall be effective upon receipt of written notice as specified herein.

IN WITNESS WHEREOF, the Contractor has executed this instrument, on the day and year first below written and the Owner has caused this instrument to be executed by and in the name of the said County, the day and year first above written.

Executed by the Contractor this ______ day of ______, 2017.

CITY OF FERNDALE:

By:

City Administrator / Mayor

STATE OF WASHINGTON)) ss. COUNTY OF WHATCOM)

On this ______ day of ______, 2017, before me personally appeared to me personally known to be the person described in and who executed the above instrument and who acknowledged to me the act of signing thereof.

NOTARY PUBLIC, in and for the State of Washington, residing at:

My Commission Expires:_____

CONTRACTOR:

By:

Title:

STATE OF WASHINGTON)

) ss. COUNTY OF WHATCOM)

On this _____ day of _____, 2017, before me personally appeared to me personally known to be the person described in and who executed the above instrument and who acknowledged to me the act of signing thereof.

NOTARY PUBLIC, in and for the State of Washington, residing at:

My Commission Expires:_____

PERFORMANCE BOND to the City of Ferndale

KNOW ALL MEN BY THESE PRESENTS, That we

					the	Contracto	r named in the	e Contract
hereinafter	referred	to as	PRINCIPAL,	and				as
SURETY,	are jointly a	nd seve	rally held and	firmly bo	ound to	the City of	of Ferndale, h	ereinafter
referred to	as OWNER	amed	in said Contra	act THOF	RNTON	STREET	SANITARY	SEWER,
Ferndale,	Was	hington,	for	the	e	penal	sum	of,
				DOLLA	RS (\$),

lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, assigns, administrators and successors jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that Whereas, the Principal entered into a contract with the Owner, dated the ______ day of ______, 2017, for such construction work with the City of Ferndale, Washington.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform all of the provisions and fulfill all of the undertakings, covenants, terms, conditions and agreements of said contract during the period of the original contract and any extensions thereof that may be granted by the Owner, with or without notices to the surety; and during the life of any guaranty required under the contract; and shall also well and truly perform and fulfill all of the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said contract that may hereafter be made; notice of which modifications to the surety being hereby waived, shall indemnify and save harmless owner from all cost and damage by reason of the principal's default of failure to do so, and shall pay the State of Washington sales and use taxes, and amounts due said state pursuant to Titles 50 and 51 of the Revised Code of Washington then this obligation to be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bonded parties have executed this instrument under their separate seals this _____ day of _____, 2017, the name and corporate seal of each corporate party hereto affixed, and these presents duly signed by its undersigned representatives pursuant to authority of its governing body.

Corporate Seal:

PRINCIPAL

ATTEST: (If Corporation)

By:_____

Title:_____

Corporate Seal:

SURETY

By:_____

Title:_____

PAYMENT BOND to the City of Ferndale

KNOW ALL MENT BY THESE PRESENTS: that

(Name of Contractor)	
(Address of Contractor)	
(Address of Contractor)	
a	, hereinafter called Principal
(Corporation, Partnership or Individual)	, , , , , , , , , , , , , , , , , ,
1	
(Name of Surety)	
(Address of surety)	
hereinafter called SURETY, are held and firmly bound unto	
	~
(Name of Owner)	
(Address of Owner)	
hereinafter called OWNER , in the penal sum of	Dollars, \$(
in lawful money of the United States, for the payment of which sum well and truly to successors, and assigns, jointly and severally, firmly by these presents.	be made, we bind ourselves,
THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal e	entered into a certain contract
with the OWNER, dated the day of	20, a copy of which
is hereto attached and made a part hereof for the construction of:	
	·····

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, **SUBCONTRACTORS**, and corporations furnishing materials for or performing labor in the prosecution of the **WORK** provided for in such contract, and any authorized extension or modification thereof including all amounts due for materials, lubricants, oil, gasoline, coal, and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such **WORK**, and all Insurance premiums on said **WORK**, and for all labor, performed in such **WORK** whether by **SUBCONTRACTOR** or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said **SURETY** for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the **WORK** to be performed thereunder or the **SPECIFICATIONS** accompanying the same shall in any wise affect its obligation on this **BOND**, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the

WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the **OWNER** and the **CONTRACTOR** shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this ins	trume	ent is executed in counterparts, each on of which
		(number)
shall be deemed an original, this the		day of
ATTEST:		
		Principal
(Principal) Secretary		
(SEAL)	By_	(s)
	_	(Address)
	_	
Witness as to Principal		
(Address)		
		(Surety)
ATTEST:	By_	
		(Attorney -in-Fact)
Witness as to Surety		(Address
(Address)		

NOTE: Date of **BOND** must not be prior to date of Contract. If **CONTRACTOR** is Partnership, all partners should execute **BOND**.

IMPORTANT: Surety companies executing **BONDS** must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the **PROJECT** is located.

CITY OF FERNDALE RETAINAGE INVESTMENT OPTION

CONTRACTOR:	
PROJECT NAME:	
DATE:	
Pursuant to Chapter 60.28 RCW, you may choose how your retainage under this contract held and invested. Please complete and sign this form indicating your preference. If you	will be 1 fail to

 do so, the City of Ferndale (City) will hold your retain age as described in "Current Expense", option 1 below.

 _____1.
 Current Expense: The City will retain your money in its Current Expense Fund

- 1. <u>Current Expense</u>: The City will retain your money in its Current Expense Fund Account until thirty days following final acceptance of the improvement or work as completed. You will not receive interest earned on this money.
- 2. <u>Interest Bearing Account</u>: The City will deposit retainage checks in an interestbearing account in a bank, mutual savings bank, or savings and loan association, not subject to withdrawal until after the final acceptance of the improvement or work as completed or until agreed to by both parties. Interest on the account will be paid to you.

BONDS AND SECURITIES ACCEPTABLE BY THE CITY OF FERNDALE:

- 1. Bills, certificates, notes or bonds of the United States.
- 2. Other obligations of the United States or its agencies.
- 3. Indebtedness of the Federal national Mortgage Association.
- 4. Time Deposits in commercial banks.

Designate below the type of investment selected:

3. <u>Bond-in-Lieu</u>: With the consent of the City, the contractor may submit a bond for all or any portion of the amount of funds retained by the City in a form acceptable to the City and from a bonding company meeting standards established by the City, if any. Unless otherwise indicated, the contractor elects to submit a bond for the entire 5% retainage amount. Such bond and any proceeds there from shall be made subject to all claims and liens and in the same manner and priority as set forth for retained percentages in Chapter 60.28 RCW. Whenever the City accepts a bond-in-lieu of retained funds from a contractor, the contractor has retained funds. The contractor shall then release the funds retained from the subcontractor or supplier, to the subcontractor or supplier, within thirty days of the contractor's receipt of the retained funds from the City.

Retainage is normally released 30 - 45 days after final acceptance of work by the City, or following receipt Employment Security / Department of Revenue clearance, whichever takes longer.

(Contractor's Signature)

Date

Title: _____

FORME	

APPENDICES (This Page Intentionally Left Blank) APPENDIX A – STATE PREVAILING WAGE RATES (This Page Intentionally Left Blank)

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: 9/12/2017

<u>County</u>	<u>Trade</u>	Job Classification	<u>Wage</u>	Holiday	Overtime	Note
Whatcom	Asbestos Abatement Workers	Journey Level	\$46.57	<u>5D</u>	<u>1H</u>	
Whatcom	<u>Boilermakers</u>	Journey Level	\$44.35		<u>1</u>	
Whatcom	Brick Mason	Journey Level	\$55.82	<u>5A</u>	<u>1M</u>	
Whatcom	Brick Mason	Pointer-Caulker-Cleaner	\$55.82	<u>5A</u>	<u>1M</u>	
Whatcom	Building Service Employees	Janitor	\$11.00		<u>1</u>	
Whatcom	Building Service Employees	Shampooer	\$11.00		<u>1</u>	
Whatcom	Building Service Employees	Waxer	\$11.00		<u>1</u>	
Whatcom	Building Service Employees	Window Cleaner	\$11.00		<u>1</u>	
Whatcom	Cabinet Makers (In Shop)	Journey Level	\$24.89		<u>1</u>	
Whatcom	<u>Carpenters</u>	Acoustical Worker	\$57.18	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Carpenters</u>	Bridge, Dock And Wharf Carpenters	\$57.18	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Carpenters</u>	Carpenter	\$57.18	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Carpenters</u>	Carpenters on Stationary Tools	\$57.31	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Carpenters</u>	Creosoted Material	\$57.28	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Carpenters</u>	Floor Finisher	\$57.18	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Carpenters</u>	Floor Layer	\$57.18	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Carpenters</u>	Scaffold Erector	\$57.18	<u>5D</u>	<u>4C</u>	
Whatcom	Cement Masons	Journey Level	\$55.56	<u>7A</u>	<u>1M</u>	
Whatcom	Divers & Tenders	Bell/Vehicle or Submersible Operator (Not Under Pressure)	\$110.54	<u>5D</u>	<u>4C</u>	
Whatcom	Divers & Tenders	Dive Supervisor/Master	\$72.97	<u>5D</u>	<u>4C</u>	
Whatcom	Divers & Tenders	Diver	\$110.54	<u>5D</u>	<u>4C</u>	<u>8V</u>
Whatcom	Divers & Tenders	Diver On Standby	\$67.97	<u>5D</u>	<u>4C</u>	
Whatcom	Divers & Tenders	Diver Tender	\$61.65	<u>5D</u>	<u>4C</u>	
Whatcom	Divers & Tenders	Manifold Operator	\$61.65	<u>5D</u>	<u>4C</u>	
Whatcom	Divers & Tenders	Manifold Operator Mixed Gas	\$66.65	<u>5D</u>	<u>4C</u>	
Whatcom	Divers & Tenders	Remote Operated Vehicle Operator/Technician	\$61.65	<u>5D</u>	<u>4C</u>	
Whatcom	Divers & Tenders	Remote Operated Vehicle Tender	\$57.43	<u>5A</u>	<u>4C</u>	
Whatcom	Dredge Workers	Assistant Engineer	\$56.44	<u>5D</u>	<u>3F</u>	
Whatcom	Dredge Workers	Assistant Mate (Deckhand)	\$56.00	<u>5D</u>	<u>3F</u>	

Whatcom	Dredge Workers	Boatmen	\$56.44	<u>5D</u>	<u>3F</u>	
Whatcom	Dredge Workers	Engineer Welder	\$57.51	<u>5D</u>	<u>3F</u>	
Whatcom	Dredge Workers	Leverman, Hydraulic	\$58.67	<u>5D</u>	<u>3F</u>	
Whatcom	Dredge Workers	Mates	\$56.44	<u>5D</u>	<u>3F</u>	
Whatcom	Dredge Workers	Oiler	\$56.00	<u>5D</u>	<u>3F</u>	
Whatcom	Drywall Applicator	Journey Level	\$56.78	<u>5D</u>	<u>1H</u>	
Whatcom	Drywall Tapers	Journey Level	\$29.63		<u>1</u>	
Whatcom	<u>Electrical Fixture Maintenance</u> <u>Workers</u>	Journey Level	\$13.82		<u>1</u>	
Whatcom	<u>Electricians - Inside</u>	Cable Splicer	\$68.09	<u>7H</u>	<u>1E</u>	
Whatcom	<u>Electricians - Inside</u>	Construction Stock Person	\$33.86	<u>7H</u>	<u>1D</u>	
Whatcom	<u>Electricians - Inside</u>	Journey Level	\$63.61	<u>7H</u>	<u>1E</u>	
Whatcom	Electricians - Motor Shop	Craftsman	\$15.37		<u>1</u>	
Whatcom	Electricians - Motor Shop	Journey Level	\$14.69		<u>1</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Cable Splicer	\$73.93	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Certified Line Welder	\$67.60	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Groundperson	\$45.49	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Heavy Line Equipment Operator	\$67.60	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Journey Level Lineperson	\$67.60	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Line Equipment Operator	\$57.02	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Pole Sprayer	\$67.60	<u>5A</u>	<u>4D</u>	
Whatcom	<u>Electricians - Powerline</u> <u>Construction</u>	Powderperson	\$50.76	<u>5A</u>	<u>4D</u>	
Whatcom	Electronic Technicians	Journey Level	\$25.09		<u>1</u>	
Whatcom	Elevator Constructors	Mechanic	\$90.39	<u>7D</u>	<u>4A</u>	
Whatcom	Elevator Constructors	Mechanic In Charge	\$100.22	<u>7D</u>	<u>4A</u>	
Whatcom	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	\$13.67		<u>1</u>	
Whatcom	Fence Erectors	Fence Erector	\$22.97		<u>1</u>	
Whatcom	<u>Flaggers</u>	Journey Level	\$39.48	<u>7A</u>	<u>31</u>	
Whatcom	<u>Glaziers</u>	Journey Level	\$60.56	<u>7L</u>	<u>1Y</u>	
Whatcom	<u>Heat & Frost Insulators And</u> <u>Asbestos Workers</u>	Journeyman	\$67.93	<u>5J</u>	<u>4H</u>	
Whatcom	Heating Equipment Mechanics	Journey Level	\$19.85		1	
Whatcom	Hod Carriers & Mason Tenders	Journey Level	\$48.02	<u>7A</u>	<u>31</u>	
Whatcom	Industrial Power Vacuum Cleaner	Journey Level	\$11.00		<u>1</u>	
Whatcom	Inland Boatmen	Boat Operator	\$59.86	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Cook	\$56.18	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Deckhand	\$56.18	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Deckhand Engineer	\$57.26	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Launch Operator	\$58.59	<u>5B</u>	<u>1K</u>	
Whatcom	Inland Boatmen	Mate	\$58.59	<u>5B</u>	<u>1K</u>	

9/12/2017		about:blank				
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator, Foamer Operator	\$11.00		<u>1</u>	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	\$11.48		<u>1</u>	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$12.78		<u>1</u>	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$11.00		<u>1</u>	
Whatcom	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Tv Truck Operator	\$11.00		<u>1</u>	
Whatcom	Insulation Applicators	Journey Level	\$57.18	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Ironworkers</u>	Journeyman	\$66.68	<u>7N</u>	<u>10</u>	
Whatcom	<u>Laborers</u>	Air, Gas Or Electric Vibrating Screed	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Airtrac Drill Operator	\$48.02	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Ballast Regular Machine	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Batch Weighman	\$39.48	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Brick Pavers	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Brush Cutter	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Brush Hog Feeder	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Burner	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Caisson Worker	\$48.02	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Carpenter Tender	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Caulker	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Cement Dumper-paving	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Cement Finisher Tender	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Change House Or Dry Shack	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Chipping Gun (under 30 Lbs.)	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Chipping Gun(30 Lbs. And Over)	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Choker Setter	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Chuck Tender	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Clary Power Spreader	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Clean-up Laborer	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Concrete Dumper/chute Operator	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Concrete Form Stripper	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Concrete Placement Crew	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Concrete Saw Operator/core Driller	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Crusher Feeder	\$39.48	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Curing Laborer	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Demolition: Wrecking & Moving (incl. Charred Material)	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Ditch Digger	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Diver	\$48.02	<u>7A</u>	<u>31</u>	

Drill Operator \$47.44 Whatcom Laborers 7A 31 (hydraulic, diamond) Whatcom Laborers **Dry Stack Walls** \$46.57 7A 31 Whatcom Laborers **Dump Person** \$46.57 7A 31 Whatcom Laborers **Epoxy Technician** \$46.57 7A 31 **Erosion Control Worker** Whatcom Laborers \$46.57 7A 31 Faller & Bucker Chain Saw \$47.44 7A 31 Whatcom Laborers Whatcom Laborers **Fine Graders** \$46.57 7A 31 Firewatch \$39.48 7A 31 Whatcom Laborers Whatcom Laborers Form Setter \$46.57 7A 31 Whatcom Laborers Gabian Basket Builders \$46.57 7A 31 General Laborer Whatcom Laborers \$46.57 7A 31 Grade Checker & Transit Person \$48.02 31 Whatcom Laborers 7A Whatcom Laborers Grinders \$46.57 7A 31 Whatcom Laborers **Grout Machine Tender** \$46.57 7A 31 Whatcom Laborers Groutmen (pressure)including \$47.44 31 <u>7A</u> Post Tension Beams Whatcom Laborers **Guardrail Erector** \$46.57 7A 31 Whatcom Laborers Hazardous Waste Worker (level \$48.02 7A 31 A) Whatcom Laborers Hazardous Waste Worker (level \$47.44 31 7A B) Whatcom Laborers Hazardous Waste Worker (level \$46.57 7A 31 C) Whatcom Laborers **High Scaler** \$48.02 7A 31 \$47.44 Whatcom Laborers Jackhammer 7A 31 \$47.44 Whatcom Laborers Laserbeam Operator 7A 31 **Maintenance** Person \$46.57 Whatcom Laborers 7A 31 Whatcom Laborers Manhole Builder-mudman \$47.44 7A 31 Whatcom Laborers Material Yard Person \$46.57 <u>7A</u> <u>31</u> Whatcom Laborers Motorman-dinky Locomotive \$47.44 <u>7A</u> <u>31</u> Whatcom Laborers Nozzleman (concrete Pump, \$47.44 7A 31 Green Cutter When Using **Combination Of High Pressure Air** & Water On Concrete & Rock, Sandblast, Gunite, Shotcrete, Water Bla Whatcom Laborers **Pavement Breaker** \$47.44 7A 31 Whatcom Laborers Pilot Car \$39.48 7A 31 Whatcom Laborers Pipe Layer Lead \$48.02 7A 31 \$47.44 Whatcom Laborers Pipe Layer/tailor 7A 31 \$47.44 7A 31 Whatcom Laborers Pipe Pot Tender Whatcom Laborers \$47.44 **Pipe Reliner** 7A 31 Whatcom Laborers **Pipe Wrapper** \$47.44 7A 31 Whatcom Laborers Pot Tender \$46.57 7A 31 Whatcom Laborers Powderman \$48.02 7A 31 Whatcom Laborers Powderman's Helper \$46.57 7A 31 \$47.44 31 Whatcom Laborers Power Jacks 7A Whatcom Laborers Railroad Spike Puller - Power \$47.44 7A 31

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Whatcom	<u>Laborers</u>	Raker - Asphalt	\$48.02	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Re-timberman	\$48.02	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Remote Equipment Operator	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rigger/signal Person	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rip Rap Person	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rivet Buster	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Rodder	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Scaffold Erector	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Scale Person	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Sloper (over 20")	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Sloper Sprayer	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Spreader (concrete)	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Stake Hopper	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Stock Piler	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Tamper & Similar Electric, Air & Gas Operated Tools	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Tamper (multiple & Self- propelled)	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Timber Person - Sewer (lagger, Shorer & Cribber)	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Toolroom Person (at Jobsite)	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Topper	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Track Laborer	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Track Liner (power)	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Traffic Control Laborer	\$42.22	<u>7A</u>	<u>31</u>	<u>8R</u>
Whatcom	<u>Laborers</u>	Traffic Control Supervisor	\$42.22	<u>7A</u>	<u>31</u>	<u>8R</u>
Whatcom	<u>Laborers</u>	Truck Spotter	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Tugger Operator	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 0-30 psi	\$92.60	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$97.63	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$101.31	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$107.01	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$109.13	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$114.23	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$116.13	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$118.13	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	<u>Laborers</u>	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$120.13	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	Laborers	Tunnel Work-Guage and Lock Tender	\$48.12	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	Laborers	Tunnel Work-Miner	\$48.12	<u>7A</u>	<u>31</u>	<u>8Q</u>
Whatcom	Laborers	Vibrator	\$47.44	<u>7A</u>	<u>31</u>	

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Whatcom	Laborers	Vinyl Seamer	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Watchman	\$35.88	<u>7A</u>	<u>31</u>	
Whatcom	Laborers	Welder	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Well Point Laborer	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers</u>	Window Washer/cleaner	\$35.88	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers - Underground Sewer &</u> <u>Water</u>	General Laborer & Topman	\$46.57	<u>7A</u>	<u>31</u>	
Whatcom	<u>Laborers - Underground Sewer &</u> <u>Water</u>	Pipe Layer	\$47.44	<u>7A</u>	<u>31</u>	
Whatcom	Landscape Construction	Irrigation Or Lawn Sprinkler Installers	\$11.50		<u>1</u>	
Whatcom	Landscape Construction	Landscape Equipment Operators Or Truck Drivers	\$11.50		<u>1</u>	
Whatcom	Landscape Construction	Landscaping Or Planting Laborers	\$11.50		<u>1</u>	
Whatcom	Lathers	Journey Level	\$56.78	<u>5D</u>	<u>1H</u>	
Whatcom	Marble Setters	Journey Level	\$55.82	<u>5A</u>	<u>1M</u>	
Whatcom	Metal Fabrication (In Shop)	Fitter	\$13.81		<u>1</u>	
Whatcom	Metal Fabrication (In Shop)	Laborer	\$11.00		<u>1</u>	
Whatcom	Metal Fabrication (In Shop)	Machine Operator	\$13.81		1	
Whatcom	Metal Fabrication (In Shop)	Welder	\$13.81		<u>1</u>	
Whatcom	<u>Millwright</u>	Journey Level	\$30.79		1	
Whatcom	<u>Modular Buildings</u>	Journey Level	\$11.00		<u>1</u>	
Whatcom	Painters	Journey Level	\$41.60	<u>6Z</u>	<u>2B</u>	
Whatcom	Pile Driver	Crew Tender	\$52.37	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI	\$71.35	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI	\$76.35	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI	\$80.35	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 54.01 - 60.00 PSI	\$85.35	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 60.01 - 64.00 PSI	\$87.85	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI	\$92.85	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI	\$94.85	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI	\$96.85	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Hyperbaric Worker - Compressed Air Worker 72.01 - 74.00 PSI	\$98.85	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Pile Driver</u>	Journey Level	\$57.43	<u>5D</u>	<u>4C</u>	
Whatcom	<u>Plasterers</u>	Journey Level	\$53.20	<u>7Q</u>	<u>1R</u>	
Whatcom	Playground & Park Equipment Installers	Journey Level	\$11.00		<u>1</u>	
Whatcom	Plumbers & Pipefitters	Journey Level	\$67.47	<u>5A</u>	<u>1G</u>	
Whatcom	Power Equipment Operators	Asphalt Plant Operators	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Assistant Engineer	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Barrier Machine (zipper)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>

Whatcom	Bower Equipment Operators	Batch Plant Operator Concrete	¢50.06	74	30	<u>8D</u>
Whatcom	Power Equipment Operators	Bobcat	\$56.90	7 <u>A</u> 74	<u>3C</u>	<u>OF</u> 8P
Whatcom	Power Equipment Operators	Brokk - Remote Demolition	\$56.90	7 <u>A</u> 74	<u>3C</u>	8P
maccom	rover Equipment operators	Equipment	<i>Q</i> 00 .70	<u>m</u>	<u></u>	<u>01</u>
Whatcom	Power Equipment Operators	Brooms	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Bump Cutter	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cableways	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Chipper	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Compressor	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Finish Machine -laser Screed	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Conveyors	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes Friction: 200 tons and over	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 20 Tons Through 44 Tons With Attachments	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: A-frame - 10 Tons And Under	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: Friction cranes through 199 tons	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Crusher	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Deck Engineer/deck Winches (power)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Derricks, On Building Work	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Dozers D-9 & Under	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Drilling Machine	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
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Whatcom	Power Equipment Operators	Elevator And Man-lift: Permanent And Shaft Type	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Forklift: 3000 Lbs And Over With Attachments	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Forklifts: Under 3000 Lbs. With Attachments	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Gradechecker/stakeman	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Guardrail Punch	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Horizontal/directional Drill Locator	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Horizontal/directional Drill Operator	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hydralifts/boom Trucks Over 10 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Hydralifts/boom Trucks, 10 Tons And Under	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loader, Overhead 8 Yards. & Over	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loaders, Plant Feed	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Loaders: Elevating Type Belt	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Locomotives, All	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Material Transfer Device	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Mechanics, All (leadmen - \$0.50 Per Hour Over Mechanic)	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Motor Patrol Graders	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Overhead, Bridge Type: 100 Tons And Over	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>

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Whatcom	Power Equipment Operators	Pavement Breaker	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Posthole Digger, Mechanical	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Power Plant	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Pumps - Water	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Rigger And Bellman	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Rigger/Signal Person, Bellman (Certified)	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Rollagon	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Roller, Other Than Plant Mix	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Roto-mill, Roto-grinder	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Saws - Concrete	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Scrapers - Concrete & Carry All	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Service Engineers - Equipment	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shotcrete/gunite Equipment	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Slipform Pavers	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Spreader, Topsider & Screedman	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Subgrader Trimmer	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Bucket Elevators	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Crane Up To 175' In Height Base To Boom	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>

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Whatcom	Power Equipment Operators	Transporters, All Track Or Truck Type	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Trenching Machines	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Truck Crane Oiler/driver - 100 Tons And Over	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Truck Crane Oiler/driver Under 100 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Truck Mount Portable Conveyor	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Welder	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Wheel Tractors, Farmall Type	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators	Yo Yo Pay Dozer	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Asphalt Plant Operators	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Assistant Engineer	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Barrier Machine (zipper)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Batch Plant Operator, Concrete	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Bobcat	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Brokk - Remote Demolition Equipment	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Brooms	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Bump Cutter	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cableways	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Chipper	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Compressor	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Finish Machine -laser Screed	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure.	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Conveyors	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes Friction: 200 tons and over	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 20 Tons Through 44 Tons With Attachments	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 100 Tons Through 199 Tons, Or 150' Of Boom (Including Jib With Attachments)	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>

Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: 45 Tons Through 99 Tons, Under 150' Of Boom (including Jib With Attachments)	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: A-frame - 10 Tons And Under	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: Friction cranes through 199 tons	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Cranes: Through 19 Tons With Attachments A-frame Over 10 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Crusher	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Deck Engineer/deck Winches (power)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Derricks, On Building Work	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Dozers D-9 & Under	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Drilling Machine	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Elevator And Man-lift: Permanent And Shaft Type	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Forklift: 3000 Lbs And Over With Attachments	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Forklifts: Under 3000 Lbs. With Attachments	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Gradechecker/stakeman	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Guardrail Punch	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Locator	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Vhatcom	Power Equipment Operators- Underground Sewer & Water	Horizontal/directional Drill Operator	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators-	Hydralifts/boom Trucks Over 10	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>

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	Underground Sewer & Water	Tons				
Whatcom	Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom Trucks, 10 Tons And Under	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead 8 Yards. & Over	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loaders, Overhead Under 6 Yards	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loaders, Plant Feed	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Loaders: Elevating Type Belt	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Locomotives, All	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Material Transfer Device	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Mechanics, All (leadmen - \$0.50 Per Hour Over Mechanic)	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Motor Patrol Graders	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Outside Hoists (elevators And Manlifts), Air Tuggers,strato	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type Crane: 20 Tons Through 44 Tons	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 100 Tons And Over	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Overhead, Bridge Type: 45 Tons Through 99 Tons	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Pavement Breaker	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Pile Driver (other Than Crane Mount)	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Posthole Digger, Mechanical	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Power Plant	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Pumps - Water	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Quick Tower - No Cab, Under 100 Feet In Height Based To Boom	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
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		Equipment				
Whatcom	Power Equipment Operators- Underground Sewer & Water	Rigger And Bellman	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Rigger/Signal Person, Bellman (Certified)	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Rollagon		<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Roller, Other Than Plant Mix	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Roto-mill, Roto-grinder	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Saws - Concrete	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Scrapers - Concrete & Carry All	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Service Engineers - Equipment	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shotcrete/gunite Equipment	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel , Excavator, Backhoe, Tractors Under 15 Metric Tons.	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Slipform Pavers	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Spreader, Topsider & Screedman	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Subgrader Trimmer	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Bucket Elevators	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Crane Up To 175' In Height Base To Boom	\$61.10	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	\$61.72	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Tower Cranes: over 250' in height from base to boom	\$62.33	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Transporters, All Track Or Truck Type	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators-	Trenching Machines	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>

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	Underground Sewer & Water					
Whatcom	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver - 100 Tons And Over	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/driver Under 100 Tons	\$59.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Truck Mount Portable Conveyor	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Welder	\$60.49	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Wheel Tractors, Farmall Type	\$56.90	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Equipment Operators- Underground Sewer & Water	Yo Yo Pay Dozer	\$59.96	<u>7A</u>	<u>3C</u>	<u>8P</u>
Whatcom	Power Line Clearance Tree Trimmers	Journey Level In Charge	\$48.54	<u>5A</u>	<u>4A</u>	
Whatcom	Power Line Clearance Tree Trimmers	Spray Person	\$46.03	<u>5A</u>	<u>4A</u>	
Whatcom	Power Line Clearance Tree Trimmers	Tree Equipment Operator	\$48.54	<u>5A</u>	<u>4A</u>	
Whatcom	Power Line Clearance Tree Trimmers	Tree Trimmer	\$43.32	<u>5A</u>	<u>4A</u>	
Whatcom	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	\$32.68	<u>5A</u>	<u>4A</u>	
Whatcom	Refrigeration & Air Conditioning Mechanics	Journey Level	\$23.95		<u>1</u>	
Whatcom	Residential Brick Mason	Journey Level	\$55.82	<u>5A</u>	<u>1M</u>	
Whatcom	Residential Carpenters	Journey Level	\$23.81		<u>1</u>	
Whatcom	Residential Cement Masons	Journey Level	\$27.28		<u>1</u>	
Whatcom	Residential Drywall Applicators	Journey Level	\$25.00		<u>1</u>	
Whatcom	Residential Drywall Tapers	Journey Level	\$23.91		<u>1</u>	
Whatcom	Residential Electricians	Journey Level	\$37.65		<u>1</u>	
Whatcom	Residential Glaziers	Journey Level	\$13.79		<u>1</u>	
Whatcom	Residential Insulation Applicators	Journey Level	\$13.96		<u>1</u>	
Whatcom	Residential Laborers	Journey Level	\$20.00		<u>1</u>	
Whatcom	Residential Marble Setters	Journey Level	\$55.82	<u>5A</u>	<u>1M</u>	
Whatcom	Residential Painters	Journey Level	\$17.43		<u>1</u>	
Whatcom	<u>Residential Plumbers &</u> <u>Pipefitters</u>	Journey Level	\$28.26		<u>1</u>	
Whatcom	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$39.88	<u>5A</u>	<u>1G</u>	
Whatcom	Residential Sheet Metal Workers	Journey Level (Field or Shop)	\$37.16	<u>7J</u>	<u>11</u>	
Whatcom	Residential Soft Floor Layers	Journey Level	\$23.46		<u>1</u>	
Whatcom	Residential Sprinkler Fitters (Fire Protection)	Journey Level	\$13.23		<u>1</u>	
Whatcom	Residential Stone Masons	Journey Level	\$55.82	<u>5A</u>	<u>1M</u>	
Whatcom	Residential Terrazzo Workers	Journey Level	\$11.00		1	
Whatcom	Residential Terrazzo/Tile	Journey Level	\$14.00		<u>1</u>	
	<u>Finishers</u>	-			_	
Whatcom	Residential Tile Setters	Journey Level	\$11.00		<u>1</u>	
Whatcom	<u>Roofers</u>	Journey Level	\$25.27		<u>1</u>	

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Whatcom	Sheet Metal Workers	Journey Level (Field or Shop)	\$62.96	<u>7F</u>	<u>1E</u>	
Whatcom	Shipbuilding & Ship Repair	Boilermaker	\$43.31	<u>7M</u>	<u>1H</u>	
Whatcom	Shipbuilding & Ship Repair	Carpenter	\$15.16		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Crane Operator	\$16.04		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Electrician	\$15.18		1	
Whatcom	Shipbuilding & Ship Repair	Heat & Frost Insulator	\$67.93	<u>5J</u>	<u>4H</u>	
Whatcom	Shipbuilding & Ship Repair	Inside Machinist	\$16.70		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Laborer	\$23.38		1	
Whatcom	Shipbuilding & Ship Repair	Outside Machinist	\$14.69		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Painter	\$15.16		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Pipefitter	\$15.18		<u>1</u>	
Whatcom	Shipbuilding & Ship Repair	Sheet Metal	\$20.26		1	
Whatcom	Shipbuilding & Ship Repair	Welder/burner	\$15.21		<u>1</u>	
Whatcom	<u>Sign Makers & Installers</u> (<u>Electrical)</u>	Journey Level	\$16.03		1	
Whatcom	<u>Sign Makers & Installers (Non- Electrical)</u>	Journey Level	\$14.23		<u>1</u>	
Whatcom	Soft Floor Layers	Journey Level	\$47.61	<u>5A</u>	<u>3D</u>	
Whatcom	Solar Controls For Windows	Journey Level	\$11.00		<u>1</u>	
Whatcom	Sprinkler Fitters (Fire Protection)	Journey Level	\$56.81	<u>7J</u>	<u>1R</u>	
Whatcom	<u>Stage Rigging Mechanics (Non</u> <u>Structural)</u>	Journey Level	\$13.23		<u>1</u>	
Whatcom	Stone Masons	Journey Level	\$55.82	<u>5A</u>	<u>1M</u>	
Whatcom	Street And Parking Lot Sweeper Workers	Journey Level	\$15.00		<u>1</u>	
Whatcom	<u>Surveyors</u>	All Classifications	\$36.16	<u>Null</u>	<u>1</u>	
Whatcom	Telecommunication Technicians	Journey Level	\$45.07	<u>7E</u>	<u>1E</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Cable Splicer	\$38.84	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Hole Digger/Ground Person	\$21.45	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Installer (Repairer)	\$37.21	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Special Aparatus Installer I	\$38.84	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Special Apparatus Installer II	\$38.03	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Telephone Equipment Operator (Heavy)	\$38.84	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Telephone Equipment Operator (Light)	\$36.09	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Telephone Lineperson	\$36.09	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Television Groundperson	\$20.33	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Television Lineperson/Installer	\$27.21	<u>5A</u>	<u>2B</u>	
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Television System Technician	\$32.55	<u>5A</u>	<u>2B</u>	
Whatcom	Telephone Line Construction -	Television Technician	\$29.18	<u>5A</u>	<u>2B</u>	

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	<u>Outside</u>					
Whatcom	<u>Telephone Line Construction -</u> <u>Outside</u>	Tree Trimmer	\$36.09	<u>5A</u>	<u>2B</u>	
Whatcom	Terrazzo Workers	Journey Level	\$51.36	<u>5A</u>	<u>1M</u>	
Whatcom	<u>Tile Setters</u>	Journey Level	\$51.36	<u>5A</u>	<u>1M</u>	
Whatcom	<u>Tile, Marble & Terrazzo Finishers</u>	Finisher	\$42.19	<u>5A</u>	<u>1B</u>	
Whatcom	Traffic Control Stripers	Journey Level	\$17.41		<u>1</u>	
Whatcom	Truck Drivers	Asphalt Mix	\$30.15		<u>1</u>	
Whatcom	Truck Drivers	Dump Truck	\$19.32		<u>1</u>	
Whatcom	Truck Drivers	Dump Truck And Trailer	\$19.32		<u>1</u>	
Whatcom	Truck Drivers	Other Trucks	\$14.48		<u>1</u>	
Whatcom	Truck Drivers	Transit Mixer	\$16.81		<u>1</u>	
Whatcom	Well Drillers & Irrigation Pump	Irrigation Pump Installer	\$15.00		<u>1</u>	
Whatcom	Well Drillers & Irrigation Pump Installers	Oiler	\$11.00		<u>1</u>	
Whatcom	Well Drillers & Irrigation Pump Installers	Well Driller	\$18.02		<u>1</u>	

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.

- 1. 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 fourten 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.
 - 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.

Overtime Codes Continued

- 1. 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.

Overtime Codes Continued

- 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, tenhour 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.
- 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.

Overtime Codes Continued

- 3. 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.

4

Overtime Codes Continued

4. D. 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 Saturday, Sundays and holidays shall be paid at double the hourly rate of pay. Rates include all members of the assigned crew.

EXCEPTION:

5.

On all multipole structures and steel transmission lines, switching stations, regulating, capacitor stations, generating plants, industrial plants, associated installations and substations, except those substations whose primary function is to feed a distribution system, will be paid overtime under the following rates:

The first two (2) hours after eight (8) regular hours Monday through Friday of overtime on a regular workday, shall be paid at one and one-half times the hourly rate of wage. All hours in excess of ten (10) hours will be at two (2) times the hourly rate of wage. The first eight (8) hours worked on Saturday will be paid at one and one-half (1-1/2) times the hourly rate of wage. All hours worked in excess of eight (8) hours on Saturday, and all hours worked on Sundays and holidays will be at the double the hourly rate of wage.

All overtime eligible hours performed on the above described work that is energized, shall be paid at the 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.

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 Monday or Friday not utilized in the normal fourday, ten hour work week, and Saturday shall be paid at one and one half $(1\frac{1}{2})$ times the regular shift rate for the first eight (8) hours. 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. 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 20% over the hourly rate of wage. 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 double the hourly rate of wage.
- G. All hours worked on Saturdays 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.
- H. 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 overtime hours worked, except Labor Day, and all hours on Sunday 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.

Holiday Codes

- 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).

Holiday Codes Continued

- 5. 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).
 - 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).

6.

- 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, the Friday 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).

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Holiday Codes Continued

- 6. 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.
- 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.
 - 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.

Holiday Codes Continued

- 7. 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.
 - 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.

Holiday Codes Continued

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

D. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.

8.

- 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.
- 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.

Note Codes Continued

- 8. U. Workers on hazmat projects receive additional hourly premiums as follows Class A Suit: \$2.00, Class B Suit: \$1.50, And Class C Suit: \$1.00. Workers performing underground work receive an additional \$0.40 per hour for any and all work performed underground, including operating, servicing and repairing of equipment. The premium for underground work shall be paid for the entire shift worked. Workers who work suspended by a rope or cable receive an additional \$0.50 per hour. The premium for work suspended shall be paid for the entire shift worked. Workers who do "pioneer" work (break open a cut, build road, etc.) more than one hundred fifty (150) feet above grade elevation receive an additional \$0.50 per hour.
 - V. In addition to the hourly wage and fringe benefits, the following depth and enclosure premiums shall be paid. The premiums are to be calculated for the maximum depth and distance into an enclosure that a diver reaches in a day. The premiums are to be paid one time for the day and are not used in calculating overtime pay.

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 101' to 150' - \$3.00 per foot for each foot over 101 feet. Over 151' to 220' - \$4.00 per foot for each foot over 220 feet. Over 221' - \$5.00 per foot for each foot over 221 feet.

Enclosure premiums apply when divers enter enclosures (such as pipes or tunnels) where there is no vertical ascent and is measured by the distance travelled from the entrance. 25' to 300' - \$1.00 per foot from entrance. 300' to 600' - \$1.50 per foot beginning at 300'. Over 600' - \$2.00 per foot beginning at 600'.

APPENDIX B – GEOTECHNICAL REPORT

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FINAL GEOTECHNICAL REPORT Thornton Street Sewer Project: Malloy Avenue to Portal Way Ferndale, Washington

PROJECT NO. 16-310 September 2017

Prepared for:

Reichhardt & Ebe Engineering, Inc.



Geotechnical & Earthquake Engineering Consultants

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APPENDIX A: FIELD EXPLORATIONS AND LOGS OF TEST BORINGS

APPENDIX B: LABORATORY TEST RESULTS

FINAL GEOTECHNICAL REPORT THORNTON STREET SEWER PROJECT: MALLOY AVE TO PORTAL WAY CITY OF FERNDALE, WASHINGTON

PROJECT DESCRIPTION

The City of Ferndale is planning to install approximately 4,000 lineal feet of new gravity sanitary sewer main along Thornton Street between Malloy Ave and Portal Way (see Figure 1, Vicinity Map). The current concept is to extend the existing gravity sanitary sewer main that terminated just east of Malloy Ave and extend it under the Burlington Northern Santa Fe (BNSF) railroad tracks to Portal Way.

The project alignment begins near the intersection of Thornton Street and Malloy Avenue (approximately Station 128+00). From this intersection, the alignment extends eastward until Thornton Street turns approximately 90 degrees and heads southward (approximately 144+50) until it reaches the existing Portal Way traffic circle (approximately Station 170+35). The proposed alignment is indicated on the Site and Exploration Plan, Figures 2A through 2D.

The proposed sewer main will be 18-inch diameter pipe and with pipe inverts varying between 6to 10-feet below existing grades. A total of sixteen proposed manholes will also be constructed as part of the project.

SITE DESCRIPTION

This site description is based in part on a visual site reconnaissance conducted on December 21, 2016. The project site is located adjacent to the floodplain of the Nooksack River Valley. The portion of the proposed sewer alignment east of the existing crossing of Thornton Street and the BNSF mainline railroad tracks is relatively level on a terrace that flanks the northwest margin of the Nooksack River floodplain about 30 feet above the floodplain. West of the street/railroad crossing additional topographic terraces begin to rise above the elevation of the floodplain terrace, with Thornton Street rising moderately to about elevation +120 feet at the intersection with Malloy Avenue.

Properties adjacent to the proposed Thornton Street sewer alignment include agricultural land, land with mature tree and understory growth, residential properties, and the Samson Rope commercial operation northwest of the Thornton Street/BNSF crossing. Thornton Street has asphaltic pavement surfacing west of the crossing, and a combination of asphalt/gravel to the east. September 6, 2017 Project No. 16-310

GEOLOGY

The project site is located on the margin of the Nooksack River floodplain, a few miles upstream from where the floodplain begins to broaden into its delta before confluence with Bellingham Bay. According to the Geologic Map of the Bellingham 1:100,000 Quadrangle (Lapen, 2000), the site is underlain by glacial outwash deposits of the Sumas Stade of the Fraser Glaciation. The deposits consist of gravel with local boulders, sandy gravel and gravelly sand. To the west of the Thornton Street/BNSF crossing reworked emergence (beach) deposits are mapped that are likely wave-cut terraces below the topographically higher deposits to the west that are mapped as glaciomarine drift of the Everson Interstade. The drift is described by Lapen (2000) as consisting of generally discontinuous beds of moderately to well-sorted gravel, sand, silt and clay with dropstones. The Bellingham Clay, a moderate to highly plastic soil unit is known to underlie the near surface deposits in the general vicinity of the project. This unit is geologically important as it is associated with settlement and stability problems in response to loading by new embankments, foundations, etc.

FIELD EXPLORATIONS

The subsurface exploration program consisted of drilling thirteen test borings along the project alignment as shown on Figure 2, Site and Exploration Plan. Five of these borings were drilled specifically for the proposed sewer project, while the other eight borings were drilled along the same general alignment in support of the Thornton Street and BNSF grade separation project. The field explorations took place on three mobilizations, the first on July 27 and 28, 2015, the second on October 5 and 6, 2015 and the third on January 30, 2017. The borings were drilled by Holocene Drilling of Edgewood, Washington, under subcontract to PanGEO, Inc. The borings were drilled using both hollow stem auger and mud rotary drilling methods. A summary of the test boring locations, depths, drill rig utilized, date(s) drilled and drilling equipment and is provided in Table 1.

Note that test boring TH-3-BR met with drilling refusal on a boulder at a depth of 30 feet. The boring location was shifted 5 feet west and re-advanced to the full depth noted above. The first log of this test boring is designated TH-3a-BR and the completion of the boring as TH-3b-BR.

Standard Penetration Test (SPT) samples taken at generally 5-foot intervals, with undisturbed, thin-wall samples obtained between the SPT samples at select depths when drilling was advancing in the Bellingham Clay. All borings were backfilled and closed in accordance with requirements of the Washington State Department of Ecology at the end of drilling each test boring. Test boring TH-2-BR was completed as a standpipe groundwater monitoring well (piezometer) for the purpose of collecting information regarding the depth to groundwater at the site.

	Correct	Comor	D:::11			
	Sewer	Sewer	Drill			5.11
Exploration	Centerline	Centerline	Depth			Drill
Number	Station	Offset	(feet)	Drill Rig	Date	Equipment
TH-1-BR	138+27	40' Rt.	51.5	Mobile B-61	10/6/15	HSA
TH-2-BR	140+57	7' Lt.	81.5	Mobile B-61	7/27/15	HSA
TH-3a-BR	142+03	5' Lt.	30.1	Mobile B-61	7/27-28/15	HSA
TH-3b-BR	142+07	5' Lt.	91.5	Mobile B-61	7/28/15	HSA
TH-4-BR	145+55	64' Rt.	71.5	Mobile B-61	10/5/15	HSA
TH-5-BR	139+55	1' Lt.	81.0	Foremost B-58	3/28/17	HSA
TH-6-BR	142+96	70' Rt.	91.5	Foremost B-58	3/29/17	Mud rotary
TH-7-RW	136+35	10' Rt.	31.5	Foremost B-58	3/28/17	HSA
TH-8-RW	137+78	9' Lt.	31.5	Diedrich D 50	1/30/17	HSA
TH-9-SWR	133+75	13' Lt.	16.5	Diedrich D 50	1/30/17	HSA
TH-10-SWR	148+24	23' Lt.	16.5	Diedrich D 50	1/30/17	HSA
TH-11-SWR	152+78	4' Rt.	16.5	Diedrich D 50	1/30/17	HSA
TH-12-SWR	158+04	9' Rt.	16.5	Diedrich D 50	1/30/17	HSA
TH-13-SWR	164+23	16' Lt.	16.5	Diedrich D 50	1/30/17	HSA

Table 1 Summary of Field Explorations

An engineering geologist or geotechnical engineer from PanGEO was on site to coordinate drilling activities and log the test borings. All boring locations were surveyed by Reichhardt & Ebe (or their designee) and are included in the base survey map used as the basis for Figure 2 of this report. Appendix A contains summary logs of boreholes and describes the field exploration methodology in greater detail.

SUBSURFACE CONDITIONS

SOILS

For a detailed description of the subsurface conditions encountered at each exploration location, please refer to the borings logs provided in Appendix A. A key to the system used in preparing the borings logs is provided in Appendix A as Figure A-1. The stratigraphic contacts indicated on the boring logs represent the approximate depth to the boundaries between soil units. Actual transitions between soil units may be more gradual or occur at different elevations. The descriptions of groundwater conditions are likewise approximate. The following is a generalized description of the subsurface conditions:

Fill (Qf): A surficial layer of undocumented fill ranging from 1 to 5 feet thick was encountered in test borings TH-3a/b-BR, TH-7-RW, TH-10-SWR through TH-12-SWR. The

fill soils were generally moist and consisted of loose fine to coarse sand with gravel and medium stiff sandy silt. The fill was mostly likely placed to make grades at this side of the approach to the BNSF railroad crossing.

Loam: Test borings TH-7-RW through TH-9-SWR encountered a layer of loose to medium dense, non-plastic silt with a trace amount of sand and medium stiff low plasticity clay. The loam was encountered at the ground surface at test borings TH-8-RW and TH-9-SWR and was mantled by about 1 feet of roadway surfacing fill at TH-7-RW. The loam soils were generally very moist to wet and consisted of loose fine to coarse sand with gravel and medium stiff sandy silt.

Alluvium (Qa): Underlying the surficial layer of fill in test borings TH-3a/b-BR, TH-10-SWR, TH-11-SWR and TH-13-SWR, an approximately 4 to 10¹/₂ foot thick layer of recent alluvium and floodplain deposits was encountered which consisted of fine grained silt with sand and sandy silt with fine gravel associated with slack water deposits of the Nooksack River floodplain or its tributaries.

Recessional Outwash (Qgo): A layer of recessional outwash deposits ranging from 6 to 13 feet thick was encountered in test borings TH-1-BR, TH-2-BR, TH-4-BR through TH-6-BR. The outwash deposits were generally moist to wet and consisted of loose to dense, fine to coarse sand and occasion layers of interbedded medium stiff, non-plastic silt. This layer was also encountered in test borings TH-3a/b and TH-11-SWR directly below the fill and Bellingham clay deposits, respectively. This unit is distinguished by its relatively uniform grain size distribution, interlayer soil structure, and iron oxide staining. Recessional outwash is material deposited in front of the glacial ice sheet as the glaciation recedes and is therefore not glacially over-ridden.

Ice Contact Deposits (Qgd): This material was only encountered in test boring TH-1-BR as an approximately 6½-foot thick layer underlying the surficial outwash deposits and consisted of medium stiff silt with sand and exhibited a heavily disrupted texture. This unit is interpreted as soils affected by glacial processes at the margins of the glacier where ploughing and gouging occur that result in deformed textures and randomly distributed clasts of differing soil types.

Beach Deposits (Qb): Underlying the loam in test boring TH-9-SWR, an approximately $7\frac{1}{2}$ foot thick layer of beach deposits was encountered which consisted of wet, loose to dense, fine to coarse sand with gravel. This unit is distinguished by its moderately to well-sorted gradation, subangular to subrounded gravel and massive soil structure.

Bellingham Clay (Qgdm): This unit was encountered in all of the test borings with the exception of TH-1-BR and TH-8-SWR. This soil unit consists of very soft to medium stiff, low to high plasticity clay which is generally massive, but does contain occasional thin interlayers of sand and/or silt. It varies in thickness across the site from 7 to 50 feet with the thickening trend increasing both to the east and to the south. For engineering purposes, this unit is important as it has both characteristics of low strength and high compressibility, as well as spatial variability due to the relatively rapid changes in thickness from point to point along the proposed roadway alignment. Glacial dropstones up to boulder size in diameter are possible within the Bellingham Clay. This is the deepest soil unit encountered in the test borings TH-9-SWR, TH-10-SWR, TH-12-SWR and TH-13-SWR.

Glaciomarine Drift and Older Drift (Qgd): This unit was encountered in all of the test borings with the exception of shallower test borings (TH-9-SWR through TH-13-SWR). In general, this soil unit consists of interlayered dense to very dense, silty fine sand with gravel and hard non-plastic to low plasticity silt and clay with some gravel with occasional thin sand interbeds. This is the deepest soil unit encountered during the field exploration and is the only soil unit encountered in the test borings that has been over-consolidated by over-ridding of glacial ice. The unit includes discontinuous layers of medium dense to very dense sand with silt and gravel and hard sandy silt to silty clay.

GROUNDWATER

Groundwater was observed in test borings TH-2-BR, TH-3a/b-BR and TH-4-BR, TH-8-RW, TH-9-SWR, TH-10-SWR, and TH-11-SWR at depths ranging from approximately 3 to 27 feet below the ground surface at the location of the borings at the time of drilling. A standpipe monitoring well (piezometer) was installed in TH-2-BR and the results of groundwater level measurements obtained to date are summarized in Table 2. Please note that absence of an observed groundwater level on boring logs other than those listed above does not indicate that a static groundwater level was not present. Rather, either the drilling method (i.e., mud rotary) masked the location of the water table or drilling was not halted for sufficient time for the water level to stabilize for measurement.

	Well Des	ignation			
Date of Booding	TH-2-BR				
Keading	Depth (ft)	Elev. (ft)			
July 27, 2015 ⁽¹⁾	8.5	+45.26			
October 4, 2015	6.98 ⁽²⁾	+46.78			
March 10, 2016	4.46 ⁽²⁾	+49.30			
July 12, 2017	5.25 ⁽³⁾	+48.34			
July 21, 2017	6.75 ⁽³⁾	+46.84			
July 28, 2017	7.08 (3)	+46.51			
Aug. 11, 2017	7.41 ⁽³⁾	+46.18			
Aug. 18, 2017	7.5 ⁽³⁾	+46.09			
Aug. 25, 2017	7.5 ⁽³⁾	+46.09			
Sept. 1, 2017	7.75 ⁽³⁾	+45.84			
Notes:					
1. At time of dr	illing.				
2. Measuremen	its taken from the top of monument at elevation				
of +53.76 feet.					
3. Measuremen	ts provided by Reichhard	t & Ebe and are			
referenced to	a top of pipe elevation of +53.59.				

 Table 2

 Summary of Groundwater Measurements

LABORATORY TESTING

Laboratory testing of soil materials included determination of moisture content, grain size distribution, plasticity limits and one-dimensional consolidation. Testing was in accordance with appropriate ASTM standards. The test results and a discussion of laboratory test methodology are presented in Appendix B. Where appropriate, test results are displayed on the summary boring logs in Appendix A.

RECOMMENDATIONS, CONCLUSIONS & CONSTRUCTION CONSIDERATIONS

GENERAL

Our field exploration indicates the proposed sanitary sewer alignment is primarily underlain by loose to dense silty sand with varying amounts of gravel and gravelly sand with varying amounts of silt between approximate SS-Alignment stations 130+00 to 144+00. The remaining portion of the proposed sewer alignment is primarily underlain by very soft to medium stiff, low to high plastic clay.

In our opinion, the very soft to medium stiff clay soils at the base of the excavation from approximately SS-Alignment station 144+00 to the end of the project (i.e., Portal Way) will not provide adequate support for the sewer and manhole structures. Through the remaining segments of the alignment, if loose or disturbed soil is encountered at the pipe or manhole structure construction subgrade elevation, it will be necessary to compact the subgrade soils to the requirements of structural fill. If adequate compaction cannot be achieved, the loose or disturbed soil should be over-excavated and replaced with structural fill. See the Trench Subgrade section, below, for additional discussion and recommendations.

All construction and materials should adhere to the requirements of 2016 (or current) WSDOT Standard Specifications for Road, Bridge, and Municipal Construction. The final design of temporary work, including but not limited to, temporary shoring and dewatering is the responsibility of the Contractor.

SITE PREPARATION AND MAINTENANCE DURING CONSTRUCTION

Excavations extending to a minimum of 6 to 10 feet below existing grade are planned to install the proposed sewer. Prior to excavation, the area of the proposed sewer should be cleared and stripped of surface vegetation, topsoil, pavements, and other deleterious material. The stripped materials should be segregated from soils that are to be used as trench backfill.

It should be noted that excavated soils are anticipated to be moisture sensitive and will degrade rapidly if exposed to excessive moisture. During wet weather backfill soils should be protected with plastic sheeting or other means to maintain soil moisture near the optimum moisture content.

Existing utilities which need to be removed, relocated, or abandoned should be plugged or removed so they do not act as a conduit for groundwater and cause saturation of the utility trench backfill.

TRENCH EXCAVATION

We understand that PVC pipes will be used for the new sewer line. The pipe invert will generally be at about 6 to 10 feet deep. The trench excavation is anticipated to encounter predominately loose to dense silty sand with varying amounts of gravel and gravelly sand with varying amounts of silt between approximate SS-Alignment stations 130+00 (beginning of project) to vicinity STA 144+00. The remaining portion of the proposed sewer alignment is primarily underlain by very soft to medium stiff, low to high plastic clay.

Static groundwater is anticipated to be present within the excavation depths. It should be noted that the groundwater level will vary depending on the seasonal precipitation, local subsurface conditions, and other factors. Groundwater levels and seepage rates are normally highest during the winter and early spring.

The soil classifications presented in the logs of test borings (Appendix A) are based solely on the materials encountered in widely-spaced exploratory test borings. The contractor should verify that similar conditions exist throughout the proposed area of excavation. If different subsurface conditions are encountered at the time of construction, the actual conditions should be evaluated to determine any excavation methods or excavation support modifications are necessary.

It should be noted that, based on the soil conditions observed in our test borings, sloughing of unsupported trench sidewalls is likely to occur. The sloughing could extend laterally to below the existing pavements that will be located beyond the construction area. This could lead to post-construction subsidence of pavements.

The excavation method and equipment should be determined by the contractor. It is our opinion that conventional excavators are capable of excavating the trenches based on the subsurface conditions encountered.

TRENCH EXCAVATION SUPPORT

It is the contractor's responsibility to maintain safe working conditions, including temporary excavation stability. Excavations should be conducted in accordance with all applicable federal, state, and other local safety requirements. All excavations in excess of 4 feet in depth should be sloped in accordance with Washington Administrative Code (WAC) 296-155, or be shored. Even if space is available for unsupported open cut excavations, we anticipate that vertical trench excavations with proper excavation support will be used for the project to reduce the disruption to the roadway and adjacent residential properties. The soils at the site are considered Type "C" per WAC 296-155. Provided dewatering efforts maintain water levels below the depth of excavation, unsupported open cut excavations, if used, may therefore be sloped 1½ H:1V or flatter.

Construction equipment, construction material, excavated soil, and vehicular traffic should not be allowed within a horizontal distance, measured from the edge of the excavation, equal to half the depth of the excavation, unless the shoring system has been designed for the surcharge. These conditions would need to be evaluated on a case-by-case basis.

8

The ground adjacent to trench excavations should be continuously monitored for cracks or dips and other indications of movements and possible sloughing of the excavation walls. If signs of ground movement or slope instability are observed during construction, measures should be immediately implemented to stabilize the excavations and slopes. These measures may include backfilling the excavations immediately and/or providing shoring to support the excavations and slopes.

CONSTRUCTION DEWATERING

Static groundwater is anticipated to be present within the excavation depths for the proposed sanitary sewer. It should be noted that the groundwater level will vary depending on the seasonal precipitation, local subsurface conditions, and other factors.

Positive dewatering methods, such as deep wells or sumps may be required to maintain a dry excavation for construction of the sewer pipe and manholes and to control the potential for heave at the base of the excavation. Depending on the time of year and the groundwater inflow potential at any particular location along the proposed sewer alignment, the use of sumps and pumps alone may not be sufficient for control of groundwater inflow. If sumps and pumps are used, the bottom of the trench should be sloped to one or more sump pits. The collected water can then be pumped from these pits to a positive and permanent discharge point. The spacing of the sumps should be determined during construction based on field observations at the time of construction.

Where the base of excavation is located at or within the Bellingham Clay, dewatering with deep wells or well points may be ineffective due to the low permeability of the clay. However, if dewatering is achieved within the clay for extended durations the normally consolidated nature of the clay will result in a settlement-prone condition. The potential for settlement should be evaluated by the Contractor based on the depth and duration of drawdown.

Also due to the low permeability of the Bellingham Clay, perched groundwater conditions may also be encountered, even though the clay may be saturated. The Contractor should be prepared to manage groundwater inflow to trench excavations from more permeable soil units that overlie the Bellingham Clay.

TRENCH SUBGRADE

We understand the invert elevations along the proposed sewer line extension will be at depths ranging from approximately 6 to 10 feet below existing grade. Soil in loose or soft areas, if recompacted are still observed to be yielding, the subgrade soils should be over-excavated a minimum of 24 inches or as directed by the engineer. A layer of Construction Geosynthetic

(Geotextile) for Separation or Underground Drainage, Moderate Survivability, Class C should be placed at the base and up the sidewalls of the over-excavation (the over-excavation backfill need not be wrapped or encased in the construction geotextile). The over-excavation should then be backfilled with Gravel Backfill for Pipe Zone Bedding if the excavation is dry. If backfilling below water, the over-excavated zone should be backfilled with Quarry Spalls and choked off with pipe bedding material. All materials should conform to the requirement in Standard Specifications Section 9 (WSDOT, 2016).

PIPE BEDDING

Pipe bedding material, placement, compaction, and shaping should be in accordance with the project specifications and the pipe manufacturer's recommendations. As a minimum, the pipe bedding material should meet the requirements for Gravel Backfill for Pipe Zone Bedding in section 9-03.12(3) of 2016 WSDOT Standard Specifications.

Bedding material should be placed in accordance with the requirements provided in WSDOT Standard Specifications Section 7-08.3(1) for Pipe Zone Bedding to ensure proper pipe support and protection. The bedding material should extend at least 6 inches above the crown of the pipe.

Contractor should take special precaution when backfilling to 2 feet above the crown of the pipes. This may involve the use of vibratory compactors to vibrate the pipe bedding and backfill in place without applying a significant downward pressure that may overstress the pipe. Part of the bedding around the pipe may need to be placed by hand tools to ensure proper placement.

TRENCH BACKFILL

The placement of trench backfill should conform to Section 7-08.3(3) of the 2016 WSDOT Standard Specifications. Outside of pavement areas, it is our opinion that the on-site soils may be considered for use as trench backfill provided the excavated soil has a moisture content near the optimum moisture content and can be compacted to the project requirements for trench backfill. If on-site soil cannot be compacted to the project requirements, imported granular material conforming to Section 9 03.14(1) Gravel Borrow of the 2016 WSDOT Standard Specifications should be used as trench backfill.

Nearly all of the new sewer line alignment west of the BNSF railroad mains will be located beneath existing asphalt pavement. We recommend that the trench in the pavement areas be backfilled with imported granular material conforming to the 2016 Standard Specifications Section 9 03.14(1) Gravel Borrow or approved equivalent. In general, the trench backfill should be placed in thin lifts not exceeding 8 inches in loose thickness with each lift mechanically

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compacted to Method 'B' requirements per 2-03.3(14)C of the Standard Specifications (WSDOT, 2016).

MANHOLE STRUCTURES

We understand that new manholes as deep as 12 feet will be installed. Loose to silty sand with varying amounts of gravel and soft to medium stiff, clay is expected to be present at the base of manholes. We recommend the manholes be bear on a minimum of 12 inches of Ballast (Standard Specifications Section 9-03.9(1)) or other approved equivalent, good quality, granular material. The native soil at the bottom of the recommended 12-inch Ballast layer should be in a firm and unyielding condition before placing Ballast. If the native soil is not in a firm condition and cannot be compacted to a firm condition, they should be over-excavated an additional 12 inches and backfilled following the recommendations provided above under Trench Subgrade, including placement of Construction Geosynthetic (Geotextile).

WET WEATHER CONSTRUCTION CONSIDERATIONS

General recommendations relative to earthwork performed in wet weather or in wet conditions are presented below. The following procedures are best management practices recommended for use in wet weather construction:

- Earthwork should be performed in small areas to minimize subgrade exposure to wet weather. Excavation or the removal of unsuitable soil should be followed promptly by the placement and compaction of clean structural fill. The size and type of construction equipment used may have to be limited to prevent soil disturbance.
- During wet weather, the allowable fines content of the structural fill should be reduced to no more than 5 percent by weight based on the portion passing the 0.75-inch sieve. The fines should be non-plastic.
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water.
- Geotextile silt fences should be installed at strategic locations around the site to control erosion and the movement of soil.
- Excavation slopes and soils stockpiled on site should be covered with plastic sheeting.

ADDITIONAL SERVICES

PanGEO should review the final project plans and specifications to confirm that our geotechnical recommendations were properly incorporated into the contract documents. Construction support services, including review of temporary shoring or dewatering submittals and field observation of trench subgrades, are beyond the scope of geotechnical design services under which this report was prepared. A supplemental scope and budget would be required for PanGEO to provide

construction support services and is recommended in order to confirm that construction is consistent with the design and construction recommendations provided herein.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

PanGEO, Inc. (PanGEO) prepared this report for Reichhardt & Ebe and the City of Ferndale. The recommendations contained in this report are based on a site reconnaissance, a subsurface exploration program, review of pertinent subsurface information, and our understanding of the project.

Variations in soil conditions may exist between the locations of the explorations and the actual conditions underlying the site. The nature and extent of soil variations may not be evident until construction occurs. If any soil conditions are encountered at the site that are different from those described in this report, PanGEO should be immediately notified to review the applicability of the recommendations presented herein. Additionally, PanGEO should also be notified to review the applicability of these recommendations if there are any changes in the project scope.

This report has been prepared for planning and design purposes for specific application to the proposed sewer project in accordance with the generally accepted standards of local practice at the time this report was written. This report may be used only by the client and for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both off and on-site), or other factors including advances in our understanding of applied science, may change over time and could materially affect our findings. Therefore, this report should not be relied upon after 36 months from its issuance. PanGEO should be notified if the project is delayed by more than 36 months from the date of this report so that the applicability of the conclusions and recommendations presented herein may be evaluated considering the time lapse.

Within the limitations of scope, schedule and budget, PanGEO engages in the practice of geotechnical engineering and endeavors to perform its services in accordance with generally accepted professional principles and practices at the time this report and/or its contents was prepared. No warranty, express or implied, is made. The scope of PanGEO's work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous or toxic substances in the soil, surface water or groundwater at this site. PanGEO does not practice or consult in the field of safety engineering. PanGEO does not direct the contractor's operations, and cannot be held responsible for the safety of personnel other than our own on the site; the safety of others is the responsibility of the contractor.

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It is the client's responsibility to see that all parties to this project, including the designer, contractor, subcontractors, etc., are made aware of this report in its entirety. The use of information contained in this report for bidding purposes shall be at the contractor's sole option and risk. Any party other than the client who wishes to use this report shall notify PanGEO of such intended use and for permission to copy this report. Based on the intended use of the report, PanGEO may require that additional work be performed and that an updated report be reissued. Noncompliance with any of these requirements will release PanGEO from any liability resulting from the use this report.

CLOSURE

PanGEO is pleased to support the Reichhardt & Ebe design team and the City of Ferndale with geotechnical engineering recommendations. If you have any questions regarding this report, please call (206) 262-0370.



Robert E. Kimmerling, P.E. Principal Geotechnical Engineer

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FIGURES







NTW


Project\Drawings\Site Z:\Projects\2016 Projects\16-310 Thor 4/10/2017 DATE:

REK CHECKED BY: NTW





Washington	PROJECT NO. 16-310	FIGURE NO. 3A



washington	PROJECT NO.	FIGURE NO.
-	16-310	3B



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APPENDIX A

FIELD EXPLORATIONS AND LOGS OF TEST BORINGS

APPENDIX A: FIELD EXPLORATIONS AND LOGS OF TEST BORINGS

Appendix A contains written and graphical borehole logs presenting the factual and interpretive results of our exploratory drilling program on the subject site. The descriptions of the materials encountered in the subsurface explorations are based on the samples extracted from the borings. The sample descriptions are augmented by observation of the drilling action and drill cuttings brought to the surface during field operations. The paragraphs below describe the field operations and sampling procedures used during the geotechnical field explorations.

FIELD EXPLORATIONS

The subsurface exploration program consisted of drilling thirteen test borings along the project alignment as shown on Figure 2, Site and Exploration Plan. The field exploration took place on three mobilizations, the first on July 27 and 28, 2015, the second on October 5 and 6, 2015 and the third on January 30, 2017. The borings were drilled by Holocene Drilling of Edgewood, Washington, under subcontract to PanGEO, Inc. The borings were drilled using both hollow stem auger and mud rotary drilling methods. A summary of the test boring locations, depths, drill rig utilized, date(s) drilled and drilling equipment and is provided in Table 1.

The test boring adjacent to the railroad tracks on the west side (TH-2-BR) was completed as an open stand pipe piezometer with a completion depth of 20 feet and a screened interval from 10 to 20 feet below the ground surface. The well as completed with a flush-mount monument.

A representative of PanGEO logged the test boring. Soil samples were collected from selected intervals in the borings. The borings were drilled using a combination of a Mobile B-61, a Foremost B-58, and a Diedrich D 50 drill rigs supplied with both hollow stem auger and mud rotary drilling equipment and automatic trip safety hammer sampling systems provided by Holocene Drilling of Pacific, Washington. The locations of the borings were surveyed and the locations and elevations provided to PanGEO by Reichhardt & Ebe.

SAMPLING METHODS

Standard penetration tests were taken at 5-foot intervals, starting at 5 feet below ground surface and continuing to the bottom of each boring. The number of blows to drive the sampler each 6 inches over an 18-inch interval was recorded and indicated on the boring log. The number of blows to drive the sampler the final 12 inches is termed the SPT resistance, or N-value, and is used to evaluate the strength and consistency/relative density of the soil. The hammer used to perform SPT sampling was an automatic trip-release mechanism, which generally delivers a higher energy than a "standard" hammer equipped with a rope and cathead mechanism. The efficiency of the hammer mechanism is considered when evaluating the liquefaction potential of September 6, 2017 Project No. 16-310

a soil. The SPT N-values reported on the borehole logs are field values, and are therefore not corrected for hammer efficiency, overburden stress or rod lengths. In soft, cohesive soils, thin-walled, undisturbed (Shelby) tube samples were obtained for consolidation testing and material classification.

Soils samples were identified and described in general accordance with the guidelines shown on Figure A-1. Summary boring logs are included as Figures A-2 to A-15. The stratigraphic contacts shown on the summary logs and subsurface profile (Figure 3, main text) represent the approximate boundaries between soil types; actual stratigraphic contacts encountered at other locations in the field may differ from the contact elevations shown on the logs, and may be gradual rather than abrupt. The soil and groundwater conditions depicted are only for the specific date and locations reported, and therefore, are not necessarily representative of other locations and times.

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Loose	4 to 10	15 - 35	Soft		2 to 4	250 - 500	DD	Dry Density
Med. Dense	10 to 30	35 - 65	Med. Stiff	f	4 to 8	500 - 1000	DS	Direct Shear
Dense	30 to 50	65 - 85	Stiff		8 to 15	1000 - 2000	%F	Fines Content
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Oti	ner symbols mav	/ be used where field obs	ervations ind	hostod	I mixed soil constituents	s or dual constituent materials.		Valio olioal
	, <u> </u>	DESCRIPTIONS			TDUCTUDES			
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Layered Laminated Lens Interlayered Pocket Homogeneous COMPON Boulder: Cobbles: Gravel Coa F	Units of mater composition fr Layers of soil Layer of soil th Alternating lay Erratic, discor Soil with unifo IENT Irse Gravel: ine Gravel:	DESCRIPTIONS ial distinguished by color rom material units above a typically 0.05 to 1mm thic hat pinches out laterally yers of differing soil mater ntinuous deposit of limited orm color and composition COMPON SIZE / SIEVE RA > 12 inches 3 to 12 inches 3 to 3/4 inches 3/4 inches to #4 sieve	S OF SC and/or and below k, max. 1 cm ial extent throughout IENT DI INGE	EFIN CC Sar Silt Cla	STRUCTURES Fissured: Break Slickensided: Fractu Blocky: Angul Disrupted: Soil th Scattered: Less t Numerous: More BCN: Angle norma SITTIONS MPONENT Ind Coarse Sand: # Fine Sand: # Coarse	s along defined planes ure planes that are polished or glossy ar soil lumps that resist breakdown hat is broken and mixed han one per foot between bedding plane and a plane al to core axis SIZE / SIEVE RANGE 44 to #10 sieve (4.5 to 2.0 mm) #10 to #40 sieve (2.0 to 0.42 mm) 440 to #200 sieve (0.42 to 0.074 mm) 0.074 to 0.002 mm c0.002 mm	MO ⊈	NITORING WELL Groundwater Level at time of drilling (ATD) Static Groundwater Level Cement / Concrete Seal Bentonite grout / seal Silica sand backfill Slotted tip Slough Bottom of Boring STURE CONTEN Dusty, dry to the touch Damp but no visible wat Visible free water
Layered Laminated Lens Interlayered Pocket Homogeneous COMPON Boulder: Cobbles: Gravel Coa F	Li: Units of mater composition fr Layers of soil Layer of soil th Alternating lay Erratic, discor Soil with unifo NENT Irse Gravel: ine Gravel:	DESCRIPTIONS ial distinguished by color rom material units above a typically 0.05 to 1mm thic hat pinches out laterally vers of differing soil mater ntinuous deposit of limited orm color and composition COMPON SIZE / SIEVE RA > 12 inches 3 to 12 inches 3 to 3/4 inches 3/4 inches to #4 sieve	S OF SC and/or and below k, max. 1 cm ial extent throughout IENT DE NGE	EFIN CC Sar Silt Clay	Fissured: Break Slickensided: Fractu Blocky: Angul Disrupted: Soil th Scattered: Less th Numerous: More BCN: Angle normal Angle NITIONS MPONENT Ind Coarse Sand: # Fine Sand: # Y	s along defined planes ure planes that are polished or glossy ar soil lumps that resist breakdown nat is broken and mixed than one per foot than one per foot between bedding plane and a plane al to core axis SIZE / SIEVE RANGE 44 to #10 sieve (4.5 to 2.0 mm) #10 to #40 sieve (2.0 to 0.42 mm) #40 to #200 sieve (0.42 to 0.074 mm) 0.074 to 0.002 mm <0.002 mm	MO ↓ ↓ MOI: MOI: MOI: Vet	NITORING WELL Groundwater Level at time of drilling (ATD) Static Groundwater Level Cement / Concrete Seal Bentonite grout / seal Silica sand backfill Slotted tip Slough Bottom of Boring STURE CONTEN Dusty, dry to the touch Damp but no visible wat Visible free water
Layered Laminated Lens Interlayered Pocket Homogeneous COMPON Boulder: Cobbles: Gravel Coa F	Li: Units of mater composition fr Layers of soil th Layer of soil th Alternating lay Erratic, discor Soil with unifor NENT Irrse Gravel: ine Gravel: ine Gravel:	DESCRIPTIONS ial distinguished by color rom material units above a typically 0.05 to 1mm thic hat pinches out laterally yers of differing soil mater thinuous deposit of limited rrm color and composition COMPON SIZE / SIEVE RA > 12 inches 3 to 3/4 inches 3/4 inches to #4 sieve	S OF SC and/or and below k, max. 1 cm ial extent throughout IENT DI INGE	EFIN CC Sar Silt Cla	STRUCTURES Fissured: Break Slickensided: Fractu Blocky: Angul Disrupted: Soil th Scattered: Less t Numerous: More BCN: Angle NITIONS MPONENT M Coarse Sand: # Fine Sand: # Fine Sand: #	s along defined planes ure planes that are polished or glossy ar soil lumps that resist breakdown hat is broken and mixed han one per foot between bedding plane and a plane al to core axis SIZE / SIEVE RANGE #4 to #10 sieve (4.5 to 2.0 mm) #10 to #40 sieve (2.0 to 0.42 mm) #40 to #200 sieve (0.42 to 0.074 mm) 0.074 to 0.002 mm <0.002 mm	MO ↓ ↓ MO ↓ MO ↓ MO ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	NITORING WELL Groundwater Level at time of drilling (ATD) Static Groundwater Level Cement / Concrete Seal Bentonite grout / seal Silica sand backfill Slotted tip Slough Bottom of Boring STURE CONTEN Dusty, dry to the touch Damp but no visible wat Visible free water
Layered Laminated Lens Interlayered Pocket Homogeneous COMPON Boulder: Gravel Coa F	t: Units of mater composition fr t: Layers of soil t: Layer of soil th t: Alternating lay t: Erratic, discor s: Soil with unifo VENT UNITSE Gravel: ine Gravel: INSE Gravel:	DESCRIPTIONS ial distinguished by color rom material units above a typically 0.05 to 1mm thic hat pinches out laterally yers of differing soil mater ntinuous deposit of limited rrm color and composition COMPON SIZE / SIEVE RA > 12 inches 3 to 12 inches 3 to 3/4 inches 3/4 inches to #4 sieve	S OF SC and/or and below k, max. 1 cm ial extent throughout NGE	EFIN CC Sar Silt Clay ern	STRUCTURES Fissured: Break Slickensided: Fractu Blocky: Angul Disrupted: Soil tf Scattered: Less t Numerous: More BCN: Angle norma NITIONS MPONENT Ind Coarse Sand: # Fine Sand: # Fine Sand: # Coarse Sa	s along defined planes ure planes that are polished or glossy ar soil lumps that resist breakdown hat is broken and mixed han one per foot between bedding plane and a plane al to core axis SIZE / SIEVE RANGE 44 to #10 sieve (4.5 to 2.0 mm) #10 to #40 sieve (2.0 to 0.42 mm) #10 to #40 sieve (0.42 to 0.074 mm) 0.074 to 0.002 mm 30.002 mm	MO ⊈	NITORING WELI Groundwater Level at time of drilling (ATD) Static Groundwater Level Cement / Concrete Seal Bentonite grout / seal Silica sand backfill Slotted tip Slough Bottom of Boring STURE CONTEN Dusty, dry to the touch Damp but no visible wa Visible free water

Pro Job	ject: Num	ber:	Thor 15-1	nton Stre	et Ove	ercrossing BNSF Railroad		Surface Elevation: Top of Casing Elev.:	61.1ft				
Loc Coc	ation: ordina	tes:	City Nort	of Fernda hing: 684	ale, Wa 365.7,	Easting: 1217248.6		Drilling Method: Sampling Method:	HSA SPT				
	·	e	ċ	ş			I				N-Value	€ ▲	
h, (ft	N N N	e Typ	/ 6 i	Test	lodr	MAT				PL	Moistu	re	LL –
Deptl	amp	ample	ows	ther	Syn	WAT	ERIAL DESC	RIFTION			_	Pecover	
	Ő	S	B	0						0	50	Recover	100
						Loose, red brown, fine to	o coarse SAND: \	vet, laminated (Outwash).				
- 5 -	S-1	X	3 6 3			Medium stiff, red brown, (Ice Contact Deposit).	SILT with sand:	moist, some woody orga	nics.				
- 10 -	S-2	X	2 4 4										
	S-3	X	2 17			Hard, gray, SILT with sar massive. (Drift).	nd and fine grave	el: moist, non-plastic,					
- 20 -	S-4		8 18 24										
	S-5		4 37 50/6			Becomes SAND with fine	e to coarse grave	el: moist, rock stuck in tip	of				× ×
	S-6		6 16 17			Dense to very dense, gra gravel: wet. (Drift).	ay to black, fine t	o coarse SAND, trace co	 barse				
Cor Dat Dat Log Dril	npleti e Bor e Bor ged E ling C	on D ehole ehole 3y: omp	epth: e Starte e Comp any:	ed: bleted:	51.5ft 10/6/1 10/6/1 C. Ma Holoce	5 ST 5 this ene Drilling	emarks: Mobile E TA 138+27, 40' F	8-61 drill rig. Location: S Rt. (Sewer project SS-Ali	FA: 38+	27, 40' Rt. ().	(Bridge pro	vject A-Lind	:::: e),
Ľ	aı				b	LOG OF T	EST BO	KING [H-1-B	ĸ			Figure	e A-2

Pro Job Loc	ject: Numl ation:	ber:	Thor 15-1 City	nton Stre 53 of Fernda	eet Ove ale, Wa	ercrossing BNSF Railroad ashington	Surface Elevation: Top of Casing Elev.: Drilling Method:	61.1ft HSA			
		les:	NOR	ning. 664	365.7,	Easung. 1217240.0	Sampling Method.	571		N-Value	▲
(ft)	No.	Type	6 in.	ests	ō				PL	Moisture	e LL
pth,	nple	- uple	NS /	erT	ymb	MATERIAL DESC	RIPTION			•	
Ğ	Sar	Sar	Blo	Gt	S				0 RQD	ا 50	Recovery
- 35 -	6.7		15			Dense to very dense, gray to black, fine gravel: wet. (Drift). (Continued)	to coarse SAND, trace co	oarse			
			23 37								
- 40 -	S-8	X	18 22 32								
 - 45 -			10								
	S-9	X	18 38			Hard, gray, fine sandy SILT: moist, trace plastic, massive. (Drift).	fine to coarse gravel, slip	ghtly			
- 50 -			8								
	5-10		31 48			Bottom of Bor	ing.				
- 55 -											
- 65 -											
Cor Dat Dat Log Dril	npletic e Bore ged B ling C	on D ehole ehole By: omp	epth: e Starte e Comp any:	ed: pleted:	51.5ft 10/6/1 10/6/1 C. Mat Holoce	5 Remarks: Mobile 5 STA 138+27, 40' 5 this ene Drilling	B-61 drill rig. Location: S Rt. (Sewer project SS-Ali	TA: 38+ gnment	27, 40' Rt. (E).	Bridge proje	ect A-Line),
\Pr	aı		Ģ	E		LOG OF TEST BO	RING TH-1-B	R		F	igure A-2

Pro Job Loc Cor	ject: Num ation: ordina	iber: : ates:	Thoi 15-1 City Nort	rnton Stre 53 of Fernda hing: 684	et Ove ale, Wa 406.5,	ercrossing BNSF Railroad ashington Easting: 1217479.6	Surface Elevation: Top of Casing Elev. Drilling Method: Sampling Method:	.:	53.8 HSA SPT	ft						
Depth, (ft)	Sample No.	Sample Type	Blows / 6 in.	Other Tests	Symbol	MATERIAL DESCRIF	PTION		PL	QD	N-Valu Moist	le ▲ ure Rec	l			Instrument
- 0 - - 5 - - 10 -	S-1	X	8 13 20 10 13 10			3 inches Asphalt. Dense, red brown, fine to coarse SAND: homogeneous, indistinctly laminated. (C Medium dense, brown becoming gray, fi SAND: wet, homogeneous, silt interbeds Medium dense, gray, fine sandy SILT: we plastic, no dilatancy, laminated with rust; (Outwash). Soft or loose, interbedded brown, fine to gray CLAY: wet, fine bedded (2 to 4 inct medium plastic, sharp contacts, (Outwa	moist, trace silt, Dutwash). ne to medium s. (Outwash). ery moist, low y laminae. medium SAND and nes), clay low to sh / Bellingham									
- 15 - - 20 - - 25 -	S-3		1 1 2 0 1 1 9	ATT		Soft, gray, lean CLAY (CL) with silt: wet, fine sand, occasional gravel, homogened massive. (Bellingham Clay).	SAND: moist,									
- 30 - - 30 - Cor	S-5 S-6	ion D	23 23 10 17 25 epth:		81.5ft	Hard, green gray, sandy, silty CLAY: mo occasional gravels, fine to medium and f interbeds, laminated, gradational contact Remarks: Mobile 140+57. 7' Lt. (Se	ist, low plastic, ine to coarse sand ts. (Drift). B-61 drill rig. Location: wer project SS-Alignm	: ST/	<u></u>	+57, 7	" Lt. (B	ridge p	projec	t A-Lir	ne), S	STA
	e Bor Iged E ling C				7/27/1 S. Eva Holoce	LOG OF TEST BO	RING TH-2-	BR	2							

Project: Job Number:	Thornton St 15-153	reet Ove	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.	: 53.8ft v.:	
Location: Coordinates:	City of Ferne Northing: 68	dale, vva 34406.5	ashington , Easting: 1217479.6	Drilling Method: Sampling Method:	HSA SPT	
Depth, (ft) Sample No. Sample Type	Blows / 6 in. Other Tests	Symbol	MATERIAL DESCRIF	ΊΟΝ	N-Value ▲ PL Moisture LL ■ RQD Recovery	Instrument
- 35 - S-7	2 4 14		Medium dense, green gray, fine sandy S slightly to low plastic, massive, with soft, and sand beds. (Drift).	ILT: moist to wet, gray clay interbed		
- 40 - S-8	7 14 GS 13		Medium dense to dense, green gray, silt SAND (SM): wet, clayey silt interbeds at massive at bottom. (Drift).	y, fine to coarse top, graded beds,		
- 45 - S-9	11 29 40		Hard, green gray, silty CLAY with fine sa plastic, slow dilatancy, scattered to a tra massive, till-like. (Drift).	and: moist, low ce of fine gravel,	-	
- 50 - S-10	14 15 15					
- 55 - S-11	17 39 45					
- 60 - S-12	36 44 45 6S		Hard, brown gray, sandy, SILT (ML): mo plastic, some rounded gravel, massive, v layers. (Drift).	ist, slightly to low vith non-plastic silt		
65 Completion D Date Borehol Date Borehol Logged By: Drilling Comp	repth: e Started: e Completed: pany:	81.5ft 7/27/1 7/27/1 S. Ev; Holoc	Remarks: Mobile 15 15 15 ans ene Drilling	B-61 drill rig. Location: wer project SS-Alignm	n: STA: 40+57, 7' Lt. (Bridge project A-Line), S ment).	TA
Pan			LOG OF TEST BO	RING TH-2-	-BR Figure /	A-3

The stratification lines represent approximate boundaries. The transition may be gradual.

Dat Log Drill	e Bore ged B ling Co	ehole y: ompa	e Comp any:		7/27/1 S. Eva Holoce	5 ans ene Drilling LOG OF TEST BO	RING TH-2-	BF	र									
Cor Dat	npletic	on De phole	epth: e Starte	ed:	81.5ft 7/27/1	5 Remarks: Mobile 140+57, 7' Lt. (Se	B-61 drill rig. Location: wer project SS-Alignm	: ST	A: 4).	10+	57, 7	'' Lt.	(Brid	lge p	oroje	ct A-I	_ine), STA
- 95 -														· · · · · · · · · · · · · · · · · · ·				
														· · · · · · · · · · · · · · · · · · ·				
- 90 -																		
														· · · · · · · · · · · · · · · · · · ·			••••	
- 85 -																		
						Bottom of Boring.								· · · · · · · · · · · · · · · · · · ·				
- 80 -	S-16	X	13 27 50/6			Possible small shell fragment. Hard, green gray, fine sandy SILT with c \gravel, slighty plastic, massive. (Drift).	lay: moist, trace											
														· · · · · · · · · · · · · · · · · · ·				
- 75 -	S-15	X	7 35 45			Signuy plasuc laminae. (Dhit).												
						Very dense, green gray, sandy SILT: we homogenous, occasional gravel, laminat	t, non-plastic fines, ed with occasional											
- 70 -	S-14	X	13 22 23			Grading to green gray, fine sandy SILT a some gravel, slightly plastic fines.	and CLAY, moist,											
						layers. (Drift). (Continued) Grading to sandy, silty CLAY wit gravel,	massive, till-like.								/	/		
- 65 -	ഗ S-13	S X	37 50/3	0		Hard, brown gray, sandy, SILT (ML): mo plastic, some rounded gravel, massive, v	ist, slightly to low with non-plastic silt	0					50				200	
Jepth, (f	ample N	ample Typ	lows / 6	ther Tes	Symbol	MATERIAL DESCRIF	TION			- RQ	D	Moi	sture	Rec	over	LL – I v 🕅		nstrumei
()		es.	. <u>.</u>	sts	400.5,	Easting. 1217479.0	Sampling Method.		5	<u> </u>		N-Va	lue .					t
Job Loc	Numt	oer:	15-1 City	53 of Fernda	ale, Wa	ashington	Top of Casing Elev. Drilling Method:	.:	HS	SA T								
Pro	ject:		Thor	nton Stre	et Ove	ercrossing BNSF Railroad	Surface Elevation:		53	.8ft								

Pro Job Loc	ject: Numl ation:	ber:	Thor 15-1 City	nton Stre 53 of Fernd	eet Ove ale, Wa	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.: Drilling Method:	51.1ft HSA				
Cod	ordina	tes:	Nort	hing: 684	400.3,	Easting: 1217624.8	Sampling Method:	SPT				
£	٩.	be	. <u>.</u>	sts	_					N-Value	▲	
th, (i	ple N	le Ty	s / 6	r Te	nbo	MATERIAL DES	SCRIPTION				9	-1
Dep	Sam	Samp	Blow	Othe	Sy						Recovery	, 🕅
- 0 -			ш	0		⊇2 inches Asphalt			0	50		100
						Loose, brown, silty, fine to medium SA	ND with gravel. (Fill).	/				
						Medium stiff, dark brown to dark gray, woody organics. (Alluvium).	SILT with sand: moist, son	ne				
- 5 -	S-1	\square	5 3 3			Loose, brown, sandy SILT with fine gr massive, gravel subrounded to suban	avel: moist, non-plastic, gular. (Alluvium).					
						Medium dense, brown, fine to coarse	SAND: wet, trace silt, scatte	ered				
						gravel, nomogenous, laminated. (Out	wasn).					
- 10 -	S-2	\mathbb{H}	8 11									
	5-2	А	12		•••••				[]]]]] []			
						Soft to medium stiff, green gray, silty,	lean CLAY (CL): wet, medi	um	/			
15						plastic, no dilatancy, homogeneous, la (Bellingham Clay).	aminated, occasional sand I	bed.	/			
- 13 -	S-3		1 1 7									
			-									
- 20 -	6.4	\mathbb{H}	0	ATT		Very soft, green gray, medium plastic,	silty CLAY, massive.					
	5-4	А	0	ATT				4				
- 25 -	S-5	\square	0 0 1			Very soft, silty CLAY.						
L _			·									
	SH-1			ATT Con		Slightly plastic (CL-ML).						
- 30 -	S-6	\sim	50/2			Medium stiff, green gray, fine sandy, s $_{\!$	silty CLAY: moist, slightly to d. (Drift).	low	//////////////////////////////////////	////X///		77444
						Drilling Refusal on Boulder, skip borin Bottom of E	g west 5 feet. Boring.					
Cor	npletio	on D	epth:	<u> </u>	30.1ft	Remarks: Obst	ruction and drilling refusal a	at 30 fee	t depth. Move	boring 4	feet east	and
Dat Dat	e Bore e Bore	ehol ehol	e Starte e Comp	ed: oleted:	7/27/1 7/28/1	5 re-start. Mobile 5 142+03, 5' Lt. (B-61 drill rig. Location: ST Sewer project SS-Alignmer	A 42+00 nt).	0, 15.5' Lt. (Brid	dge proje	ct A-Line)	, STA
Log Dril	ged B ling C	3y: omp	any:		S. Eva Holoce	ans ene Drilling						
D	51		Γ	F		LOG OF TEST BC	RING TH-3a-E	BR				
T	å	R								I	Figure	A-4

Pro Job Loc Coc	ject: Numl ation: ordina	ber: tes:	Thor 15-1 City North	nton Stre 53 of Fernda hing: 684	eet Ove ale, Wa 400.8,	ercrossing BNSF Railroad ashington Easting: 1217628.9	Surface Elevation: Top of Casing Elev.: Drilling Method: Sampling Method:	51.0ff HSA SPT	t						
								-			N-Val	ue 🛦			
, (ft)	No	Type	6 in	[ests					PL		Mois	ture		LL	-
epth	mple	mple	/ SM	ner J	Sym	MATERIAL DESC	RIPTION					,		I	777
ŏ	Sa	Sa	Blo	ð						JD	5(R 0	ecove	ery [100
- 0 -						2 inches Asphalt.								: :	
						(Fill).									
5															
5						(Outwash).									
															· · · · · · · · · · · · · · · · · · ·
						7									
- 10 -						-				<u> </u>					
						Green grav, silty, lean CLAY (CL); wet, r	nedium plastic. no dilatar	ncv.							· · · · · · · · · · · · · · · · · · ·
						homogeneous, laminated. (Bellingham C	Clay).	,							
- 15 -										<u> </u>			<u> </u>		
	SH-2a														· · ·
											77777		: 	7777	
	SH-3a			ATT Con											
- 20 -															<u></u>
															· · · · · · · · · · · · · · · · · · ·
- 25 -														<u> </u>	
															· · ·
- 30 -	S-6a	\square	0			Soft, green gray, silty CLAY: wet, low to	medium plastic,							· ////	
	0 04	А	14			<u>nomogeneous</u> , massive. Stiff to very stiff, green gray, sandy, silty	CLAY: moist, slightly to I	low		<u>/////</u>	<u>////X</u> :::		//////////////////////////////////////		///// ::::
- Cor	npletio	on D	epth:		91.5ft	Remarks: Mobile	B-61 drill rig. Location: S	TA 42+	03, 17' Lt.	(Brid	ge pro	oject	A-Line	e), S	TA
Dat Dat	e Bore e Bore	ehole ehole	e Starte e Comp	d: d:	7/28/1	5 142+07, 5' Lt. (Se	wer project SS-Alignmen	nt).		•		-			
Log	ged B	By: omn	anv.		S. Eva	ns Pre Drilling									
D			\bigcap				NG TH-3h-F	R							
Ľ	ģ				ッ			<i></i>				Fi	igur	e /	۹-5

Pro	ject:	hor	Thor	nton Stre	et Ove	ercrossing BNSF Railroad	Surface Elevation:	51.0ft			
Loc	ation:		City	of Fernda	ale, Wa	ashington	Drilling Method:	HSA			
Cod	ordina	ites:	Nort	hing: 684	400.8,	Easting: 1217628.9	Sampling Method:	SPT			
				s						N-Value	•
(ft)	Ž	Type	6 ir	est					PL	Moisture	LL
pth,	ble	Jple	VS /	erT	ymt	MATERIAL DESC	RIPTION				
De	San	San	Blov	Oth	S.				RQD	F	Recovery
					<i></i>	plastic occasional gravel massive (Drif	t)		0	50	100
						Stiff to very stiff, green gray, sandy, silty	CLAY: moist, slightly to lo	ow _			
- 35 -			0			Loose green grav fine to medium SAND	t). (Continued)] `		<u></u>	
	S-7a	١X	3		11/1/	fines, homogeneous, laminated. (Drift).					
		\square	0			Hard, green gray, fine sandy SILT with cl homogenous, occasional coarse sand / fi	ay: moist, slightly plastic ine gravel, lenses of silty	,			
						sand, massive. (Drift).				\mathbf{N}	
- 40 -	S-8a		13 31								
		Ĥ	42							<u>/////////////////////////////////////</u>	<u>/////////////////////////////////////</u>
											/
- 45 -		H	15			Grading to green gray, fine sandy, silty C	I AY low plastic scattere	he			
	S-9a	١Щ	24 34			fine gravel, till-like.		54			
										/	
					<u>/////</u>	Dense, green gray, fine to medium SAND	D: wet, trace silt,			/	
- 50 -						nomogenous, indistinctly laminated. (Dri	n).				
50	S-10a	aX	3 14							<u>VIIXII</u>	
		\square	19			Very dense, green gray, silty, fine SAND:	wet, non-plastic fines,				
						occasional nard, silty clay interbeds and	pockets. (Drift).			N	
										$ \rangle$	
- 55 -	S-11:		10 31								
		Ά	38							<u>'////X////</u>	<u>[[]]]]]]]]</u>
						poorly graded, homogenous, indistinctly l	D with silt (SP-SM): wet, aminated to massive. (D	Drift).			
- 60 -		\mathbb{H}	4								
	S-12a	a 📈	14 16	GS							
										N	
						Dense, green gray, silty CLAY with fine s	and: moist, low plastic, cl	lay		$\left \right\rangle$	
- 65 -										N	
Cor	npleti	on D	epth:		91.5ft	Remarks: Mobile E	B-61 drill rig. Location: ST	FA 42+(03, 17' Lt. (Bri	dge project	A-Line), STA
Dat Dat	e Bor e Bor	ehole ehole	e Starte e Comp	ed: oleted:	7/28/1 7/28/1	5 142+07, 5 Lt. (Sev	wer project 55-Alignment	ι).			
Log Dril	iged E ling C	By:	anv [.]		S. Eva	ans ene Drilling					
		Sinp						D			
Γ	a	n	J	Ľ	*	LUG UF IESI BUR		ĸ			
I N	C O	R	OR	ATE	D					F	igure A-5

Pro Job Loc	ject: Number: ation:	Thor 15-1 City	nton Stre 53 of Fernd	eet Ove ale, Wa	ercrossing BNSF Railro	ad	Surface Elevation: Top of Casing Elev.: Drilling Method:	51.0ft HSA					
Coo	ordinates:	Nort	ning: 684	400.8,	Easting: 1217628.9		Sampling Method:	SPI		N-V:	alue 🔺		
(ft)	No.	6 in.	ests						PL	Мо	isture		LL
pth,	nple	NS /	erT	ymb	M	ATERIAL DESC	RIPTION		-	,	•		-
De	Sar	Blo	0th Oth	S S						D	R	ecovery	/ 💹
- 65 -	S-13a	15 22 33			Dense, green gray, si homogenous, massiv (Continued)	ilty CLAY with fine s re with occasional s	and: moist, low plastic, c and laminae. (Drift).	lay					
					Dense, green gray, fi homogenous, massiv	ne to medium SANI /e. (Drift).	D: wet, trace silt,						
- 70 -	S-14a	11 32											
		50/6			Dense to very dense, coarse SAND (SC) w dilatancy, massive bu	, brown gray to gree ith gravel, low to me it with occasional sa	n gray, silty, clayey, fine edium plastic fines, no and laminae. (Drift).	to		///////////////////////////////////////			
- 75 -													
75	S-15a	15 19 20			Low plastic, silty, clay	vey SAND.							
		20								Ň			
- 80 -		12			Green grav silty, clav	ev SAND low to me	edium plastic fines scatte	ered	1////////				777777
	S-16a X	23 32	GS		gravel, till-like.			, iou					
- 85 -		6		• • • • • • • • • • • • • • • • • • •	gravel: wet, trace silt,	laminated. (Drift).	e to coarse SAND with fir	ie					71/11/11/
	S-17a	17 34			Very dense, green gr	ay, fine sandy SILT	very moist, non-plastic,	rapid					
					Hard, green gray, silt dilatancy, occasional	y CLAY with fine sa fine gravel, homoge	nd: moist, low plastic, no enous, massive to indistir	nctly					
- 90 -	S-189	14 19			laminated, occasiona	i sand interbed. (Di	rint).						
		24				Bottom of Bor	ing.		<u>/////////////////////////////////////</u>	<u>/////////////////////////////////////</u>			
							Ū						
05													
- 95 -								Ī					
L .													
Cor Dat Dat Log	mpletion [e Boreho e Boreho ged By:	Depth: le Starte le Comp	ed: bleted:	91.5ft 7/28/1 7/28/1 S. Eva	5 5 ns 200 Drilling	Remarks: Mobile I 142+07, 5' Lt. (Se	B-61 drill rig. Location: S wer project SS-Alignmen	TA 42+0 t).)3, 17' Lt.	(Bridge p	roject /	A-Line)	, STA
							ING TH-3h-P	R					
Ľ	d[]			D				7 1 X			Fi	gure	• A-5



The stratification lines represent approximate boundaries. The transition may be gradual.

Pro Job Loc Coc	ject: Num ation: ordina	iber:	Thor 15-1 City North	nton Stre 53 of Fernda hing: 684	et Ove ale, Wa 290.1,	rcrossing BNSF Railroad Ishington Fasting: 1217833.3	Surface Elevation: Top of Casing Elev.: Drilling Method: Sampling Method:	50.9ft HSA SPT							
				ing. cc .	200,		Company measures.	0			N-Va	lue 🔺			
(ft)	No.	Type	6 in	ests					PL		Mois	sture		LL	
pth,	nple	- uple	NS /	erT	, Amb	MATERIAL DESC	RIPTION		⊢)		1	_
De	Sar	San	Blov	Oth	ပ				F	RQD		R	ecove	ery 🛛	
						Soft, gray, fat CLAY (CH) with silt: wet, r	nedium to high plastic, no)	<u> </u>		5	0			100
						dilatancy, homogenous, laminated to ma (Bellingham Clay). (Continued)	issive, occasional sand b	ed.							
- 35 -	0.7	\square	1								<u>: : :</u>		:::	::	::
	5-7	А	2 1						T						
- 40 -		\mathbb{H}	2										<u> </u>	<u> </u>	<u>: :</u> : :
	S-8	М	1 2						↑						
	-														
- 45 -	-		1								<u> </u>		<u> </u>		· · ·
	S-9	М	2						+ -						
	-														
- 50 -															· · · · · · · · · · · · · · · · · · ·
50	S-10	M	3 3			Medium stiff, silty CLAY, moist, low to m	edium plastic.								
		Ħ	4												
	<u>55 - 3</u>														
- 55 -	S-11	\square	3 5			Stiff, silty CLAY.									
		H	7												
	-					Very dense, gray, silty fine SAND with fin	ne gravel: moist to wet,			\backslash					• •
						non-plastic fines, laminated to massive.	(Drift).								
- 60 -	C 10	\mathbb{H}	32												: :
	5-12	А	22 34												
- 65 -														: :	: :
Cor Dat	Completion Depth: Date Borehole Started: Date Borehole Complet				71.5ft	Remarks: Mobile 145+55, 64' Rt. (S	B-61 drill rig. Location: S Sewer project SS-Alignme	TA 44+2 ent).	24, 34' L	t. (Brid	dge pr	oject	A-Line	e), S⁻	ΓA
Dat	Date Borehole Startea: Date Borehole Comple: _ogged By:				10/5/1	5		,							
Dril	ling C	omp	any:		Holoce	ene Drilling									
P	51	n	\square	FA		LOG OF TEST BO	RING TH-4-B	R	_	_	_	_	_	_	
۲.	å											F	igur	e A	۸-6

Pro Job	ject: Numl	ber:	Tho 15-1	rnton Stre 53	eet Ove	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.:	50.9ft	t								
Coc	ordinat	tes:	Nort	hing: 684	290.1,	Easting: 1217833.3	Sampling Method:	SPT									
t)	<u>o</u> .	эе	in.	sts								N-V	alue .	▲			
th, (f	le N	le Ty	\$ / 6	Tes	lodn	MATERIAL DESC	RIPTION			PL H		Мо	isture •	;		LL 	
Dept	Samp	Samp	Blows	Other	Syr				0	R	QD		50	Reco	over	y 🛛	∭ 100
- 05 -	S-13	X	16 20 36			Very dense, gray, silty fine SAND with fin non-plastic fines, laminated to massive.	ne gravel: moist to wet, (Drift). <i>(Continued)</i>							· · · · · · · · · · · · · · · · · · ·			
						Dense, gray, fine to medium SAND with homogenous. (Drift).	silt: wet, trace silt,		-					· · · · · · · · · · · · · · · · · · ·			
- 70 -	S-14		12 21														
			25			Bottom of Bor	ing.							· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
- 75 -														· · ·			
														· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
- 80 -																	
														· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
- 85 -																	
														· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
- 90 -																	
														· · · · · · · · · · · · · · · · · · ·			
- 95 -														· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
														· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
Cor Dat Dat Loc Dril	npletic e Bore e Bore Iged B ling Co	on D ehole ehole 3y: omp	epth: e Starte e Comp any:	ed: bleted:	71.5ft 10/5/1 10/5/1 C. Ma Holoce	5 Remarks: Mobile 5 145+55, 64' Rt. (S 5 this ene Drilling	B-61 drill rig. Location: S Sewer project SS-Alignm	TA 44+. ent).	24, 3	84' Lt	. (Br	idge p	orojec	t A-L	_ine)	, S1	Ā
P	aı		Ģ	E		LOG OF TEST BO	RING TH-4-B	R					F	-ia	ure	Α	-6

Pro Job	ject: Num	ber:	Thor 15-1	nton Stre	et Ove	ercrossing BNSF Railroad	Surface Elevation:	55.8ft	t			
Loc	ation	:	City	of Fernda	ale, Wa	ashington	Drilling Method:	ISA				
Coo	ordina	ates:	Nort	hing: 684 	403.4,	Easting: 1217377.5	Sampling Method:	SPT		N-Valı		
(ft)	N	ype	6 in.	ests	0				PL	Moist	ture	LL
pth,	ble	ple T	vs / (er Te	ymb	MATERIAL DESC	RIPTION		⊢—	•		-1
De	San	San	Blov	Oth	Ś.				RQD		Recove	ry 💹
- 0 -		+			aete	¬Asphalt 3 inches.			0	50)	100
			1			Loose, brown, silty, fine SAND: very moi sand, non-plastic fines, homogeneous, la	st, grading to fine to mediur aminated. (Outwash).	n	7//////////////////////////////////////		77777777777	
- 5 -	S-1	X	3 2									
- 10 -	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					Medium stiff to soft, brown to gray, silty, contact with sand, low plastic, scattered homogeneous, laminated, some rusty me	lean CLAY (CL): wet, sharp gravel and sand, ottles. (Bellingham Clay).	,				
- 15 -	S-3	\square	1 2			Grading low to medium plastic, no dilata	ncy, wet, massive.					
	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					Medium plastic (CL).						
			1			Hard, green gray, sandy SILT (ML) with	clay: moist, non-plastic to			<u>/////////////////////////////////////</u>	///////////////////////////////////////	
- 25 -	S-5	X	10 14 20	GS		slightly plastic, scattered fine gravel and with occasional sand seams. (Drift).	sand, homogeneous, mass	ive				
- 30 -	S-6	X	15 19 24			Silty fine SAND interbeds.						
Cor Dat Dat Log Dril	npleti e Bor e Bor Iged I ling C	ion D rehole rehole By: Comp	epth: e Starte e Comp any:	ed: oleted:	81.0ft 3/28/1 3/28/1 S. Eva Holoce	7 Remarks: Foremo 7 STA 139+55, 1' Lt 7 ans ene Drilling	ost B-58 drill rig. Location: S t. (Sewer project SS-Alignm	TA 3 ient).	99+55, 1' Lt. (B	ridge pi	roject A-Lir	ne),
P	ą	ņ	G	E		LOG OF TEST BO	RING TH-5-BR				Figur	e A-7

Pro Job Loc Coc	ject: Num ation: ordina	ber: tes:	Thor 15-1 City Nort	nton Stre 53 of Fernda hing: 684	et Ove ale, Wa 403.4,	ercrossing BNSF Railroad ashington Easting: 1217377.5	Surface Elevation: Top of Casing Elev.: Drilling Method: Sampling Method:	55.8ft HSA SPT				
(e	ċ	ts						N-Value	L	
ר, (ft	N N N	e Typ	/ 6 i	Test	lodi				PL	Moisture		
Depth	Sampl	Sample	Blows	Other	Sym	MATERIAL DESC	RIPTION		RQD	F	Recovery	
			ш						0	50	10	00
- 35 -	S-7	X	7 18 23			Dense, green gray, interbedded, clayey S SAND: wet, low plastic and no plastic wit gravel, fine bedded and laminated. (Old	SILT with sand and silty, h rapid dilatancy, scatter er Drift).	fine red				
			F			Medium dense, gray, silty, fine to coarse	SAND (SM) with gravel:	wet,		/		
- 40 -	S-8	X	15 11	GS		fines slightly to low plastic, fine bedded v (Older Drift).	with silty clay interbeds.					
- 45 -	45 - S-9 6 11 14					Grading to fine to coarse SAND with silt a indistinctly laminated.	and gravel, massive to					
- 50 -	$50 - S-10 \ge \frac{23}{50/4}$					Very dense, gray, fine to coarse SAND (graded, gravel sub-rounded to rounded, Drift). Heave, 6 inches.	SP) with gravel: wet, poo blocky, massive. (Older	orly				1./
			7			Grading to gravelly, fine to coarse SAND	. trace silt. multiple				<i></i>	
	S-11	X	18 50/6	GS		lithologies.	,				<i>//////</i> //////////////////////////////	Ý
- 60 -	S-12	X	15 50/3			Grading fine to coarse SAND with gravel	, trace silt.					
	65 7 Completion Depth:					Hard, green gray, sandy SILT (ML) with a scattered fine gravel, homogeneous, lam brown bands. (Older Drift).	clay: moist, low plastic, inated with some slightly	/	17.11.11.11.11.11.1			
Cor Dat Dat Log Dril	npleti e Bor e Bor ged E ling C	on D ehole ehole By: omp	epth: e Starte e Comp any:	eted:	81.0ft 3/28/1 3/28/1 S. Eva Holoce	Remarks: Foremo 7 STA 139+55, 1' Lt 7 Ins ene Drilling	st B-58 drill rig. Location . (Sewer project SS-Alig	nment).	9+55, 1' Lt. (B	ridge proje	ct A-Line),	
Γ	a		G	E		LOG OF TEST BO	RING TH-5-B	R		F	igure A-	.7

The stratification lines represent approximate boundaries. The transition may be gradual.

Pro Job Loc	ject: Number: ation:	Tho 15-1 City	rnton Stre 53 of Fernd	eet Ove ale, Wa	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.: Drilling Method:	55.8ft HSA			
Coo	ordinates:	Nort	hing: 684	403.4,	Easting: 1217377.5	Sampling Method:	SPT	1	NI \/_	
(Ħ)	Vo.	ü.	sts	_				PI	N-Value Moistu	e▲ re II
oth, (/ s/	er Te	/mpc	MATERIAL DESC	RIPTION			•	
Dep	Sam	Blow	Othe	ŝ					50	Recovery
- 65 -	S-13	21 22	GS		Hard, green gray, sandy SILT (ML) with scattered fine gravel, homogeneous, lan brown bands. (Older Drift). (<i>Continued</i>)	clay: moist, low plastic, inated with some slightly				
- 70 -	S-14	16 21	GS		Dense, green gray, silty, fine to medium with fine sand interbeds, non-plastic fine bed less than 3 inches thick. (Older Drif	SAND (SM): very moist, s, fine bedded and lamina;	 silt ated,			
		28								
- 75 -	S-15	18 23 30							}	
- 80 -	S-16	14 18 22			Hard, silt CLAY interbeds, low plastic, we	et, occasional gravel.				
		22			Bottom of Bor	ing.				
- 85 -										
- 90 -										
	5 -									
- 95 -										
Cor Dat Dat Log Dril	mpletion I e Boreho e Boreho ged By: ling Com	Depth: le Starte le Comp pany:	ed: oleted:	81.0ft 3/28/1 3/28/1 S. Eva Holoce	7 Remarks: Foremo 7 STA 139+55, 1' L' 7 ans ene Drilling	est B-58 drill rig. Location: . (Sewer project SS-Aligr	STA 3 nment).	9+55, 1' Lt. (E	Bridge pro	ject A-Line),
P	aņ	G			Figure A-7					

Pro Job	ject: Num'	ber:	Thor 15-1	nton Stre	et Ove	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.:	47.8ft	
Loc Coc	ation: ordina	ites:	City Nort	of Fernda hing: 684	ale, Wa 323.7,	ashington , Easting: 1217716.2	Drilling Method: Sampling Method:	Mud Rotary SPT	
		e	Ŀ.	ts			<u>.</u>	N-Valu	e 🔺
th, (ft	ole Nc	le Typ	s / 6 ii	r Test	lodm	MATERIAL DESC		PL Moiste	ure LL
Dept	Samp	Samp	Blows	Other	Syr			RQD	Recovery
- 0 -						Loose, brown, fine SAND with silt: wet, h grading gray. (Outwash).	iomogeneous, laminated,	, 0 50	
- 5 -	S-1		3 4 5						
						Soft, gray, silty, lean CLAY (CL): wet, low no-dilatancy, homogeneous, massive. (I	v to medium plastic, Bellingham Clay).		
	S-3	X	2 1 1	ATT		Massive to indistinctly laminated.			
- 20 -	S-4		1 2 1			Silty, lean CLAY.			
- 25 -	SH-2	:							//////////////////////////////////////
- 30 -	SH-3 SH-3 S-5 S-5 Completion Depth:					Gravel dropstones in sample tube. Silty, lean CLAY (CL), medium plastic, o	ccasional gravel.		
Cor Dat Dat Log Dril	npletic e Bore ged E ling C	on D ehole ehole 3y: comp	epth: e Starte e Comp pany:	ed: bleted:	91.5ft 3/29/1 3/29/1 S. Eva Holoc	7 Remarks: Foremo 7 STA 142+96, 70 7 ans ene Drilling	ıst B-58 drill rig. Location: Rt. (Sewer project SS-Ali	: STA 43+15, 18' Rt. (Bridge p gnment).	project A-Line),
P	ģ		G	E		LOG OF TEST BO	RING TH-6-B	R	Figure A-8

Pro Job Loc	ject: Num ation:	ber:	Thor 15-1 City	nton Stre 53 of Fernda	et Ove	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.: Drilling Method:	47.8ft Mud R	lotary			
		les.	NOT	1119. 664	323.7,	Easung. 1217710.2	Sampling Method.	581		N-Va	lue 🔺	
(ft)	Ň.	Lype	6 in.	ests					PL	Mois	sture	LL
pth,	nple	- ple	NS /	erT	ymb	MATERIAL DESC	RIPTION					—— I
De	Sar	Sar	Blo	Oth	S					-	Rec	overy
	S-6	X	1 2 1			Soft, gray, silty, lean CLAY (CL): wet, low no-dilatancy, homogeneous, massive. (I Massive, occasional gravel.	v to medium plastic, Bellingham Clay). <i>(Contir</i>	nued)				
 - 40 - 	S-7	X	2 4 7			Medium stiff, granitic gravel in tip. Very dense, green gray, silty, fine to med homogeneous, indistinctly laminated. (C	dium SAND (SM): very m Ilder Drift).	noist,				
- 45 -	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$											
- 50 -	50 - S-9 24 45 47					Indistinctly laminated to massive.						
- 55 -	S-10	X	21 31 45	GS		Hard, green gray, sandy SILT (ML) with in pockets and lenses, occasional gravel	clay: moist, low plastic, s , massive. (Older Drift).	and				
- 60 -	60 - S-11 S-11 S-11 S-11					Grading to clayey SILT: slightly to low pla	astic, occasional, massiv	'e.				
- 65 - Cor Dat Dat Log Dril	mpleti e Bor e Bor ged E ling C	on De ehole ehole By: ompa	epth: e Starte e Comp any:	ed: oleted:	91.5ft 3/29/1 3/29/1 S. Eva Holoco	7 Remarks: Foremo STA 142+96, 70' l ans ene Drilling	ost B-58 drill rig. Location Rt. (Sewer project SS-Ali	: STA 43 ignment)	3+15, 18' Rt.	(Bridge	project	A-Line),
Ľ	ä					LOG OF TEST BO		ĸ			Fig	ure A-8

Pro Job Loc Coc	ject: Numl ation: ordina	ber: tes:	Thor 15-1 City Nort	nton Stre 53 of Fernda hing: 684	et Ove ale, Wa 323.7,	ercrossing BNSF Railroad ashington Easting: 1217716.2	Surface Elevation: Top of Casing Elev.: Drilling Method: Sampling Method:	47.8ft Mud F SPT	Rotary				
ft)	lo.	be	.Ľ	sts	_				D	N-Valu	e 🔺		
oth, (I	ple N	ple Ty	's / 6	er Te	/mbo	MATERIAL DESC	RIPTION				ure	I	
Der	Sam	Sam	Blow	Othe	S					50	Recov	/ery	
- 65 -	S-12	X	16 31 46			Very dense and hard, green gray, interbe CLAY and fine to medium SAND: moist, gravel, finer/coarser sand beds 1 to 2 inc laminated, brown bands. (Older Drift). (0	edded clayey SILT to silty fines low plastic, occasio ches thick, trace silt, <i>Continued</i>)	y onal					
- 70 -	S-13	X	20 32 38			Very dense, green gray, silty, fine SAND with rapid dilatancy, homogeneous, indis occasional fine to medium layers. (Olde	(SM): wet, non-plastic fir tinctly laminated with r Drift).	nes					
	C 14		30	65		Grading to fine to medium SAND with sil	t, 2 inch interbeds of silty	fine					ŢŢŢŢ
	S-14	А	37 44	GS		sand and fine to medium sand.	· · · · ·						
			24										· · · · · · · · · · · · · · · · · · ·
	$\begin{array}{c c} S-15 \\ S-15 \\ - \\ S-16 \\ S-16 \\ - \\ S-16 \\ - \\ 31 \\ 31 \\ - \\ 31 \\ - \\ 31 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$					Grading to slity, fine SAND, wet, nornoge	enous, massive.						
- 85 -	S-16		23 31			Grading to fine SAND with silt, 2 inch silt	interbeds and pockets.						
			31										<u>////</u>
- 90 -	S-17		20 33 38			Silty, fine SAND, grading to sandy silt in dilatancy, massive.	tip, non-plastic, rapid						
						Bottom of Bor	ing.						
													· · · · · · · · · · · · · · · · · · ·
Cor Dat Dat Log Dril	npletio e Bore ged B ling C	on De ehole ehole By: ompa	epth: e Starte e Comp any:	ed: bleted:	91.5ft 3/29/1 3/29/1 S. Eva Holoce	Remarks: Forence 7 STA 142+96, 70 7 ans ene Drilling	ost B-58 drill rig. Location Rt. (Sewer project SS-Ali	: STA 4 gnment	3+15, 18' Rt.).	(Bridge	broject A	-Line),	<u> </u>
Ľ	ģi		G	E.		LOG OF TEST BO	RING TH-6-B	R			Fiqu	ire A	-8

Pro Job Loc	ject: Num ation:	ber:	Thor 15-1 City	nton Stre 53 of Fernda	eet Ove	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.: Drilling Method:	66.6ft			
Coc	ordina	ates:	Nort	hing: 684	399.9,	Easting: 1217057.2	Sampling Method:	SPT	N-V	alua 🔺	
(ft)	No.	ype	6 in.	ests	0				PL Mo	bisture	LL
pth,	nple	T ald	vs / (er To	ymb	MATERIAL DESC	RIPTION			•	1
De	San	San	Blo	Oth	ပ				RQD	Reco	very
- 0 -						Asphalt 3 inches.				50	100
					m	Brown SAND to sandy SILT ballast.					
						Loose, brown to gray SILT: wet, non-pla- sand, homogenous, laminate to massive	stic, rapid dilatancy, trace fi . (Loam).	ne			
- 5 -	S-1	\square	1 2								
		H	2								
						Soft, gray and brown, silty, lean CLAY (C dilatancy and no dilatancy layers, sandy bedded with color bands, shell fragments	CL): wet, low plastic, rapid lenses, laminated and fine s. (Bellingham Clay).				
- 10 -	S-2	\square	1 0	ATT							
		\square	3								
45											
- 15 -	S-3	\square	0 0 2	ATT		Low to medium plastic, occasional faint r	nottles, no dilatancy, massi	ve.			
		\square	2								
- 20 -	20 - 5 S-4 7 5 13 21					Dense, gray, very silty, fine SAND (SM): non-plastic, sandy zones, homogeneous	moist, occasional gravel, , massive. (Older Drift).				
- 20 -	S-4		5 13 21								
			21								
- 25 -			10						· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
	S-5	\square	16 35 32	GS		Grading very dense, fine sandy SILT to s laminated.	silty SAND, indistinctly				
- 30 -		H	20			Grading to SILT with fine sand, scattered	d coarse sand and fine grav	rel,		X////X/	
	S-6 24 43					massive.	ing				
Cor Dat Dat Log Drill	npleti e Bor e Bor ged E ling C	ion D rehole rehole By: comp	epth: e Starte e Comp any:	ed: pleted:	31.5ft 3/28/1 3/28/1 S. Eva Holoco	7 Remarks: Foremo 7 STA 136+35, 10' 7 drilling. ene Drilling	nig. ost B-58 drill rig. Location: S Rt. (Sewer project SS-Align	TA 3		ge project / observed	
P	ą		G	E		LOG OF TEST BOI	RING TH-7-RW	1		Figu	ure A-9

Pro Job	ject: Num	ber:	Thor 15-1	rnton Stre	et Ove	ercrossing BNSF Railroad	Surface Elevation: Top of Casing Elev.:	60.1ft				
Loc Coc	ation:	: ates:	City Nort	of Fernda	ale, Wa 415,9,	ashington Fasting: 1217200.5	Drilling Method: Sampling Method:	HSA SPT				
							Camping motions.	0		N-Value	•	
, (ft)	No No	Type	, 6 in	Fests	log				PL	Moistu	re	LL
epth	mple	mple	/ SMC	her	Sym	MATERIAL DESC	RIPTION					
	Sa	Sa	Blo	ð						50	Recovery	/ 20
- 0 -	-					Loose to medium dense, brown to green SAND and silty CLAY: very moist to wet, gravel, homogeneous, massive. (Loam)	gray, clayey, fine to medi low plastic fines, occasion	ium nal				
- 5	S-1	\square	0 4 6									
		\square	5									· · · · ·
- 10 -	-		13			Dense to very dense, gray, silty, fine SA fines, occasional fine gravel or coarse sa (Older Drift).	ND: moist, slightly plastic and, homogeneous, massi	ive.			<i></i>	
	S-2	Д	19 43									
	5 - S-3 18 37 41											
- 15	S-3	\mathbb{N}	18 37 41			Some gravel, occasional gravels weathe	red and broken.					
	$\begin{array}{c c} 5 \\ - \\ 8 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$					Grading green gray, non-plastic to slight	ly plastic fines.					
	S-5		15 15			Sample wet, water bearing interbeds, sa	mples generall moist to νε	ery				
	5 - S-5 15 22					<u>7</u>	a dus angola. 5.2.0.		///////////////////////////////////////		\	
- 30 -	S-6 14 S-6 41				Wet, water bearing, trace coarse sand a coarser beds.	nd fine gravel, finer and						
	41					Bottom of Bor	ing.	•				
Cor Dat Dat Log Dril	Completion Depth: Date Borehole Started: Date Borehole Complete Logged By: Drilling Company:				31.5ft 1/30/1 1/30/1 S. Eva Holoca	7 Remarks: Diedricl 7 137+78, 9' Lt. (Se 7 ans ene Drilling	n D 50 drill rig. Location: S wer project SS-Alignment	STA 37- .).	⊦78, 9' Lt. (Bri	dge proje	€ A-Line)	, STA
\Pr	aı	ņ	Ģ	E		LOG OF TEST BOI	RING TH-8-RV	N		F	igure	A-10



Pro Job Loc Coc	ject: Num ation: ordina	ber: tes:	Thor 16-3 Fern Nort	rnton Stre 10 Idale, Wa hing: 684	eet Sew ashingto	ver Project on Easting: 1217932	Surface Elevation: Top of Casing Elev.: Drilling Method: Sampling Method:	47.1ft HSA SPT							
	_		_:	6							N-V	/alue			
, (ft)	No	Type	6 ir	[est:	8				F	۳L	Мо	oistur	е	LL	
epth	mple	mple	WS /	ler]) Mul	MATERIAL DESC	RIPTION			i					77
ă	Sal	Sai	Blo	ð						RQD		50	Recove	ery 🖉	
- 0 -		+				Medium dense, brown, silty SAND with g	ravel. (Fill).		0			50			100
						Medium dense to very loose, brown, fine with silt: wet, poorly graded, occasional p	to medium SAND (SP-S beaty layer, occasional g	SM) ravel,							
						laminated, reddish mottles. (Alluvium).									
						7									
- 5 -		\mathbb{H}	2											1	
	S-1	M	7 8	GS								XI			
- 10 -		\square	0							<u>.</u>			<u> </u>		
	S-2	X	0												
		\square	0			Very sett groop group silty fot CLAV (CL	Nu voru moiot louvito mo	dium							
						plastic, no dilatancy, homogeneous, mas	sive but with some dark	er							
						layers. (Beilingnam Clay).									
- 15 -	-														
	S-3	M	0	ATT											
		H	0			Bottom of Bor	ing.								
	-						5								
00															
- 20 -															
- 25 -															
Cor	nnleti	ם on ח	enth.	I	16 54	Remarke: Diadrick	D 50 drill rig. Groundwa	ater mes			en hole	e follo	wina d	rilling	: :
Dat	e Bor	ehole	e Starte	ed:	1/30/1	7 Location: STA: 46	+90, 33' Lt. (Bridge proje	ect A-Lin	ne), S	TA 148	+24, 2	23' Lt.	(Sewe	r proje	ect
Log	ate Borehole Complete ogged By:				1/30/1 S. Eva	ins									
Dril	ling C	omp	any:		Holoce	ene Drilling									
~	21	n	(-	H		LOG OF TEST BOR	NG TH-10-S	WR							
1 N	C 0	RI	P O R									F	igure	• А-	12

Project: Job Number:		Thor 16-3	rnton Stre 310	et Sew	<i>i</i> er Project	Surface Elevation: Top of Casing Elev.:	47.8ft									
Location: Coordinates:			⊦en Nort	idale, vva hing: 68:	ishingto 3571, E	on asting: 1217882	Drilling Methoa: Sampling Method:	HSA SPT								
<u>.</u>		ð	<u>c</u>	ts			L		N-Value ▲							
h, (ft	le N	e Typ	/ 6	Tes	loqu	MATERIAL DESC	וארודחוסי		F	PL		Mois	ture		LL 	
Jept	amp	ampl	SMO	ther	Syn						n		R	~~~\/f		
	С,	S	B	0		·			0]		5	0	ecov.	"y E	<u>///</u> 100
- 0	Γ	ΤI		Γ		Medium dense, brown SAND and GRAV	EL. (Road Fill).									
	1				¥	, Loose, brown, fine to coarse SAND (SP): wet, poorly graded, - occasional gravel, homogeneous, massive. (Alluvium).										
- 5 -	-		Л						·////		·////,		·////,	 		<u> </u>
	S-1	X	4 5	GS												
			5			Very soft green gray silty fat CLAY (CL	Vanuaaft groop grou ailty fat CLAV (CH) you maint low to madium				<u>/////</u>		<u>//////</u>			1: :
						plastic, no dilatancy, homogeneous, massive. (Bellingham Clay).										
- 10 -	_	$\left \right $	1		т	Brown, possibly organic lenses, white grains in tip, possible shell fragments.						· /////				::::::::::::::::::::::::::::::::::::::
	S-2	X	0	ATT				4			//////////////////////////////////////					
	_	\square														
	_		0			Very loose, green gray, fine to coarse S	AND: wet, homogeneous	,								
- 15 -		\mathbb{H}				laminated. (Outwash).						7////				1777),
	S-3	Д	0 0			Very soft, green gray, silty CLAY: very m massive. (Bellingham Clay).	ioist, low to medium plas	tic,								
						Bottom of Bor	ring.	/								
- 20 -	-															
 	-															
- 25 -																÷
Cor Dat Dat	mpleti te Bor	ion D rehole	epth: e Starte	ed:	16.5ft 1/30/1 1/30/1	Remarks: Diedric 7 Location: STA 15	h D 50 drill rig. Groundwa 2+78, 4' Rt. (Sewer proje	ater mea ct SS-A	asureo	d in o ent).	pen l	nole f	ollow	ing dr	illing	<u></u> -
Log	Jged E	By:	· · · · · · · · · · · · · · · · · · ·	notea.	S. Eva											
Ľ	Figure A-13															

Project: Job Number: Location: Coordinates:		Thornton Street Sewer ProjectSurface Elevation:42.216-310Top of Casing Elev.:Ferndale, WashingtonDrilling Method:HSANorthing: 683048.3, Easting: 1217837.9Sampling Method:SPT					42.2ft HSA SPT	t							
	, No.		_:	6			1			N-Value 🔺					
(ft)		Type	6 in	esta					PL	Moist	Moisture		LL		
nple			NS /	erT	, Amb	MATERIAL DESC	CRIPTION			•			1		
Ď	Sar	Sar	Blo	oth	S S			RQD) R		Recovery				
- 0 -		+		Sandy gravel to 1.5 feet, becoming yellow silt. (Fill).					0	50			100		
						Very soft, gray, silty, fat CLAY (CH): very moist, low to medium plastic, no dilatancy, homogeneous, massive, (Bellingham Clay).		lastic,							
	S-1					Becoming green gray.									
- 5 -		\square	0		Г										
		X	0 0					4							
		\square													
- 10 -			0								· · · · · · · · · · · · · · · · · · ·				
		X	0 0	ATT											
		Ħ											<u>//////</u>		
			0 0									· · · ·			
- 15 -															
15		М				Very moist to wet.									
		A	0			Bottom of Bor	ing								
	-														
- 20 -															
	-														
													· · · ·		
- 25 -	-														
Completion Depth: Date Borehole Started: Date Borehole Completed: Logged By:					16.5ft 1/30/1 1/30/1 S. Eva	7 Remarks: Diedric 7 STA 158+04, 9' R 7 ns	h D 50 drill rig. No flowing tt. (Sewer project SS-Alig	g ground Inment).	dwater observ	ved in bo	ring. Lo	ocatio	<u>: : :</u> n:		
\mathbf{P}			Ģ	E		LOG OF TEST BOR	ING TH-12-S	WR			Figu	re A	\-14		
Pro Job Loc Coc	ject: Num ation: ordina	ber: ites:	Thor 16-3 Fern Nort	nton Stre 10 Idale, Wa hing: 682	eet Sev shingto 482.5,	ver Project on Easting: 1217592.5	Surface Elevation: Top of Casing Elev.: Drilling Method: Sampling Method:	42.6ft HSA SPT							
-----------------------------------	---	---------------------------------------	-------------------------------------	---	--	---	--	----------------------	----	---------------------	---------	---------	---------------------		
(e	Ŀ.	ts						N-Valu	ie 🔺				
n, (ft	N N N	e Typ	/ 6 i	Tes	lodi				PL	Moist	ure		LL -I		
eptl	dmg	ample	ows	ther	Syn	WATERIAL DESC	RIPTION			-	De				
	လိ	ů	Ē	ō						50	Re	covery	100		
- 0 -	S-1	X	2 5	65		Medium stiff, brown, silty, fine SAND (SM non-plastic to slightly plastic, laminated, (Alluvium).	/) with fine organics: moi wet sand lens at 6.4 feet	st,							
			6			Soft to medium stiff, green gray, silty, lea moist, low to medium plastic, no dilatanc homogeneous, massive. (Bellingham Cl	an CLAY (CL): moist to ve y, scattered sand and gra ay).	ery avel,							
- 10 -	S-2	X	2 1 3	ATT											
- 15 -	S-3		0 2 3												
						Bottom of Bor	ing.								
- 20 -															
- 25 -															
Cor Dat Dat Log Drill	mpleti e Bor e Bor ged E ling C	on D ehole ehole By: comp	epth: e Starte e Comp any:		16.5ft 1/30/1 1/30/1 S. Eva Holoce	7 7 7 ans ene Drilling LOG OF TEST BOR	n D 50 drill rig. No flowing Lt. (Sewer project SS-Ali ING TH-13-SV	g ground gnment)	l	: : : ed in bo	ring. I	Locatio	<u>: : :</u> on:		
.											Figu	ure /	4-1 :		

APPENDIX B

LABORATORY TEST RESULTS

September 6, 2017 Project No. 16-310

APPENDIX B: LABORATORY TEST RESULTS

This appendix contains descriptions of the procedures and results of physical (geotechnical) laboratory testing conducted on soil samples retained during the field explorations for the Thornton Street sewer project in Ferndale, Washington. The methodology of the soil sampling from the borings is described in Appendix A. The samples were tested to determine basic physical index properties of the soils for purposes of classifying the material types encountered and to measure or correlate parameters used in the geotechnical design. Select samples collected in thin-walled Shelby tubes were also tested for compressibility characteristics in a one-dimensional oedometer.

Laboratory testing was performed in general accordance with the following ASTM Standard Test Methods (STM):

D 2216	STM for Laboratory Determination of Water (Moisture) Content of Soil and Rock
D 422	STM for Particle-Size Analysis of Soils
D 4318	STM for the Liquid Limit, Plastic Limit and Plasticity of Soils (Atterberg Limits)
D 2435	STM One-Dimensional Consolidation Properties of Soils

Moisture contents are shown on the logs of the test borings in Appendix A.

Grain size results are shown on Figures B-1 through B-3. Atterberg Limit test results are shown on Figure B-4. The results of the consolidation testing are also included in Appendix B.



5/8/17 GDT PANGEO 15-153 LOGS.GPJ SI7F GRAIN



PANGEO d C C C C 15-153 SI7F GRAIN





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Project:BNSF Overpass Thornton St.oject #:15T013Date Received:Officit:PanGeoSampled By:Client:PanGeoDate Tested:Source:TH-3 SH-1 @ 27.5'Date Tested:OTC ID:T15-1462Tested By:			One-Dimensional Consolidation performed in accordance with ASTM D2435/D2435 Sample Description Gray Silt Equipment Used						
				GeoTac Sigm	a-1 Load Fram	e			
				Come L. D					
	Initial	Moisture Cont	ent, %	20.2%	Final	Moisture Cont	tent, %	16.1%	Т
	Initial I	Dry Unit Weigh	it, lb/ft'	104.9	Final 1	Dry Unit Weigl	ht, lb/ft'	118.5]
	Ir	nitial Void Rati	0	0.55		Final Void Rat	io	0.38	4
	L1	indai Saturatio		70.170	1	i mai Saturallo	/11	104.470	T
				Test	Data	1			· · · · · · · · · · · · · · · · · · ·
Load, psf	Strain Ratio	D_0	D ₅₀	D ₁₀₀	$D_{\rm f}$	t _{50 (min)}	Sample Ht	Drainage	C _v (ft ² /day)
500	0.01%	0.0000	0.0002	0.0004	0.0000		0.8999	0.4500	#N/A
1,000	0.93%	0.0000	0.0046	0.0091	0.8999	0.00	0.0000	0.0000	#N/A
2,000	2.40%	0.8999	-0.4385	0.023	0.0145	0.81	0.8854	0.4427	0.048
4,000	4.26%	0.0145	0.0130	0.0405	0.0299	0.81	0.8700	0.4350	0.046
8,000	6.23%	0.0299	0.0146	0.059	0.0465	0.81	0.8534	0.4267	0.044
16,000	8.21%	0.0465	0.0159	0.0782	0.0667	0.36	0.8332	0.4166	0.095
64,000	12 52%	0.0007	0.0105	0.0993	0.0833	0.25	0.7974	0.4085	0.125
16 000	12.09%	0.0055	0.0175	0.1222	0.1025	0.23	0.1714	0.3707	0.125
4,000	11.49%		-						
1,000	10.29%					1			
Calculations The followin	: ng equation was u Where:	used to calculat T = The time $H_{D50} = The$	e the values sl factor for 509 length of the o	hown in the tabl 6 consolidation, drainage path at	e above: C _v : provided as 0 50% of prima	= TH _{D50} ² /t ₅₀ .197 (per ASTI ry consolidatio	M D2435). n (double drain	age path).	
For the vo	id ratio and satura	$t_{50} =$ The tin	ne correspond	cific gravity of	rimary consoli 2.70 was used.	dation.			
<u> </u>									J

Comments:

HBarn

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Load, psf Void Ratio

500	0.553
1000	0.537
2000	0.512
4000	0.479
8000	0.445
16000	0.411
32000	0.376
64000	0.337
16000	0.344
4000	0.355
1000	0.375

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oject: BNSF Overp	ass Thornton St.	ate Received.	07/31/15	One-Dimensio	onal Consolid	lation perforn	ned in accorda	nce with AST	TM D2435/D24	
Client: PanGeo	2	Sampled By:	Client	Sample Descri	ption					
ource: TH-3a SH-2a	a @ 17.5'	Date Tested:	08/10/15	Gray Silt						
°C ID: T15-1463		Tested By:	CL	Equipment Us	ed					
				GeoTac Sigma-	-1 Load Fram	e				
				Gamerala Da						
	Initial	Moisture Cont	ant %	20.6%	Final	Moisture Con	ont %	10.5%	Т	
	Initial I	Dry Unit Weigh	t. lb/ft ³	91.8	Final I	Dry Unit Weigl	nt, lb/ft	114.2	+	
	Ir	nitial Void Rati	0	0.46]	Final Void Rat	io	0.32	1	
	b	nitial Saturation	n	95.4%		Final Saturatio	n	111.9%	1	
									_	
		Void Ratio								
				Test I	Data					
T 1 0	Studie Devid	P	P				0	Drainage	G (C ²):	
Load, psf	Strain Ratio	D_0	D_{50}	D ₁₀₀	Df	t _{50 (min)}	Sample Ht	Path	C_v (ft ⁻ /day)	
500	0.01%	0.0000	0.0001	0.0001	0.0000		0.8999	0.4500	#N/A	
1,000	1.61%	0.0000	0.0076	0.0152	0.0070	2.89	0.8929	0.4465	0.014	
2,000	2.56%	0.0070	0.0087	0.0244	0.0187	3.24	0.8812	0.4406	0.012	
4,000	5.99%	0.0187	0.0187	0.036	0.0409	4.41	0.8352	0.4295	0.008	
16,000	13 62%	0.0409	0.0192	0.115701257	0.0047	2.89	0.8552	0.4170	0.019	
32.000	16.99%	0.1043	0.0233	0.147719784	0.1368	2.35	0.7631	0.3815	0.012	
64,000	21.37%	0.1368	0.0231	0.183019784	0.1766	1.44	0.7233	0.3616	0.018	
16,000	20.68%									
4,000	19.47%									
1,000	17.67%									
Calculations:						<u> </u>	L			
The followin	g equation was u	sed to calculate	e the values sl	hown in the table	above: C _v =	$= TH_{D50}^{2}/t_{50}$				
	Where:	T = The time	factor for 50%	6 consolidation, p	provided as 0.	.197 (per ASTI	M D2435).			
		$n_{D50} = 1 \text{ ne}$	e correspond	ling to 50% of pri	imary consoli	ry consolidatio	ii (double drain	age pain).		
		$t_{50} = 110$ m	ie correspond	ang to 50% of ph	inary conson	Gution.				
	For the void ratio and saturation values, an assumed specific gravity of 2.70 was used									
For the voi	a rano ana satura									
For the voie										
For the voi										
For the voi										
For the voi										
For the voi										
For the voi										

Comments:

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Load, psf	Void Ratio
500	0.775
1000	0.743
2000	0.724
4000	0.657
8000	0.607
16000	0.506
32000	0.440
64000	0.353
16000	0.367
4000	0.391
1000	0.426

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ject: <mark>BNSF O</mark>	verpass Thornton S	t.		One-Dimensi	ional Consolid	lation perform	ned in accorda	nce with AST	M D2435/D2435
ct #: 15T013		Date Received:	10/12/15	George D					
ent: PanGeo	I 1. 11 5'	Sampled By:	Client	Sample Desc	ription				
le#• T15-230	3	Tested By	CL	Equipment I	Ised				
115-250		Testeu Dy.		GeoTac Sigm	a-1 Load Fram	e			
				George Signi	a i Loud i fuili	0			
				Sample P	arameters				-
	Initia	l Moisture Cont	ent, %	60.7%	Final	Moisture Con	tent, %	48.3%	
	Initial	Dry Unit Weigh	nt, lb/ft	61.8	Final I	Dry Unit Weig	ht, lb/ft	78.1	
		Initial Void Rati	10	1.52		Final Void Rat	10	1.04	ļ.
	These volues	are calculated f	II om the initial	yy.3%	tore using a cr	rmai Saturatio	of 2.50	100.5%	l
	These values	are calculated II	om me mitiai	sample parame	wis, using a sp	Senie gravity			
			1	Test	Data		1		· · · · · · · · · · · · · · · · · · ·
Load,	psf Strain Ratio	D_0	D ₅₀	D_{100}	$D_{\rm f}$	t _{90 (min)}	Sample Ht	Drainage	$C_v (in^2/s)$
250	0.020/	0.0000	0.0044	0.0087	0.0104		0.8806	Path 0.4448	
500	2.14%	0.0104	0.0044	0.0211	0.0089	0.81	0.8807	0.4404	0.00009
1,00	0 3.24%	0.0089	0.0118	0.0324	0.0188	0.49	0.8708	0.4354	0.00019
2,00	0 5.97%	0.0188	0.0207	0.0602	0.0433	4.00	0.8463	0.4232	0.00012
4,00	0 12.20%	0.0433	0.0379	0.1190	0.0994	5.29	0.7902	0.3951	0.00010
8,00	0 19.04%	0.0994	0.0419	0.1832	0.1610	4.00	0.7286	0.3643	0.00005
2,00	17.37%	0.1610	0.0024	0.1657	0.1459	12.25	0.7437	0.3719	N/A N/A
500	0.00%	0.1459	0.0003	0.1405	0.1291	0.70	0.7605	0.3803	IN/A
0	0.00%			1					
0	0.00%								
Calculati	ons:]
The follo	wing equation was	used to calculat	e the values sl	nown in the tabl	e above: $C_v =$	$= TH_{D50}^{2}/t_{90}$			
	-					-			
	Where:	T = The time $H_{per} = The$	factor for 90%	6 consolidation,	provided as 0.	848 (per AST)	M D2435). n (double drain	age nath)	
		$t_{90} =$ The tin	ne correspond	ing to 50% of p	rimary consoli	dation.	(asubie didili	-o. P).	
			•	- 1	-				
For the	void ratio and satu	ration values, ar	n assumed spe	cific gravity of	2.65 was used.				

Comments:

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HBa Reviewed by:

Regional Offices: Olympia ~ 360.534.9777

Corporate ~ 777 Chrysler Drive • Burlington, WA 98233 • Phone (360) 755-1990 • Fax (360) 755-1980 Bellingham ~ 360.647.6111 Silverdale ~ 360.698.6787 Tukwila ~ 206.241.1974 Visit our website: www.mtc-inc.net

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Load, psf	Void Ratio
250	1.388
500	1.356
1000	1.326
2000	1.253
4000	1.086
8000	0.903
2000	0.947
500	0.998

These values calculated from the incremental loading data.

All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Comments:

HBarns

Reviewed by:

Corporate ~ 777 Cl

Regional Offices: Olympia ~ 360.534.9777

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ect: BNSF Overpa	ass Thornton St.			One-Dimensi	onal Consolid	lation perform	ned in accorda	nce with AST	M D2435/D243
t #: 15T013	D	ate Received:	10/12/15						
ent: PanGeo	16.51	Sampled By:	Client	Sample Descr	ription				
ce: 1H-4, SH-2;	16.5	Date Tested:	10/19/15 CI	Gray Clay	lead				
icπ. 11 <i>3</i> -2304		resieu by:	CL	GeoTac Sigm	a-1 Load From	e			
				Scorac Sigili	a - i Loau I I dill				
				Sample Pa	arameters				
	Initial	Moisture Cont	ent, %	61.4%	Final	Moisture Con	tent, %	47.8%	I
	Initial D	ry Unit Weigh	it, lb/ft	60.4	Final I	Dry Unit Weig	ht, lb/ft'	75.4	ļ
	In	itial Void Rati	0	1.74]	Final Void Rat	io	1.19	ļ
	L Ir	nitial Saturation	n	103.1%		Final Saturatio	n	101.1%	I
	these values ar	e calculated fr	om the initial	sample parame	ters, using a sp	ecific gravity	01 2.65.		
				Test	Data				
Load nef	Strain Ratio	D.	Dro	Diag	D,	too	Sample Ht	Drainage	$C_{(in^{2}/s)}$
Load, psi		D ₀	D 50	D 100	D _f	490 (min)	Sample III	Path	$C_v (m/s)$
250	0.60%	0.0000	0.0030	0.0060	0.0104	0.91	0.8896	0.4448	0.00015
1 000	1./1%	0.0104	0.0040	0.0185	0.0050	0.81	0.8728	0.4423	0.00015
2.000	5.27%	0.0050	0.0140	0.0350	0.0108	4 00	0.8526	0.4304	0.00018
4,000	13.70%	0.0370	0.0344	0.1059	0.1129	5.29	0.7767	0.3884	0.00004
8,000	22.11%	0.1129	0.0362	0.1853	0.1886	4.00	0.7010	0.3505	0.00005
2,000	20.12%	0.1886	-0.0115	0.1657	0.1707	12.25	0.7189	0.3595	N/A
	╂────┤								
L	II								
Calculations:]
The following	equation was u	sed to calculate	e the values s	hown in the tabl	e above: C	$= TH_{D50}^2/t_{00}$			
The following	, equation was a	sea to calculat	e ale values si	is in in the tabl	ε πουτέ. Ογ	***D20 / 490			
	Where:	T = The time	factor for 90%	6 consolidation,	provided as 0.	.848 (per ASTI	M D2435).		
		$H_{D50} = The$	length of the	drainage path at	50% of prima	ry consolidatio	n (double drain	age path).	
		$t_{90} =$ The tin	ne correspond	ling to 50% of p	rimary consoli	dation.			
Eastha at	1	4) <i>(E</i>				
For the void	i ratio and satura	uon values, ar	assumed spe	ecific gravity of 2	2.05 was used.				
L									

Comments: We had a power failure at the end of the test and lost the final unload data for 500 psf.

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Comments: We had a power failure at the end of the test and lost the data for the final unload data point at 500 psf.

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Load, psf	Void Ratio
250	1.806
500	1.771
1000	1.730
2000	1.659
4000	1.395
8000	1.131
2000	1.193

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Comments: We had a power failure at the end of the test and lost the data for the final unload data point at 500 psf

HBarns ____

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Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Project:	Thorton Street Overpass	Date Received:	March 30, 2017
Project #:	17T002-03	Sampled By:	Client
Client:	PanGEO, Inc.	Date Tested:	April 12, 2017
Source:	Boring # TH-6-BR / Sample # SH-3	Tested By:	B. Goble & M. Tecle
MTC Sample #:	T17-0492	-	

			-	
Load, psf	Strain	Void Ratio	t ₅₀ , min	C _{v,} ft²/day
100	0.00	0.61	0.00	N/A
200	0.86	0.60	0.16	2.48
400	2.47	0.57	0.25	1.55
800	3.80	0.55	3.06	0.12
1600	5.58	0.51	9.61	0.04
3200	6.91	0.49	2.25	0.16
6400	9.58	0.44	9.00	0.04
12800	11.69	0.40	2.56	0.13
25600	14.13	0.36	2.56	0.12
6400	13.87	0.37		
1600	13.16	0.38		
400	11.89	0.40		
100	11.04	0.42		

Test	Summary
------	---------

	Initial	Final
Moisture Content, %	24.6	18.8
Wet Density, pcf	39.3	139.2
Dry Density, pcf	31.6	117.2

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Comments:

Reviewed by: M. Tecle

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Project: Thorton Street Overpass	Date Received: March 30, 2017
Project #: 17T002-03	Sampled By: Client
Client: PanGEO, Inc.	Date Tested: April 12, 2017
Source: Boring # TH-6-BR / Sample # SH-3	Tested By: B. Goble & M. Tecle
MTC Sample #: T17-0492	



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Comments:

Reviewed by: M. Tecle

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Comments:

Reviewed by: M. Tecle

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Project:	Thorton Street Overpass	Date Received:	March 30, 2017
Project #:	17T002-03	Sampled By:	Client
Client:	PanGEO, Inc.	Date Tested:	April 26, 2017
Source:	Boring # TH-6-BR / Sample # SH-3	Tested By:	B. Goble
MTC Sample #:	T17-0500		

			-	
Load, psf	Strain	Void Ratio	t ₅₀ , min	C _{v,} ft²/day
100	0.00	0.68	0.00	N/A
200	1.02	0.66	1.00	0.40
400	1.69	0.65	0.72	0.54
800	3.19	0.62	0.25	1.52
1600	5.43	0.58	0.16	2.29
3200	7.25	0.54	0.04	8.82
6400	9.58	0.50	4.64	0.07
12800	11.80	0.46	0.04	8.02
25600	14.56	0.41	1.51	0.20
6400	14.20	0.41		

Test Summary

	Initial	Final
Moisture Content, %	26.6	19.0
Wet Density, pcf	74.4	137.8
Dry Density, pcf	58.8	115.9

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Comments:

Reviewed by: M. Tecle

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting

Project: Thorton Street Overpass	Date Received: March 30, 2017
Project #: 17T002-03	Sampled By: Client
Client: PanGEO, Inc.	Date Tested: April 26, 2017
Source: Boring # TH-6-BR / Sample # SH-3	Tested By: B. Goble
MTC Sample #: T17-0500	



All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. Consolidation testing was performed on a GeoTac, Inc. automated consolidation test system. Preliminary data reduction is performed by the proprietary software that runs the test. Additional data reduction is performed by MTC personnel using this data.

Comments:

Reviewed by: M. Tecle

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Comments:

Reviewed by: M. Tecle

APPENDIX C – GROUNDWATER ELEVATION READINGS (This Page Intentionally Left Blank)

	The second secon		Fendale Terrace				Peridale Peridale	inthe second secon	off R	Thornton Road Thornton Road 55 Monitoring Well 55 Monitoring Well 55 Monitoring Well 55 Monitoring Well 56 Monitoring Well 66 Monitoring Well 66 Monitoring Well 66 Monitoring Well 67 Monitoring Well 68 Monitoring Well 71 1000000000000000000000000000000000000	
ation		Groundwater Elevation	48.34	46.51	46.18	46.09	46.09	45.84	45.84		
Groundwater Elev Thornton Road	53.59 53.59	Measurement from Ground Surface	5.25	7.08	7.41	7.50	7.50	7.75	7.75		
Monitoring Well	Ground Surface Elev. Top of Pipe Elev.	Date	12-Jul-17	28-Jul-17	11-Aug-17	18-Aug-17	25-Aug-17	1-Sep-17	7-Sep-17		

APPENDIX D – NPDES PERMIT

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Instructions for Transfer of Coverage

Construction Stormwater General Permit

Instructions

This form is used to process two types of permit transfers: 1) Complete Transfer, or 2) Partial Transfer. Determine which type of transfer applies to your situation before filling out this form.

1. Complete Transfer: The original permittee has sold, or otherwise released control of the entire site to another party.

Required Paperwork for Complete Transfer:

• Either the current permittee, or the new permittee(s), must submit a complete and accurate Transfer of Coverage form to Ecology for each new party. The form must be signed by the current permittee *and* the new permittee.

2. Partial Transfer: The original permittee retains control over some portion of the site after selling or releasing control over a portion of the site.

Required Paperwork for Partial Transfer

- Either the current permittee or the new permittee(s) must submit a complete and accurate Transfer of Coverage Form for each new operator to Ecology. The form must be signed by the current permittee and the new permittee.
- For partial transfers, once all transfers are submitted, the original permittee should submit the Notice of Termination only if the portion(s) they still own or control have undergone final stabilization and meet the criteria for termination.

For Your Information

- When this form is 1) completed, 2) signed by the current and new permittee, and 3) submitted to Ecology, permit transfers are effective on the date specified at the top of page 1 (unless Ecology notifies the current permittee and new permittee of its intention to revoke coverage under the General Permit or if Ecology sends notice that the application is incomplete). If no date for the transfer of coverage is specified, Ecology will use the date of the last signature.
- The new permittee should keep a copy of the signed Transfer of Coverage form (which serves as proof of permit coverage) until Ecology sends documentation in the mail.
- Following the transfer, the new permittee must either: (1) use the Stormwater Pollution Prevention Plan (SWPPP) developed by the original operator, and modified as necessary, or (2) develop and use a new SWPPP that meets the requirements of the Construction Stormwater General Permit.
- For projects for which the original permittee has completed a Proposed New Discharge to an Impaired Waterbody Form (ECY 070-399), or for projects that are operating on sites with soil or groundwater contamination: By completing the Transfer of Coverage form, the new permittee will adopt any special provisions made to protect water quality for sites that have existing contamination or that discharge to an impaired waterbody.

To request ADA accommodation including materials in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call 877-833-6341.

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		_						
	Transfer of Coverag	je Per	mit # WAR _					
Const	Construction Stormwater General Permit							
DEPARTMENT OF ECOLOGY State of WashingtonThis form transfers permit coverage for all, or a portion of a site to one or more new operators.								
Type of permit transfer (check	one): 🗌 Partial transfer	Complete trans	fer					
Specific date that permit respo *If no date is indicated Ecology	nsibility, coverage, and liability is will use date of last signature	s transferred to new op	perator:					
Please see instructions for details	s on type of transfer.							
	Current Operator/P	ermittee Informa	tion					
For partial transfers: •List <i>total size of project/site</i> re •List <i>total area of soil disturbar</i> •Submitting this form meets the r	maining under your operational con ace remaining under your operation requirement to submit an updated N	trol following transfer: _ al control following trans OI (General Permit Con	acres. sfer: acres dition G9)					
Current Operator/Permittee Name: Company:								
Business Phone:	Ext:	Mailing Address:						
Cell Phone: Fax (optional):								
Email:		City:	State:	Zip+4:				
Signature* (see signatory requirements in Section VIII): Title:								
			Da	ate:				
	New Operator/Per	mittee Informatio	n					
I. New Operator/Permittee (Part which ensure compliance with Sta and permit fee invoices to the per	y with operational control over plans ormwater Pollution Prevention Plan rmittee on record.)	s and specifications or d (SWPPP) and permit co	ay-to-day operation onditions. Ecology v	nal control of activities will send correspondence				
Name:		Company:						
Business Phone:	Ext:	Unified Business Ident (UBI is a nine-digit nur Write "none" if you o	tifier (UBI): mber used to identi lo not have a UBI	fy a business entity. number .)				
Cell Phone (Optional):	Fax (Optional):	E-mail:						
Mailing Address:		City:	State:	Zip + 4:				
II. Property Owner (The party lis is requested. Ecology will <i>not</i> ser be used for emergency contact p	I. Property Owner (The party listed on the County Assessor's records as owner and taxpayer of the parcel[s] for which permit coverage is requested. Ecology will <i>not</i> send correspondence and permit fee invoices to the Property Owner. The Property Owner information will be used for emergency contact purposes.)							
Name:		Company:						
Business Phone:	Ext:	Unified Business Ident (UBI is a nine-digit nur Write "none" if you d	tifier (UBI): mber used to identi Io not have a UBI	fy a business entity. number .)				
Cell Phone (Optional)	Fax (Optional):	F-mail:						

Mailing Address:	City:	State:	Zip + 4:

III. On-Site Contact Person(s) (Typically the Certified Erosior	and Sediment Contro	Lead or Operator/Pe	ermittee)	
Name:		Company:			
Business Phone:	Ext:	Mailing Addres	Mailing Address:		
Cell Phone:	Fax(Optional):	City:	State:	Zip+4:	
Email:					
IV. Site/Project Information					
Site or Project Name		Site Acreage	project (that you on	un/control):	
Street Address or Location Description (<i>If the site lacks a street address, list its specific location. For example, Intersection of Highway 61 and 34.</i>)		Total size of your site/project (that you own/control):acres. (<i>Note: 1 acre = 43,560 ft</i> ² .) Total area of soil disturbance for your site/project over the life of the project:acres. Include grading, equipment staging, excavation, borrow pit, material storage areas, dump areas, haul			
Parcel ID#: Type of Construction Activity (che	roads, side-cast area other soil disturbance acre = 43,560 ft ²)	as, off-site constructic e acreage associated	on support areas, and all I with the project. (Note: 1		
 Residential Commercial Industrial Highway or Road (city ,county, state) Utilities (specify):					
City (or nearest city):	Zip Code:	Estimated project start-up date (mm/dd/yy):			
County:		Estimated project completion date (mm/dd/yy):			
Record the latitude and longitude	of the main entrance to the s	ite or the approximate	center of site.		
Latitude:	°N	Longitude:		°W	
V. Existing Site Conditions					
1. Are you aware of contamina	ted soils present on the site?	🗌 Yes 🗌 No			
2. Are you aware of groundwa	ter contamination located with	nin the site boundary?	🗌 Yes 🗌 No		
3. If you answered yes to ques discharged due to the proposition of th	tions 1 or 2, will any contamir sed construction activity?	nated soils be disturbed] Yes 🗌 No	d or will any contamir	nated groundwater be	
("Contaminated" and "contaminat occur naturally or occurs at great	("Contaminated" and "contamination" here mean containing any hazardous substance (as defined in WAC 173-340-200) that does not occur naturally or occurs at greater than natural background levels.)				
If you answered yes to Question and extent of the contamination (Management Practices (BMPs) p include information that would be contaminated and potentially con	3, please provide detailed info concentrations, locations, and roposed to control the discha included in related portions o taminated construction storm	ormation with the NOI (d depth), as well as pol rge of soil and/or grour of the Stormwater Pollu water and dewatering v	as known and readil lution prevention and ndwater contaminant tion Prevention Plan water will be manage	y available) on the natures l/or treatment Best s in stormwater. This should (SWPPP) that describe how d.	

VI. WQWebDMR (Electronic Discharge Monitoring Reporting)

You must submit monthly discharge monitoring reports using Ecology's WQWebDMR system. To sign up for WQWebDMR, or to register a new site, go to http://www.ecy.wa.gov/programs/wq/permits/paris/portal.html. If you are unable to submit your DMRs electronically, you may contact Ecology to request a waiver. Ecology will generally only grant waiver requests to those permittees without internet access. Only a permittee or representative, designated in writing, may request access to or a waiver from WQWebDMR. To have the ability to use the system immediately, you must submit the Electronic Signature Agreement with your transfer of coverage form. If you have questions on this process, contact Ecology's WQWebDMR staff at webDMRPortal@ecy.wa.gov or 800/633-6193 or 360-407-7097 (local).

VII. Discharge/Receiving Water Information

Indicate whether your site's stormwater and/or dewatering water could enter surface waters, directly and/or indirectly:

Water will discharge directly or indirectly (through a storm drain system or roadside ditch) into one or more surface waterbodies (wetlands, creeks, lakes, and all other surface waters and water courses).

If your discharge is to a storm sewer system, provide the name of the operator of the storm sewer system:

(e.g., City of Tacoma): _

Water will discharge to ground with 100% infiltration, with no potential to reach surface waters under any conditions.

If your project includes dewatering, you **must** include dewatering plans and discharge locations in your site Stormwater Pollution Prevention Plan.

Location of Outfall into Surface Waterbody

Enter the outfall identifier code, waterbody name, and latitude/longitude of the point(s) where the site has the potential to discharge into a waterbody (the outfall). Enter all locations. See illustration of Surface Waterbody Outfall locations at the end of this form.

- Include the names and locations of both direct and indirect discharges to surface waterbodies, even if the risk of discharge is low or limited to periods of extreme weather. Attach a separate list if necessary.
- Give each point a unique 1-4 digit alpha numeric code. This code will be used for identifying these points in WQWebDMR.
- Some large construction projects (for example, subdivisions, roads, or pipelines) may discharge into several waterbodies.
- If the creek or tributary is unnamed, use a format such as "unnamed tributary to Deschutes River."
- If the site discharges to a stormwater conveyance system that in turn flows to a surface waterbody, include the surface waterbody name and location.

Outfall Identifier Code. These cannot be symbols. (Maximum of 4 characters).		Surface Waterbody Name at the Outfall	Latitude Decimal Degrees	Longitude Decimal Degrees	
Example	e: 001A		Example: Puget Sound	47.5289247° N	-122.3123550° W
				° N	° W
				° N	°W
				° N	° W

If your site discharges to a waterbody that is on the impaired waterbodies list (e.g., 303[d] list) for turbidity, fine sediment, high pH, or phosphorus, Ecology will require additional documentation before issuing permit coverage and these sites will be subject to additional sampling and numeric effluent limits (per Permit Condition S8). Ecology will notify you if any additional sampling requirements apply. Information on impaired waterbodies is available online at: <u>http://www.ecy.wa.gov/programs/wq/303d/index.html.</u>

Before signing, please use the following checklist	to ensure this form	n is complete:		
All spaces on this form have been completed. (Attach additional sheets if necessary)				
The transfer form has been signed by both the current permittee <i>and</i> the new permittee(s).				
The date permit responsibility was transferred is speci	fied. (See Page 1)			
New Operator/Permittee: Before you submit this form permit coverage until documentation arrives from Ecology.	to Ecology, please reta	ain a copy for you	ur records – this will serve as proof of	
For partial transfers: If the original permittee no longer termination, the original permittee must submit a Notice of (<u>http://www.ecy.wa.gov/biblio/ecy02087.html</u>)	owns or controls any p Termination to termina	portions of the sit ate permit covera	te that meet the criteria for ge.	
For sites with contaminated soils/groundwater or a new water quality put in place at the time of initial coverage have	v discharger to an impa ve been reviewed and a	aired waterbody: adopted by the n	Any special provisions to protect ew permittee.	
Administrative Order Docket No.	_			
VIII. Certification of Permittee				
"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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the 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."				
Printed/Typed Name Co	Company (operator/permittee only) Title		Title	
Signature of Operator/Permittee			Date	
 Signature of Operator/Permittee requirements: A. For a corporation: By a responsible corporate offic B. For a partnership or sole proprietorship: By a gen C. For a municipality, state, federal, or other public fa Please sign and return this document to the following addr Washington Department of Ecology - Star PO Box 47696 	cer. eral partner or the prop acility: By either a princ ess: ormwater	prietor, respective cipal executive of	ely. fficer or ranking elected official.	
Olympia, WA 98504-7696				
If you have questions about this form, contact the follo	owing Ecology staff:			
Location	Contact Name	Phone	E-mail	
City of Seattle, and Kitsap, Pierce, and Thurston counties	Josh Klimek	360-407- 7451	josh.klimek@ecy.wa.gov	
Island, King, and San Juan counties	RaChelle	360-407-	rachelle.stane@ecy.wa.gov	
	Statle	0000		

You must submit monthly discharge monitoring reports using Ecology's WQWebDMR system. To sign up for WQWebDMR, or to register a new site, go to <u>www.ecy.wa.gov/programs/wq/permits/paris/portal.html</u>. If you are unable to submit your DMRs electronically, you may contact Ecology to request a waiver. Ecology will generally only grant waiver requests to those permittees without internet access. Only a permittee or representative, designated in writing, may request access to or a waiver from WQWebDMR. To have the ability to use the system immediately, you must submit the Electronic Signature Agreement with your application.

If you have questions on this process, contact Ecology's WQWebDMR staff at <u>WQWebPortal@ecy.wa.gov</u> or 800-633-6193 or 360-407-7097 (local).



*Note: The monitoring points are for illustration only and are not required on this Notice of Intent application form. Monitoring point information will be entered on the monthly discharge monitoring report as required for active permits.

To request ADA accommodation including materials in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call 877-833-6341.



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

September 11, 2017

Wendy LaRocqu City of Ferndale PO Box 936 Ferndale, WA 98248-0936

RE: Coverage under the Construction Stormwater General Permit

Permit number:	WAR305818			
Site Name:	Thornton Road Sanitary Sewer Project P1			
Location:	Thornton Road and Malloy Avenue intersection			
	Ferndale	County: Whatcom		
Disturbed Acres:	1			

Dear Ms. LaRocqu:

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 September 11, 2017. 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). Appeals must be filed within 30 days of the date of receipt of this letter. Any 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).

Included is a Focus Sheet describing where and how to appeal this permit coverage. The Focus Sheet may also be accessed here: <u>http://www.ecy.wa.gov/programs/wq/permits/index.html</u>.
Wendy LaRocqu September 11, 2017 Page 2

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. If you have questions, contact the portal staff at (360) 407-7097 (Olympia area), or (800) 633-6193/option 3, or email WQWebPortal@ecy.wa.gov.

Ecology Field Inspector Assistance

If you have questions regarding stormwater management at your construction site, please contact Stephanie Barney of Ecology's Bellingham Field Office at stephanie.barney@ecy.wa.gov or (360) 715-5233.

Questions or Additional Information

Ecology is committed to providing assistance. Please review our web page at: www.ecy.wa.gov/programs/wq/stormwater/construction. If you have questions about the construction stormwater general permit, please contact Shawn Hopkins at shawn.hopkins@ ecy.wa.gov or (360) 407-6442.

Sincerely,

Kath Finnett for

Bill Moore, P.E., Manager Program Development Services Section Water Quality Program

Enclosures

Issuance Date: Effective Date: Expiration Date: November 18, 2015 January 1, 2016 December 31, 2020

Modification Issuance Date: March 22, 2017 Modification Effective Date: May 5, 2017

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.

Heather R. Bartlett 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.

Permit Section	Submittal	Frequency	First Submittal Date	
<u>S5.A</u> and <u>S8</u>	High Turbidity/Transparency Phone Reporting	As Necessary	Within 24 hours	
S5.B Discharge Monitoring Report		Monthly*	Within 15 days following the end of each month	
<u>S5.F</u> and <u>S8</u>	Noncompliance Notification – Telephone Notification	As necessary	Within 24-hours	
<u>S5.F</u>	Noncompliance Notification – Written Report	As necessary	Within 5 Days of non- compliance	
<u>\$9.C</u>	Request for Chemical Treatment Form	As necessary	Written approval from Ecology is required prior to using chemical treatment (with the exception of dry ice or CO ₂ to adjust pH)	
<u>G2</u>	Notice of Change in Authorization	As necessary		
<u>G6</u>	Permit Application for Substantive Changes to the Discharge	As necessary		
<u>G8</u>	Application for Permit Renewal	1/permit cycle	No later than 180 days before expiration	
<u>G9</u>	Notice of Permit Transfer	As necessary		
G20 Notice of Planned Changes		As necessary		
<u>G22</u>	Reporting Anticipated Non- compliance	As necessary		

Table 1: Summary of Required Submittals

SPECIAL NOTE: *Permittees must submit electronic 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 <u>S2</u> , <u>S5</u>
Construction Stormwater General Permit	See Conditions <u>S2</u> , <u>S5</u>
Site Log Book	See Conditions <u>S4</u> , <u>S5</u>
Stormwater Pollution Prevention Plan (SWPPP)	See Conditions <u>S9</u> , <u>S5</u>

SPECIAL CONDITIONS

S1. PERMIT COVERAGE

A. Permit Area

This Construction Stormwater General Permit (CSWGP) covers all areas of Washington State, except for federal operators and Indian Country 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 (including off-site disturbance acreage authorized in S1.C.2) 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 Washington State 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 an 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. 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. Uncontaminated or potable 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) 122.2 (see Appendix A of this permit).
- 4. Slurry materials and waste from shaft drilling, including process wastewater from shaft drilling for construction of building, road, and bridge foundations unless managed according to Special Condition S9.D.9.j.
- 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 managed according to Special Condition S9.D.9.
- 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 operator.

4. Stormwater from facilities located on "Indian Country" as defined in 18 U.S.C.§1151, except portions of the Puyallup Reservation as noted below.

Indian Country includes:

- a. All land within any Indian Reservation notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. This includes all federal, tribal, and Indian and non-Indian privately owned land within the reservation.
- b. All off-reservation Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.
- c. All off-reservation federal trust lands held for Native American Tribes.

Puyallup Exception: Following the *Puyallup Tribes of Indians Land Settlement Act of 1989*, 25 U.S.C. §1773; the permit does apply to land within the Puyallup Reservation except for discharges to surface water on land held in trust by the federal government.

- 5. 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.
- 6. 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. Operators must apply using the electronic application form (NOI) available on Ecology's website <u>http://www.ecy.wa.gov/programs/wq/stormwater/</u> <u>construction/index.html</u>. 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 NOI.

Department of Ecology Water Quality Program - Construction Stormwater PO Box 47696 Olympia, Washington 98504-7696

- c. 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 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 as required by WAC173-226-200(2).
- 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.
- f. Applicants must notify Ecology if they are aware of contaminated soils and/or groundwater associated with the construction activity. Provide detailed information with the NOI (as known and readily available) on the nature and extent of the contamination (concentrations, locations, and depth), as well as pollution prevention and/or treatment BMPs proposed to control the discharge of soil and/or groundwater contaminants in stormwater. Examples of such detail may include, but are not limited to:
 - i. List or table of all known contaminants with laboratory test results showing concentration and depth,
 - ii. Map with sample locations,
 - iii. Temporary Erosion and Sediment Control (TESC) plans,
 - iv. Related portions of the Stormwater Pollution Prevention Plan (SWPPP) that address the management of contaminated and potentially contaminated construction stormwater and dewatering water,
 - v. Dewatering plan and/or dewatering contingency plan.

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, PO Box 47696, Olympia, Washington 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 (see the CSWGP homepage <u>http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html</u> for a link to the EPA's calculator and step by step instructions on computing the "R" Factor in the EPA Erosivity Waiver Fact Sheet). 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 (Average Annual Precipitation Region 2), refer to <u>http://www.ecy.wa.gov/programs/wq/stormwater/construction/resourcesguidance.html</u>.
- 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. or for any size construction activity that could reasonably expect to cause a violation of any water quality standard as defined in Special Condition S1.B.1.b.ii.
- 5. This waiver does not apply to construction activities which include nonstormwater 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 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

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 site inspections must include all areas disturbed by construction activities, all BMPs, and all stormwater discharge points under the Permittee's operational control. (See Special Conditions S4.B.3 and B.4 below for detailed requirements of the Permittee's Certified Erosion and Sediment Control Lead [CESCL].)

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.

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."

Size of Soil Disturbance ¹	Weekly Site Inspections	Weekly Sampling w/ Turbidity Meter	Weekly Sampling w/ Transparency Tube	Weekly pH Sampling ²	CESCL Required for Inspections?
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 Requi either method ³	red –	Required	Yes
Sites that disturb 5 acres or more	Required	Required	Not Required ⁴	Required	Yes

Table 3: Summary of Primary Monitoring Requirements

¹ Soil disturbance is calculated by adding together all areas that will be 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.

² If construction activity results in the disturbance of 1 acre or more, and involves significant concrete work (1,000 cubic yards of poured concrete 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 sampling in accordance with Special Condition S4.D.

³ 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.

⁴ 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.

- 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 points 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); sampling is not required on sites that disturb less than an acre.
 - 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.
 - g. The Permittee may reduce the sampling frequency for temporarily stabilized, inactive sites to once every calendar month.
 - 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.

- e. The Permittee may discontinue sampling at discharge points in areas of the project where the Permittee no longer has operational control of the construction activity.
- 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 (NTUs).
 - b. The Permittee performs transparency analysis on site with a 1³/₄-inch-diameter, 60-centimeter (cm)-long transparency tube. The Permittee will record the results in the site log book in centimeters (cm).

Table 4: Monitoring and Reporting Requirements

Parameter	Unit	Analytical Method	Sampling Frequency	Benchmark Value	Phone Reporting Trigger Value
Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs	250 NTUs
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 NTUs 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 NTUs, or Transparency 32 - 7 cm:

If the discharge turbidity is 26 to 249 NTUs; 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 NTUs or greater, or Transparency 6 cm or less:

If a discharge point's turbidity is 250 NTUs 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 or submit an electronic report to the applicable Ecology Region's Environmental Report Tracking System (ERTS) number (or through Ecology's Water Quality Permitting Portal [WQWebPortal] – Permit Submittals when the form is available) within 24 hours, in accordance with Special Condition S5.A.
 - **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

Links to these numbers and the ERTS reporting page are located on the following web site: http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.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. Sample discharges daily until:
 - a) Turbidity is 25 NTUs (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 NTUs over background turbidity, if background is less than 50 NTUs, *or*
 - 2) No more than 10% over background turbidity, if background is 50 NTUs 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 or to a storm sewer system that drains to surface waters of the State or 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 sampling 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 recycled concrete where monitoring is required, the Permittee must begin the weekly pH sampling period when the recycled concrete is first exposed to precipitation and must continue until the recycled concrete is fully stabilized with the stormwater pH in the range of 6.5 to 8.5 (su).
- 3. For sites with engineered soils, the Permittee must begin the pH sampling period when the soil amendments are first exposed to precipitation and must continue until the area of engineered soils is fully stabilized.
- 4. 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.
- 5. The Permittee must sample 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.
- 6. 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 (CO₂) sparging or dry ice. The Permittee must obtain written approval from Ecology before using any form of chemical treatment other than CO₂ sparging or dry ice.
- 7. 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 sampling results in the site log book.

S5. REPORTING AND RECORDKEEPING REQUIREMENTS

A. High Turbidity Reporting

Anytime sampling performed in accordance with Special Condition S4.C indicates turbidity has reached the 250 NTUs or more (or transparency less than or equal to 6 cm) high turbidity reporting level, the Permittee must either call the applicable Ecology Region's Environmental Report Tracking System (ERTS) number by phone within 24 hours of analysis or submit an electronic ERTS report (or submit an electronic report through Ecology's Water Quality Permitting Portal (WQWebPortal) – Permit Submittals when the form is available). See the CSWGP web site for links to ERTS and the WQWebPortal: <u>http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html</u>. Also, see phone numbers in Special Condition S4.C.5.b.i.

B. Discharge Monitoring Reports (DMRs)

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 WQWebDMR web application accessed through Ecology's Water Quality Permitting Portal. To find out more information and to sign up for WQWebDMR go to: <u>http://www.ecy.wa.gov/programs/wq/permits/paris/portal.html</u>.

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:

Department of Ecology Water Quality Program - Construction Stormwater PO Box 47696 Olympia, Washington 98504-7696

Permittees who obtain a waiver not to use WQWebDMR 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. DMRs are required for the full duration of permit coverage (from issuance date to termination). For more information, contact Ecology staff using information provided at the following web site: www.ecy.wa.gov/programs/wq/permits/paris/contacts.html.

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, copy of the permit coverage letter (including Transfer of Coverage documentation), 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 (such as but not limited to spills of fuels or other materials, catastrophic pond or slope failure, and discharges that violate water quality standards), or exceed numeric effluent limitations (see S8. Discharges to 303(d) or TMDL Waterbodies), the Permittee must, upon becoming aware of the circumstance:

- 1. Notify Ecology within 24-hours of the failure to comply by calling the applicable Regional office ERTS phone number (refer to Special Condition S4.C.5.b.i. or <u>www.ecy.wa.gov/programs/wq/stormwater/construction/turbidity.html</u> for Regional ERTS phone numbers).
- 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, of the time the Permittee becomes aware of the circumstances, unless requested earlier by Ecology. The report must be submitted using Ecology's Water Quality Permitting Portal (WQWebPortal) Permit Submittals, unless a waiver from electronic reporting has been granted according to S5.B. 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. Upon request of the Permittee, Ecology may waive the requirement for a written report on a case-bycase basis, if the immediate notification is received by Ecology within 24 hours.

- 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*
 - iii. 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 WATERBODIES

A. Sampling and Numeric Effluent Limits For Certain Discharges to 303(d)-listed Waterbodies

- 1. Permittees who discharge to segments of waterbodies 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, 2016, 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 TMDL or 303(d)-listed waterbody are not eligible for coverage under this permit *unless* the operator:

- 1. Prevents exposing stormwater to pollutants for which the waterbody 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 waterbody 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 instream water quality criteria at the point of discharge to the waterbody; *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 waterbody are subject to compliance schedules designed to bring the waterbody 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
 - 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 NTUs 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 NTUs over background turbidity when the background turbidity is 50 NTUs or less, or no more than a 10% increase in turbidity when the background turbidity is more than 50 NTUs. 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 ¹
TurbidityFine SedimentPhosphorus	Turbidity	NTU	SM2130	Weekly, if discharging	25 NTUs, at the point where stormwater is discharged from the site; OR
					In compliance with the surface water quality standard for turbidity (S8.C.2.a)

¹Permittees 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	Analytical	Sampling	Numeric Effluent
	Sampled/Units	Method	Frequency	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 waterbody 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
 - Discharges to a waterbody 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 <u>http://www.ecy.wa.gov/programs/wq/tmdl/</u> <u>TMDLsbyWria/TMDLbyWria.html</u> 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.
 - 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, 2016, 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 13 elements of a SWPPP in Special Condition S9.D.1-13, 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, treatment systems, and any other designed structures. When a treatment system requires engineering calculations, these calculations must be included in the SWPPP. Engineering calculations do not need to be included in the SWPPP for treatment systems that do not require such calculations.
- 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 current approved edition at the time this permit was issued), for sites west of the crest of the Cascade Mountains; *or*
- 2. Stormwater Management Manual for Eastern Washington (most current approved edition at the time this permit was issued), 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 13 elements below in Special Condition S9.D.1-13 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 topsoil, 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, infiltration facilities, 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 - September 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 flow rate 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 rate 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 flow rate 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 rate 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, recycled concrete stockpiles, 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 or authorized non-stormwater if necessary to prevent an exceedance of groundwater and/or surface water quality standards.
- h. Assure that washout of concrete trucks is performed off-site or in designated concrete washout areas only. Do not wash out concrete truck drums or concrete handling equipment onto the ground, or into storm drains, open ditches, streets, or streams. Washout of concrete handling equipment may be disposed of in a designated concrete washout area or in a formed area awating concrete where it will not contaminate surface or ground water. Do not dump excess concrete on site, except in designated concrete washout areas. Concrete spillage or concrete discharge directly to groundwater or surface waters of the State is prohibited. Do not wash out to formed areas awaiting LID facilities.
- i. Obtain written approval from Ecology before using any chemical treatment, with the exception of CO_2 or dry ice used to adjust pH.
- j. Uncontaminated water from water-only based shaft drilling for construction of building, road, and bridge foundations may be infiltrated provided the wastewater is managed in a way that prohibits discharge to surface waters. Prior to infiltration, water from water-only based shaft drilling that comes into contact with curing concrete must be neutralized until pH is in the range of 6.5 to 8.5 (su).
- 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 wellpoint 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 dewatering 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 (see S9.D.9.i. regarding chemical treatment written approval).
- 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.
- 13. Protect Low Impact Development (LID) BMPs

The primary purpose of LID BMPs/On-site LID Stormwater Management BMPs is to reduce the disruption of the natural site hydrology. LID BMPs are permanent facilities.

a. Permittees must protect all Bioretention and Rain Garden facilities from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the Bioretention and/or Rain Garden facilities. Restore the facilities to their fully functioning condition if they accumulate sediment during construction. Restoring the facility must include removal of sediment and any sediment-laden Bioretention/Rain Garden soils, and replacing the removed soils with soils meeting the design specification.
- b. Permittees must maintain the infiltration capabilities of Bioretention and Rain Garden facilities by protecting against compaction by construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.
- c. Permittees must control erosion and avoid introducing sediment from surrounding land uses onto permeable pavements. Do not allow muddy construction equipment on the base material or pavement. Do not allow sediment-laden runoff onto permeable pavements.
- d. Permittees must clean permeable pavements fouled with sediments or no longer passing an initial infiltration test using local stormwater manual methodology or the manufacturer's procedures.
- e. Permittees must keep all heavy equipment off existing soils under LID facilities that have been excavated to final grade to retain the infiltration rate of the soils.
- 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 waterbody, 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 constructionphase permit requirements apply.
- 11. Location or proposed location of LID facilities.

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

When an electronic termination form is available, the Permittee may choose to submit a complete and accurate Notice of Termination (NOT) form through the Water Quality Permitting Portal rather than mailing a hardcopy as noted above.

The termination is effective on the thirty-first calendar day following the date Ecology receives a complete NOT form, unless Ecology notifies the Permittee that the termination request is denied because the Permittee has not met the eligibility requirements in Special Condition S10.A.

Permittees are required to comply with all conditions and effluent limitations in the permit until the permit has been terminated.

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;
 - 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 (including NOIs, NOTs, and Transfer of Coverage forms) 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 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. The Permittee must reapply using the electronic application form (NOI) available on Ecology's website. 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 NOI.

Department of Ecology Water Quality Program - Construction Stormwater PO Box 47696 Olympia, Washington 98504-7696

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 (including any Administrative Orders associated with the Permit) 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 at 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, 2016, 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.

Benchmark means a *pollutant* concentration used as a permit threshold, below which a *pollutant* is considered unlikely to cause a water quality violation, and above which it may. When *pollutant* concentrations exceed benchmarks, corrective action requirements take effect. Benchmark values are not water quality standards and are not numeric effluent limitations; they are indicator values.

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).

Chemical Treatment means the addition of chemicals to *stormwater* and/or authorized non-stormwater prior to filtration and discharge to surface waters.

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* comingles 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, site preparation, soil compaction, movement and stockpiling of topsoils, 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.

Contaminated Groundwater means groundwater which contains *contaminants*, *pollutants*, or *hazardous substances* that do not occur naturally or occur at levels greater than natural background.

Contaminated Soil means soil which contains *contaminants*, *pollutants*, or *hazardous substances* that do not occur naturally or occur at levels greater than natural background.

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 technologybased 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 State 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.

Federal Operator is an entity that meets the definition of "*Operator*" in this permit and is either any department, agency or instrumentality of the executive, legislative, and judicial branches of

the Federal government of the United States, or another entity, such as a private contractor, performing construction activity for any such department, agency, or instrumentality.

Final Stabilization (same as **fully stabilized** or **full stabilization**) means the establishment of a permanent vegetative cover, or equivalent permanent stabilization measures (examples of permanent non-vegetative stabilization methods include, but are not limited to riprap, gabions or geotextiles) which prevents erosion.

Ground Water means water in a saturated zone or stratum beneath the land surface or a surface waterbody.

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(10) 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 State 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. If *stormwater* commingles with process wastewater, the commingled water is considered process wastewater.

Receiving Water means the waterbody at the point of discharge. If the discharge is to a *storm sewer system*, either surface or subsurface, the receiving water is the waterbody 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.

Responsible Corporate Officer for the purpose of signatory authority means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

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 waterbody, 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 used 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 waterbody, 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 waterbody 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 waterbody 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.

Transfer of Coverage (TOC) means a request for transfer of coverage under this general permit as specified by General Condition G9 of this permit.

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 (NTUs) and measured with a calibrated turbidimeter.

Uncontaminated means free from any contaminant. 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-only Based Shaft Drilling is a shaft drilling process that uses water only and no additives are involved in the drilling of shafts for construction of building, road, or bridge foundations.

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 trackout onto roads. When *stormwater* comingles 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
ERTS	Environmental Report Tracking System
ESC	Erosion and Sediment Control
FR	Federal Register
LID	Low Impact Development
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

APPENDIX E – BNSF AGREEMENT AND PIPELINE LICENSE (This Page Intentionally Left Blank)



Jones Lang LaSalle Americas, Inc. 4200 Buckingham Road, Suite 110 Fort Worth, Texas 76155 tel +1 817-230-2600

August 18, 2017

Tracking No. 17-57993

City of Ferndale Attention: Mr. Kevin Renz PO Box 936 Ferndale, WA 98248-0936

Dear Mr. Renz,

Enclosed please find one (1) fully executed Agreement for the City of Ferndale. A copy of the executed Agreement must be available upon request at the job site allowing authorization to do the work. Please contact the Roadmaster, Karl Jay at telephone (360) 922-1401, or email at karl.jay@bnsf.com, at least ten (10) days in advance of entry for each location and BEFORE YOU DIG, CALL 1-800-533-2891. If you need additional information please contact me at (817) 230-2631.

Sincerely,

Katrina Salayar

Katrina Salazar Associate Manager Permits

Enclosure

cc: Karl Jay, BNSF Roadmaster, 1200 D Street, Bellingham, Washington 98225

PIPELINE LICENSE

THIS PIPELINE LICENSE ("License") is made to be effective August 18, 2017, (the "Effective Date") by and between **BNSF RAILWAY COMPANY**, a Delaware corporation ("Licensor") and CITY OF FERNDALE, a Washington corporation ("Licensee").

In consideration of the mutual covenants contained herein, the parties agree to the following:

GENERAL

- 1. <u>Grant of License</u>. Licensor hereby grants Licensee a non-exclusive license, subject to all rights, interests, and estates of third parties, including, without limitation, any leases, use rights, easements, liens, or other encumbrances, and upon the terms and conditions set forth below, to construct and maintain, in strict accordance with the drawings and specifications approved by Licensor as part of Licensee's application process (the "**Drawings and Specifications**"), one (1) pipeline, 18 inches in diameter inside a 24 inch steel casing (collectively, the "**Pipeline**"), across or along Licensor's rail corridor at or near the station of Ferndale, County of Whatcom, State of Washington, Line Segment 0050, Mile Post 107.10 as shown on the attached Drawing No. 70001, dated June 9, 2017, attached hereto as **Exhibit "A"** and incorporated herein by reference (the "**Premises**").
- 2. <u>Term</u>. This License shall commence on the Effective Date and shall continue for a period of twenty-five (25) years, subject to prior termination as hereinafter described.
- 3. <u>Existing Improvements</u>. Licensee shall not disturb any improvements of Licensor or Licensor's existing lessees, licensees, easement beneficiaries or lien holders, if any, or interfere with the use, repair, maintenance or replacement of such improvements.
- 4. <u>Use of the Premises</u>. Licensee shall use the Premises solely for construction, maintenance, and use of the Pipeline in accordance with the Drawings and Specifications. The Pipeline shall carry sanitary sewage, and Licensee shall not use the Pipeline to carry any other material or use the Premises for any other purpose.
- 5. <u>Alterations</u>. Except as set forth in this License, Licensee may not make any alterations to the Premises or permanently affix anything to the Premises or any buildings or other structures adjacent to the Premises without Licensor's prior written consent.

COMPENSATION

- 6. <u>License Fee</u>. Licensee shall pay Licensor, prior to the Effective Date, the sum of Three Thousand, Seven Hundred and No/100 Dollars (\$3,700.00) as compensation for the use of the Premises.
- 7. Costs and Expenses.
 - 7.1 For the purpose of this License, "cost" or "costs" and "expense" or "expenses" includes, but is not limited to, actual labor and material costs including all assignable additives, and material and supply costs at current value where used.
 - 7.2 Licensee agrees to reimburse Licensor (pursuant to the terms of **Section 8** below) for all costs and expenses incurred by Licensor in connection with Licensee's use of the Premises or the presence, construction and maintenance of the Pipeline, including but not limited to the furnishing of Licensor's flaggers and any vehicle rental costs incurred. Licensee shall bear the cost of flagger services and other safety measures provided by Licensor, when deemed necessary by Licensor's representative. Flagging **costs** shall include, but not be limited to, the following: pay for at least an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays (as applicable); vacation allowance; paid holidays (as applicable); railway and unemployment insurance; public liability and property damage insurance; health and welfare benefits; transportation; meals; lodging and supervision. Negotiations for railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase flagging rates. Flagging rates in effect at the time of performance by the flaggers will be used to calculate the flagging costs pursuant to this **Section 7**.

8. <u>Payment Terms</u>. All invoices are due thirty (30) days after the date of invoice. If Licensee fails to pay any monies due to Licensor within thirty (30) days after the invoice date, then Licensee shall pay interest on such unpaid sum from the due date until paid at an annual rate equal to the lesser of (i) the prime rate last published in *The Wall Street Journal* in the preceding December plus two and one-half percent (2-1/2%), or (ii) the maximum rate permitted by law.

LICENSOR'S RESERVED RIGHTS

- 9. <u>Reserved Rights of Use</u>. Licensor accepts and reserves the right, to be exercised by Licensor and any other parties who may obtain written permission or authority from Licensor:
 - 9.1 to maintain, use, operate, repair, replace, modify and relocate any utility, power or communication pipe/lines/cables and appurtenances (other than the Pipeline) and other facilities or structures of like character upon, over, under or across the Premises existing as of the Effective Date;
 - 9.2 to construct, maintain, renew, use, operate, change, modify and relocate any tracks or additional facilities, structures and related appurtenances upon, over, under or across the Premises; or
 - 9.3 to use the Premises in any manner as Licensor in its sole discretion deems appropriate, provided Licensor uses all commercially reasonable efforts to avoid material interference with the use of the Premises by Licensee for the purpose specified in **Section 4** above.
- 10. <u>Right to Require Relocation</u>. If at any time during the term of this License, Licensor desires the use of its rail corridor in such a manner as would, in Licensor's reasonable opinion, be interfered with by the Pipeline, Licensee shall, at its sole expense, within thirty (30) days after receiving written notice from Licensor to such effect, make such changes in the Pipeline as in the sole discretion of Licensor may be necessary to avoid interference with the proposed use of Licensor's rail corridor, including, without limitation, the relocation of the Pipeline, or the construction of a new pipeline to replace the Pipeline. Notwithstanding the foregoing, Licensee agrees to make all emergency changes and minor adjustments, as determined by Licensor in its sole discretion, to the Pipeline promptly upon Licensor's request.

LICENSEE'S OPERATIONS

- 11. Construction and Maintenance of the Pipeline.
 - 11.1 Licensee shall notify Licensor's Roadmaster, Karl Jay at 1200 D Street, Bellingham, WA 98225, telephone (360) 922-1401, or email karl.jay@bnsf.com, at least ten (10) business days prior to installation of the Pipeline and prior to entering the Premises for any subsequent maintenance thereon. In the event of emergency, Licensee shall notify Licensor of Licensee's entry onto the Premises at the telephone number above as soon as practicable and shall promptly thereafter follow up with written notice of such entry.
 - 11.2 Licensee's on-site supervisors shall retain/maintain a fully executed copy of this License at all times while on the Premises.
 - 11.3 While on the Premises, Licensee shall use only public roadways to cross from one side of Licensor's tracks to the other.
 - 11.4 Any contractors or subcontractors performing work on the Pipeline or entering the Premises on behalf of Licensee shall be deemed servants and agents of Licensee for purposes of this License.
 - 11.5 Under no conditions shall Licensee be permitted to conduct any tests, investigations or any other activity using mechanized equipment and/or machinery, or place or store any mechanized equipment, tools or other materials, within twenty-five (25) feet of the centerline of any railroad track on the Premises unless Licensee has obtained prior written approval from Licensor. Licensee shall, at its sole cost and expense, perform all activities on and about the Premises in such a manner as not at any time to endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. If ordered to cease using the Premises at any time by Licensor's personnel due to any hazardous condition, Licensee shall immediately do so.

Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine the safe nature thereof, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is safe. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.

- 11.6 Licensee shall, at its sole cost and expense, construct and maintain the Pipeline in such a manner and of such material that the Pipeline will not at any time endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. The construction of the Pipeline shall be completed within one (1) year of the Effective Date, and any subsequent maintenance shall be completed within one (1) year of initiation. Within fifteen (15) days after completion of the construction of the Pipeline or the performance of any subsequent maintenance thereon, Licensee shall, at Licensee's own cost and expense, restore the Premises to substantially their state as of the Effective Date, unless otherwise approved in advance by Licensor in writing. On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense, surrender the Premises to Licensor pursuant to the terms and conditions set forth in Section 24 hereof.
- Licensor may direct one or more of its field engineers to observe or inspect the construction and/or 11.7 maintenance of the Pipeline at any time for compliance with the Drawings and Specifications and Legal Requirements (defined below). If ordered at any time to halt construction or maintenance of the Pipeline by Licensor's personnel due to non-compliance with the Drawings and Specifications or any other hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to observe or inspect, or to halt work on, the Pipeline, it being solely Licensee's responsibility to ensure that the Pipeline is constructed and maintained in strict accordance with the Drawings and Specifications and in a safe and workmanlike manner in compliance with all terms hereof. Neither the exercise of, nor the failure by Licensor to exercise, any right granted by this Section will alter in any way the liability allocation provided by this License. If at any time Licensee shall, in the sole judgment of Licensor, fail to properly perform its obligations under this Section 11, Licensor may, at its option and at Licensee's sole expense, arrange for the performance of such work as it deems necessary for the safety of its operations and activities. Licensee shall promptly reimburse Licensor for all costs and expenses of such work, pursuant to the terms of Section 8. Licensor's failure to perform any obligations of Licensee shall not alter the liability allocation hereunder.
- 12. Boring and Excavation.
 - Prior to Licensee conducting any boring, excavation, or similar work on or about any portion of the 12.1 Premises, Licensee shall explore the proposed location for such work with hand tools to a depth of at least three (3) feet below the surface of the ground to determine whether pipelines or other structures exist below the surface, provided, however, that in lieu of the foregoing, Licensee shall have the right to use suitable detection equipment or other generally accepted industry practice (e.g., consulting with the Underground Services Association) to determine the existence or location of pipelines and other subsurface structures prior to drilling or excavating with mechanized equipment. Licensee may request information from Licensor concerning the existence and approximate location of Licensor's underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline by contacting Licensor's Telecommunications Helpdesk at least thirty (30) business days prior to installation of the Pipeline. Upon receiving Licensee's timely request, Licensor will provide Licensee with the information Licensor has in its possession regarding any existing underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline and, if applicable, identify the location of such lines on the Premises pursuant to Licensor's standard procedures. Licensor does not warrant the accuracy or completeness of information relating to subsurface conditions of the Premises and Licensee's operations will be subject at all times to the liability provisions herein.
 - 12.2 For all bores greater than 26-inch diameter and at a depth less than 10.0 feet below bottom of rail, a soil investigation must be performed by Licensee and reviewed by Licensor prior to construction. This study is to determine if granular material is present, and to prevent subsidence during the installation process. If the investigation determines in Licensor's reasonable opinion that granular

material is present, Licensor may select a new location for Licensee's use, or may require Licensee to furnish for Licensor's review and approval, in Licensor's sole discretion, a remedial plan to deal with the granular material. Once Licensor has approved any such remedial plan in writing, Licensee shall, at Licensee's sole cost and expense, carry out the approved plan in accordance with all terms thereof and hereof.

- 12.3 Any open hole, boring, or well, constructed on the Premises by Licensee shall be safely covered and secured at all times when Licensee is not working in the actual vicinity thereof. Following completion of that portion of the work, all holes or borings constructed on the Premises by Licensee shall be:
 - 12.3.1 filled in to surrounding ground level with compacted bentonite grout; or
 - 12.3.2 otherwise secured or retired in accordance with any applicable Legal Requirement. No excavated materials may remain on Licensor's property for more than ten (10) days, but must be properly disposed of by Licensee in accordance with applicable Legal Requirements.

LIABILITY AND INSURANCE

- 13. Liability and Indemnification.
 - 13.1 For purposes of this License: (a) "Indemnitees" means Licensor and Licensor's affiliated companies, partners, successors, assigns, legal representatives, officers, directors, shareholders, employees, and agents; (b) "Liabilities" means all claims, liabilities, fines, penalties, costs, damages, losses, liens, causes of action, suits, demands, judgments, and expenses (including, without limitation, court costs, reasonable attorneys' fees, costs of investigation, removal and remediation, and governmental oversight costs) environmental or otherwise; and (c) "Licensee Parties" means Licensee or Licensee's officers, agents, invitees, licensees, employees, or contractors, or any party directly or indirectly employed by any of them, or any party they control or exercise control over.
 - 13.2 TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS INDEMNITEES FOR, FROM, AND AGAINST ANY AND ALL LIABILITIES OF ANY NATURE, KIND, OR DESCRIPTION DIRECTLY OR INDIRECTLY ARISING OUT OF, RESULTING FROM, OR RELATED TO (IN WHOLE OR IN PART):
 - 13.2.1 THIS LICENSE, INCLUDING, WITHOUT LIMITATION, ITS ENVIRONMENTAL PROVISIONS,
 - 13.2.2 ANY RIGHTS OR INTERESTS GRANTED PURSUANT TO THIS LICENSE,
 - 13.2.3 LICENSEE'S OCCUPATION AND USE OF THE PREMISES,
 - 13.2.4 THE ENVIRONMENTAL CONDITION AND STATUS OF THE PREMISES CAUSED BY OR CONTRIBUTED TO BY LICENSEE, OR
 - 13.2.5 ANY ACT OR OMISSION OF ANY LICENSEE PARTY.
 - 13.3 TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE NOW AND FOREVER WAIVES ANY AND ALL CLAIMS THAT BY VIRTUE OF ENTERING INTO THIS LICENSE, LICENSOR IS A GENERATOR, OWNER, OPERATOR, ARRANGER, OR TRANSPORTER FOR THE PURPOSES OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR OTHER ENVIRONMENTAL LAWS (DEFINED BELOW). LICENSEE WILL INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM ANY AND ALL SUCH CLAIMS. NOTHING IN THIS LICENSE IS MEANT BY EITHER PARTY TO CONSTITUTE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES AND THIS LICENSE SHOULD NOT BE SO CONSTRUED. IF ANY AGENCY OR COURT CONSTRUES THIS LICENSE TO BE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES, LICENSEE AGREES TO INDEMNIFY, HOLD HARMLESS, AND DEFEND INDEMNITEES FOR ANY LIABILITIES RELATED TO THAT CONSTRUCTION OF THIS

LICENSE. IN NO EVENT AS BETWEEN LICENSOR AND LICENSEE AS TO USE OF THE PREMISES AS CONTEMPLATED BY THIS LICENSE SHALL LICENSOR BE RESPONSIBLE TO LICENSEE FOR THE ENVIRONMENTAL CONDITION OF THE PREMISES.

- 13.4 IF ANY EMPLOYEE OF ANY LICENSEE PARTY ASSERTS THAT HE OR SHE IS AN EMPLOYEE OF ANY INDEMNITEE, TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM AND AGAINST ANY LIABILITIES ARISING OUT OF OR RELATED TO (IN WHOLE OR IN PART) ANY SUCH ASSERTION INCLUDING, BUT NOT LIMITED TO, ASSERTIONS OF EMPLOYMENT BY AN INDEMNITEE RELATED TO THE FOLLOWING OR ANY PROCEEDINGS THEREUNDER: THE FEDERAL EMPLOYERS' LIABILITY ACT, THE SAFETY APPLIANCE ACT, THE LOCOMOTIVE INSPECTION ACT, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AND ANY SIMILAR STATE OR FEDERAL STATUTE.
- 13.5 THE FOREGOING OBLIGATIONS OF LICENSEE SHALL NOT APPLY TO THE EXTENT LIABILITIES ARE PROXIMATELY CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY INDEMNITEE, BUT SHALL APPLY TO ALL OTHER LIABILITIES, INCLUDING THOSE ARISING FROM OR ATTRIBUTED TO ANY OTHER ALLEGED OR ACTUAL NEGLIGENCE, INTENTIONAL ACTS, OR STRICT LIABILITY OF ANY INDEMNITEE.
- 13.6 Upon written notice from Licensor, Licensee agrees to assume the defense of any lawsuit or other proceeding brought against any Indemnitee by any entity, relating to any matter covered by this License for which Licensee has an obligation to assume liability for and/or save and hold harmless any Indemnitee. Licensee shall pay all costs and expenses incident to such defense, including, but not limited to, reasonable attorneys' fees, investigators' fees, litigation and appeal expenses, settlement payments, and amounts paid in satisfaction of judgments.
- 14. <u>Personal Property Risk of Loss</u>. ALL PERSONAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, FIXTURES, EQUIPMENT, OR RELATED MATERIALS UPON THE PREMISES WILL BE AT THE RISK OF LICENSEE ONLY, AND NO INDEMNITEE WILL BE LIABLE FOR ANY DAMAGE THERETO OR THEFT THEREOF, WHETHER OR NOT DUE IN WHOLE OR IN PART TO THE NEGLIGENCE OF ANY INDEMNITEE.
- 15. <u>Insurance</u>. Licensee shall, at its sole cost and expense, procure and maintain during the life of this License the following insurance coverage:
 - 15.1 <u>Commercial General Liability Insurance</u>. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000 but in no event less than the amount otherwise carried by Licensee. Coverage must be purchased on a post 2004 ISO occurrence or equivalent and include coverage for, but not limited to, the following:
 - Bodily Injury and Property Damage
 - Personal Injury and Advertising Injury
 - Fire legal liability
 - Products and completed operations

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- The definition of insured contract shall be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- Waiver of subrogation in favor of and acceptable to Licensor.
- Additional insured endorsement in favor of and acceptable to Licensor and Jones Lang LaSalle Brokerage, Inc.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability Insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to Licensor's employees.

No other endorsements limiting coverage may be included on the policy.

- 15.2 <u>Business Automobile Insurance</u>. This insurance shall contain a combined single limit of at least \$1,000,000, and include coverage for, but not limited to the following:
 - Bodily injury and property damage.
 - Any and all vehicles owned, used or hired.

This policy shall also contain the following endorsements, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Licensor.
- Additional insured endorsement in favor of and acceptable to Licensor.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.
- 15.3 <u>Workers' Compensation and Employers' Liability Insurance</u>. This insurance shall include coverage for, but not limited to:
 - Licensee's statutory liability under the workers' compensation laws of the state(s) in which the services are to be performed. If optional under state laws, the insurance must cover all employees anyway.
 - Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Licensor.
- 15.4 <u>Railroad Protective Liability Insurance</u>. This insurance shall name only Licensor as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The coverage obtained under this policy shall only be effective during the initial installation and/or construction of the Pipeline. THE CONSTRUCTION OF THE PIPELINE SHALL BE COMPLETED WITHIN ONE (1) YEAR OF THE EFFECTIVE DATE. If further maintenance of the Pipeline is needed at a later date, an additional Railroad Protective Liability Insurance Policy shall be required. The policy shall be issued on a standard ISO form CG 00 35 12 03 and include the following:
 - Endorsed to include the Pollution Exclusion Amendment.
 - Endorsed to include the Limited Seepage and Pollution Endorsement.
 - Endorsed to include Evacuation Expense Coverage Endorsement.
 - No other endorsements restricting coverage may be added.
 - The original policy must be provided to Licensor prior to performing any work or services under this License.
 - Definition of "Physical Damage to Property" shall be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control arising out of the acts or omissions of the contractor named on the Declarations."

In lieu of providing a Railroad Protective Liability Policy, for a period of one (1) year from the Effective Date, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to Licensee or its contractor. The limits of coverage are the same as above. The cost is \$1,150.



- l elect to participate in Licensor's Blanket Policy;
- I elect not to participate in Licensor's Blanket Policy.

15.5 Intentionally Deleted.

15.6 Other Requirements:

- 15.6.1 Where allowable by law, all policies (applying to coverage listed above) shall contain no exclusion for punitive damages.
- 15.6.2 Licensee agrees to waive its right of recovery against Licensor for all claims and suits against Licensor. In addition, Licensee's insurers, through the terms of the policy or a policy endorsement, must waive their right of subrogation against Licensor for all claims and suits, and the certificate of insurance must reflect the waiver of subrogation endorsement. Licensee further waives its right of recovery, and its insurers must also waive their right of subrogation against Licensee's owned or leased property, or property under Licensee's care, custody, or control.
- 15.6.3 Licensee is not allowed to self-insure without the prior written consent of Licensor. If granted by Licensor, any self-insured retention or other financial responsibility for claims shall be covered directly by Licensee in lieu of insurance. Any and all Licensor liabilities that would otherwise, in accordance with the provisions of this License, be covered by Licensee's insurance will be covered as if Licensee elected not to include a self-insured retention or other financial responsibility for claims.
- 15.6.4 Prior to entering the Premises, Licensee shall furnish to Licensor an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments. Licensee shall notify Licensor in writing at least 30 days prior to any cancellation, non-renewal, substitution, or material alteration. In the event of a claim or lawsuit involving Licensor arising out of this License, Licensee will make available any required policy covering such claim or lawsuit.
- 15.6.5 Any insurance policy shall be written by a reputable insurance company acceptable to Licensor or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.
- 15.6.6 If coverage is purchased on a "claims made" basis, Licensee hereby agrees to maintain coverage in force for a minimum of three years after expiration or termination of this License. Annually, Licensee agrees to provide evidence of such coverage as required hereunder.
- 15.6.7 Licensee represents that this License has been thoroughly reviewed by Licensee's insurance agent(s)/broker(s), who have been instructed by Licensee to procure the insurance coverage required by this License. Allocated Loss Expense shall be in addition to all policy limits for coverages referenced above.
- 15.6.8 Not more frequently than once every five years, Licensor may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.
- 15.6.9 If any portion of the operation is to be subcontracted by Licensee, Licensee shall require that the subcontractor shall provide and maintain insurance coverages as set forth herein, naming Licensor as an additional insured, and shall require that the subcontractor shall release, defend and indemnify Licensor to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Licensor herein.
- 15.6.10 Failure to provide evidence as required by this **Section 15** shall entitle, but not require, Licensor to terminate this License immediately. Acceptance of a certificate that does not comply with this Section shall not operate as a waiver of Licensee's obligations hereunder.
- 15.6.11 The fact that insurance (including, without limitation, self-insurance) is obtained by Licensee shall not be deemed to release or diminish the liability of Licensee, including, without limitation, liability under the indemnity provisions of this License. Damages recoverable by Licensor shall not be limited by the amount of the required insurance coverage.

- 15.6.12 These insurance provisions are intended to be a separate and distinct obligation on the part of the Licensee. Therefore, these provisions shall be enforceable and Licensee shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable.
- 15.6.13 For purposes of this **Section 15**, Licensor shall mean "Burlington Northern Santa Fe, LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

COMPLIANCE WITH LAWS, REGULATIONS, AND ENVIRONMENTAL MATTERS

- 16. Compliance with Laws, Rules, and Regulations.
 - 16.1 Licensee shall observe and comply with any and all laws, statutes, regulations, ordinances, orders, covenants, restrictions, or decisions of any court of competent jurisdiction ("Legal Requirements") relating to the construction, maintenance, and use of the Pipeline and the use of the Premises.
 - 16.2 Prior to entering the Premises, Licensee shall and shall cause its contractor(s) to comply with all of Licensor's applicable safety rules and regulations. Licensee must ensure that each of its employees, contractors, agents or invitees entering upon the Premises completes the safety orientation program at the Website "www.BNSFcontractor.com" (the "Safety Orientation") within one year prior to entering upon the Premises. Additionally, Licensee must ensure that each and every employee of Licensee, its contractors, agents and invitees possess a card certifying completion of the Safety Orientation prior to entering upon the Premises. Licensee must renew the Safety Orientation annually.
 - 16.3 Licensee shall obtain on or before the date it or its contractor enters the Premises, any and all additional rights-of way, easements, licenses and other agreements relating to the grant of rights and interests in and/or access to the Premises (collectively, the "**Rights**") and such other rights, licenses, permits, authorizations, and approvals (including without limitation, any necessary local, state, federal or tribal authorizations and environmental permits) that are necessary in order to permit Licensee to construct, maintain, own and operate the Pipeline and otherwise to perform its obligations hereunder in accordance with the terms and conditions hereof.
 - 16.4 Licensee shall either require that the initial stated term of each such Rights be for a period that does not expire, in accordance with its ordinary terms, prior to the last day of the term of this License or, if the initial stated term of any such Right expires in accordance with its ordinary terms on a date earlier than the last day of the term of this License, Licensee shall, at its cost, exercise any renewal rights thereunder, or otherwise acquire such extensions, additions and/or replacements as may be necessary, in order to cause the stated term thereof to be continued until a date that is not earlier than the last day of the term of this License.
 - 16.5 Upon the expiration or termination of any Right that is necessary in order for Licensee to own, operate or use the Pipeline in accordance with the terms and conditions of this License, this License thereby shall automatically expire upon such expiration or termination of the Right.

17. Environmental.

- 17.1 Licensee shall strictly comply with all federal, state and local environmental Legal Requirements and regulations in its use of the Premises, including, but not limited to, the Resource Conservation and Recovery Act, as amended (RCRA), the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, and CERCLA (collectively referred to as the "Environmental Laws"). Licensee shall not maintain a treatment, storage, transfer or disposal facility, or underground storage tank, as defined by Environmental Laws on the Premises. Licensee shall not release or suffer the release of oil or hazardous substances, as defined by Environmental Laws on or about the Premises.
- 17.2 Licensee covenants that it will not handle or transport "hazardous waste" or "hazardous substances", as "hazardous waste" and "hazardous substances" may now or in the future be defined by any federal, state, or local governmental agency or body through the Pipeline on Licensor's property. Licensee agrees periodically to furnish Licensor with proof, satisfactory to Licensor that Licensee is in compliance with the provisions of this **Section 17.2**.

- 17.3 Licensee shall give Licensor immediate notice to Licensor's Resource Operations Center at (800) 832-5452 of any known (i) release of hazardous substances on, from, or affecting the Premises, (ii) violation of Environmental Laws, or (iii) inspection or inquiry by governmental authorities charged with enforcing Environmental Laws with respect to Licensee's use of the Premises. Licensee shall use the best efforts to promptly respond to any release on, from, or affecting the Premises. Licensee also shall give Licensor immediate notice of all measures undertaken on behalf of Licensee to investigate, remediate, respond to or otherwise cure such release or violation.
- 17.4 If Licensor has notice from Licensee or otherwise of a release or violation of Environmental Laws arising in any way with respect to the Pipeline which occurred or may occur during the term of this License, Licensor may require Licensee, at Licensee's sole risk and expense, to take timely measures to investigate, remediate, respond to or otherwise cure such release or violation affecting the Premises or Licensor's right-of-way.
- 17.5 Licensee shall promptly report to Licensor in writing any conditions or activities upon the Premises known to Licensee which create a risk of harm to persons, property or the environment and shall take whatever action is necessary to prevent injury to persons, property, or the environment arising out of such conditions or activities; provided, however, that Licensee's reporting to Licensor shall not relieve Licensee of any obligation whatsoever imposed on it by this License. Licensee shall promptly respond to Licensor's request for information regarding said conditions or activities.

DISCLAIMER OF WARRANTIES

- 18. <u>No Warranties</u>.
 - 18.1 LICENSOR'S DUTIES AND WARRANTIES ARE LIMITED TO THOSE EXPRESSLY STATED IN THIS LICENSE AND SHALL NOT INCLUDE ANY IMPLIED DUTIES OR IMPLIED WARRANTIES, NOW OR IN THE FUTURE. NO REPRESENTATIONS OR WARRANTIES HAVE BEEN MADE BY LICENSOR OTHER THAN THOSE CONTAINED IN THIS LICENSE. LICENSEE HEREBY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES OR WHICH MAY EXIST BY OPERATION OF LAW OR IN EQUITY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
 - 18.2 LICENSOR MAKES NO WARRANTY, REPRESENTATION OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING (A) THE SCOPE OF THE LICENSE OR OTHER RIGHTS GRANTED HEREUNDER TO LICENSEE OR (B) WHETHER OR NOT LICENSEE'S CONSTRUCTION, MAINTENANCE, OWNERSHIP, USE OR OPERATION OF THE PIPELINE WILL VIOLATE OR INFRINGE UPON THE RIGHTS, INTERESTS AND ESTATES OF THIRD PARTIES, INCLUDING, WITHOUT LIMITATION, ANY LEASES, USE RIGHTS, EASEMENTS AND LIENS OF ANY THIRD PARTY.
- 19. <u>Disclaimer of Warranty for Quiet Enjoyment</u>. LICENSOR DOES NOT WARRANT ITS TITLE TO THE PREMISES NOR UNDERTAKE TO DEFEND LICENSEE IN THE PEACEABLE POSSESSION OR USE THEREOF. NO COVENANT OF QUIET ENJOYMENT IS MADE.
- 20. Eviction at Risk of Licensee. In case of the eviction of Licensee by anyone owning, claiming title to, or claiming any interest in the Premises, or by the abandonment by Licensor of the affected rail corridor, Licensor shall not be liable (i) to refund Licensee any compensation paid hereunder, except for the pro-rata part of any recurring charge paid in advance, or (ii) for any damage Licensee sustains in connection with the eviction.

LIENS AND TAXES

21. <u>Liens and Charges</u>. Licensee shall promptly pay and discharge any and all liens arising out of any construction, alterations or repairs done, suffered or permitted to be done by Licensee on Premises. Licensor is hereby authorized to post any notices or take any other action upon or with respect to Premises that is or may be permitted by law to prevent the attachment of any such liens to Premises; provided, however, that failure of Licensor to take any such action shall not relieve Licensee of any obligation or liability under this **Section 21** or any other Section of this License.

22. <u>Taxes</u>. Licensee shall pay when due any taxes, assessments or other charges (collectively, "Taxes") levied or assessed by any governmental or quasi-governmental body upon the Pipeline or any other improvements constructed or installed on the Premises by or for Licensee (collectively, the "Improvements") or any Taxes levied or assessed against Licensor or the Premises that are attributable to the Improvements.

DEFAULT, TERMINATION, AND SURRENDER

- 23. <u>Default and Termination</u>. In addition to and not in limitation of Licensor's right to terminate for failure to provide evidence of insurance as required pursuant to the terms of **Section 15**, the following events are also deemed to be events of default pursuant to which Licensor has the right to terminate as set forth below:
 - 23.1 If default shall be made in any of Licensee's covenants, agreements, or obligations contained in this License and Licensee fails to cure said default within thirty (30) days after written notice is provided to Licensee by Licensor, or in case of any assignment or transfer of this License in violation of Section 26 below, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee. Notwithstanding the foregoing, Licensor shall have the right to terminate this License immediately if Licensee fails to provide evidence of insurance as required in Section 15.
 - 23.2 Should Licensee not comply fully with the obligations of Section 17 regarding the handling or transporting of hazardous waste or hazardous material, notwithstanding anything contained in any other provision of this License, Licensor may, at its option, terminate this License by serving five (5) days' notice of termination upon Licensee.
 - 23.3 Any waiver by Licensor of any default or defaults shall not constitute a waiver of the right to terminate this License for any subsequent default or defaults, nor shall any such waiver in any way affect Licensor's ability to enforce any Section of this License. The remedy set forth in this Section 23 shall be in addition to, and not in limitation of, any other remedies that Licensor may have at law or in equity.
 - 23.4 In addition to and not in limitation of Licensor's rights to terminate this License for failure to provide evidence of insurance or occurrence of defaults as described above, this License may be terminated by either party, at any time, by serving thirty (30) days' written notice of termination upon the other party. Such termination shall not release either party hereto from any liability or obligation under the License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or thereafter in case by the terms of the License it is provided that anything shall or may be done after termination hereof.
- 24. Surrender of the Premises.
 - 24.1 On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense:
 - 24.1.1 if so directed by Licensor in writing, remove the Improvements, the Pipeline and all appurtenances thereto, or, at the sole discretion of Licensor, fill and cap or otherwise appropriately decommission the Pipeline with a method satisfactory to Licensor;
 - 24.1.2 report and restore any damage to the Premises or Licensor's other property arising from, growing out of, or connected with Licensee's use of the Premises;
 - 24.1.3 remedy any unsafe conditions on the Premises created or aggravated by Licensee; and
 - 24.1.4 leave the Premises in substantially the condition which existed as of the Effective Date.
 - 24.2 Upon any expiration or termination of this License, if Licensee fails to surrender the Premises to Licensor or if Licensee fails to complete its obligations under **Section 24.1** above (the **"Restoration Obligations"**), Licensee shall have a limited license to enter upon the Premises solely to the extent necessary for Licensee to complete the Restoration Obligations, and all liabilities and obligations of Licensee hereunder shall continue in effect until the Premises are surrendered and the Restoration Obligations are completed. Neither termination nor expiration shall release Licensee from any liability

or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or, if later, the date when Licensee surrenders the Premises and all of the Restoration Obligations are completed.

24.3 If Licensee fails to complete the Restoration Obligations within thirty (30) days after the date of such termination of its tenancy, then Licensor may, at its election, either: (i) remove the Pipeline and the other Improvements or otherwise restore the Premises, and in such event Licensee shall, within thirty (30) days after receipt of bill therefor, reimburse Licensor for cost incurred, (ii) upon written notice to Licensee, take and hold the Pipeline and the other Improvements and personal property as its sole property, without payment or obligation to Licensee therefor, or (iii) specifically enforce Licensee's obligation to restore and/or pursue any remedy at law or in equity against Licensee for failure to so restore. Further, if Licensor has consented to the Pipeline and the other Improvements by Licensor, provide a bill of sale in a form acceptable to Licensor conveying the Pipeline and the other Improvements to Licensor.

MISCELLANEOUS

25. <u>Successors and Assigns</u>. All provisions contained in this License shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of Licensor and Licensee to the same extent as if each such successor and assign was named a party to this License.

26. <u>Assignment</u>.

- 26.1 Licensee may not sell, assign, transfer, or hypothecate this License or any right, obligation, or interest herein (either voluntarily or by operation of law, merger, or otherwise) without the prior written consent of Licensor, which consent may not be unreasonably withheld or delayed by Licensor. Any attempted assignment by Licensee in violation of this **Section 26** shall be a breach of this License and, in addition, shall be voidable by Licensor in its sole and absolute discretion.
- 26.2 For purposes of this **Section 26**, the word "assign" shall include without limitation (a) any sale of the equity interests of Licensee following which the equity interest holders of Licensee immediately prior to such sale own, directly or indirectly, less than 50% of the combined voting power of the outstanding voting equity interests of Licensee, (b) any sale of all or substantially all of the assets of (i) Licensee and (ii) to the extent such entities exist, Licensee's parent and subsidiaries, taken as a whole, or (c) any reorganization, recapitalization, merger or consolidation involving Licensee. Notwithstanding the foregoing, any reorganization, recapitalization, merger or consolidation following which the equity interest holders of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation following power of the outstanding voting equity interests of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation following power of the outstanding voting equity interests of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation following power of the outstanding voting equity interests of Licensee or any successor thereto or the entity resulting from such reorganization, recapitalization, merger or consolidation shall not be deemed an assignment. THIS LICENSE SHALL NOT RUN WITH THE LAND WITHOUT THE EXPRESS WRITTEN CONSENT OF LICENSOR, SUCH CONSENT TO BE IN LICENSOR'S SOLE DISCRETION.
- 26.3 Notwithstanding the provisions of **Section 26.1** above or anything contained in this License to the contrary, if Licensee sells, assigns, transfers, or hypothecates this License or any interest herein in contravention of the provisions of this License (a "**Purported Assignment**") to another party (a "**Purported Transferee**"), the Purported Transferee's enjoyment of the rights and privileges granted under this License shall be deemed to be the Purported Transferee's agreement to be bound by all of the terms and provisions of this License, including but not limited to the obligation to comply with the provisions of **Section 15** above concerning insurance requirements. In addition to and not in limitation of the foregoing, Licensee, for itself, its successors and assigns, shall indemnify, defend and hold harmless Licensor for all Liabilities of any nature, kind or description of any person or entity directly or indirectly arising out of, resulting from or related to (in whole or in part) a Purported Assignment.
- 26.4 The provisions of this **Section 26** shall survive the expiration or earlier termination of this License.
- 27. <u>Notices</u>. Any notice, invoice, or other writing required or permitted to be given hereunder by one party to the other shall be in writing and the same shall be given and shall be deemed to have been served and given if (i) placed in the United States mail, certified, return receipt requested, or (ii) deposited into the custody of a

nationally recognized overnight delivery service, addressed to the party to be notified at the address for such party specified below, or to such other address as the party to be notified may designate by giving the other party no less than thirty (30) days' advance written notice of such change in address.

If to Licensor:	Jones Lang LaSalle Brokerage, Inc. 4200 Buckingham Road, Suite 110 Fort Worth, TX 76155 Attn: Permits/Licenses
with a copy to:	BNSF Railway Company 2301 Lou Menk Dr. – GOB-3W Fort Worth, TX 76131 Attn: Senior Manager Real Estate
If to Licensee:	City of Ferndale PO Box 936 Ferndale, WA 98248-0936

- 28. <u>Survival</u>. Neither termination nor expiration will release either party from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or expiration, or, if later, the date when the Pipeline and the other Improvements are removed and the Premises are restored to its condition as of the Effective Date.
- Recordation. It is understood and agreed that this License shall not be placed or allowed to be placed on public record.
- Applicable Law. All questions concerning the interpretation or application of provisions of this License shall be decided according to the substantive laws of the State of Texas without regard to conflicts of law provisions.
- 31. <u>Severability</u>. To the maximum extent possible, each provision of this License shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this License shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this License.
- 32. <u>Integration</u>. This License is the full and complete agreement between Licensor and Licensee with respect to all matters relating to Licensee's use of the Premises, and supersedes any and all other agreements between the parties hereto relating to Licensee's use of the Premises as described herein. However, nothing herein is intended to terminate any surviving obligation of Licensee or Licensee's obligation to defend and hold Licensor harmless in any prior written agreement between the parties.
- 33. <u>Joint and Several Liability</u>. If Licensee consists of two or more parties, all the covenants and agreements of Licensee herein contained shall be the joint and several covenants and agreements of such parties.
- 34. <u>Waiver</u>. The waiver by Licensor of the breach of any provision herein by Licensee shall in no way impair the right of Licensor to enforce that provision for any subsequent breach thereof.
- 35. Interpretation.
 - 35.1 This License shall be interpreted in a neutral manner, and not more strongly for or against any party based upon the source of the draftsmanship; both parties hereby agree that this License shall not be subject to the principle that a contract would be construed against the party which drafted the same. Article titles, headings to sections and paragraphs and the table of contents (if any) are inserted for convenience of reference only and are not intended to be a part or to affect the meaning or interpretation hereof. The exhibit or exhibits referred to herein shall be construed with and as an integral part of this License to the same extent as if they were set forth verbatim herein.
 - 35.2 As used herein, "include", "includes" and "including" are deemed to be followed by "without limitation" whether or not they are in fact followed by such words or words of like import; "writing", "written" and

Tracking #17-57993

comparable terms refer to printing, typing, lithography and other means of reproducing words in a visible form; references to any person are also to that person's successors and permitted assigns; "hereof", "herein", "hereunder" and comparable terms refer to the entirety hereof and not to any particular article, section, or other subdivision hereof or attachment hereto; references to any gender include references to the masculine or feminine as the context requires; references to the plural include the singular and vice versa; and references to this License or other documents are as amended, modified or supplemented from time to time.

- 36. <u>Counterparts</u>. This License may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of this License may also be exchanged via email or electronic facsimile machines and any email or electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.
- 37. <u>Licensor's Representative</u>. Jones Lang LaSalle Brokerage, Inc. is acting as representative for BNSF Railway Company.

END OF PAGE – SIGNATURE PAGE FOLLOWS

This License has been duly executed by the parties hereto as of the date below each party's signature; to be effective, however, as of the Effective Date.

LICENSOR:

BNSF Railway Company, a Delaware corporation

By: Jones Lang LaSalle Brokerage, Inc., 4200 Buckingham Road, Suite 110 Fort Worth, TX 76155

By:	Shane Kurga	
Title	Shane Krueger Vice President – Permits & Special Projects	
Date:	Aulto	
Date:	5/////	_

LICENSEE:

CITY OF FERNDALE, a Washington corporation

PO Box 936 Ferndale, WA 98248-0936 By: 1 1100, Title: winh Date:


VENTS: NUMBER ____ SIZE ___ HEIGHT OF VENT ABOVE GROUND ___ NOTE: CASING TO BE JACKED OR DRY BORED ONLY

FERNDALE COUNTY OF WHATCOM

COATING:

STATE OF WA

CATHODIC PROTECTION

JNC

DRAWING NO. 70001

N/A

APPENDIX F – AGC AGREEMENT

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AGC – WSDOT EQUIPMENT RENTAL AGREEMENT

Effective Date: May 1, 2007 Until Further Notice

It is mutually agreed by the parties to this agreement that rental rates to be paid Contractors for equipment used on force account will be established in accordance with Section 1-09.6 of the Standard Specifications and this agreement. The following rules have been agreed to:

1. General

The Rental Rate Blue Book published by Primedia Information, Inc., as clarified or modified by this agreement, will be used to establish rental rates for equipment approved for use on force account work. Rate modifications, indicated on Regional Adjustment Maps in the Blue Book and as applied automatically by the Blue Book CD (Washington State Version), shall be used for all equipment covered under this agreement. Updates to the Rental Rate Book, in compact disk format, are published on a schedule determined by Primedia Information, Inc. Each update will become applicable to force accounts fourteen days after the date on which Primedia Information, Inc. declares the update to be effective. Equipment used under the terms of this agreement will be at the rates in effect for each section of the Blue Book at the time of use except that calculations made prior to the applicable date, using the previous rates, will not be changed.

2. Rental Rate

The hourly rental rate for equipment utilized on force account shall be a combination of the following items:

- a. The Blue Book monthly rate multiplied by the Rate Adjustment factors for age and geographic location divided by 176.
- b. Attachments will be included in the rental rate when the Engineer deems them necessary to accomplish the force account work. An approved attachment that is continuously attached and used intermittently during the work will be paid for the same duration as the host equipment. When multiple attachments are approved for use, and the attachments are being used interchangeably on the force account operation, only the one attachment having the higher rate will be paid.
- c. The hourly operating cost for each hour that the equipment is in use. "In use" shall mean that the presence of the equipment is necessary for the operation and that the equipment is present and is not being used for other activities while the force account work is underway. Under the circumstances, the equipment shall be paid at its hourly rate plus the hourly operating cost.

3. Standby Time

Standby time shall be defined as the time during which equipment is idled and cannot be assigned to other work on the project. Only that equipment which has been utilized for work on the force account and is expected to be utilized again on the same force account will be eligible for standby compensation. The Contractor is expected to utilize idled equipment on other work if reasonably possible. Standby time will only be paid if the Engineer has had an opportunity to evaluate the cost of standby versus the cost of mobilizing and demobilizing and has ordered standby.

When ordered by the Engineer, standby time shall be paid at one-half of the rate established in accordance with this agreement. The operating cost shall not be included in the calculation for establishing the standby rate. Standby time will not be compensated beyond that amount which will bring the resulting total of operated time and standby time to 8 hours in any one day or 40 hours in any one week.

4. Rental Equipment

If Contactor-owned equipment is not reasonably available, the Engineer may approve the use of operated or non-operated rental equipment. Operated equipment shall be considered a "service" and shall be compensated according to section 4 of the force account specification. Non-operated equipment shall be compensated according to the provisions for rented equipment in section 3 of the force account specifications. If the invoice costs of non-operated equipment do not specifically say the fuel is included, the Rental Rate Blue Book Hourly Operating Cost shall be added for each hour the equipment operates.

When invoiced equipment is used on both force account and non-force account work, payment for the equipment will be a prorated share of the invoice cost. The time period covered by the invoice shall reflect the normal practice of the renting agency, except that the time period shall not exceed one month. When calculating the prorated share, the amounts of standby time for both types of work will be considered according to the formula:

	FC
Share of Invoice to be charged to Force Account =	
	FC + NFC

Where:

FC = \$ Force account including standby time. NFC = \$ Non-force account including standby time.

5. Mobilization

Force account mobilization of equipment is defined as the preparatory work performed by the Contractor including procurement, loading and transportation of equipment that is intended for use in a force account. A pro-rata adjustment will be made when the equipment is eventually used for regular contract work in addition to the force account work. Mobilization also included the costs incurred during demobilization. The costs will be included in the appropriate sections (Labor, Equipment, Services, etc) depending on the nature of the cost. If the equipment being mobilized is hauled, payment will cover the hauling vehicle (operated cost). In the event that equipment is transferred under its own power, the payment will cover the operated cost of the equipment plus operator costs. Move-out, or demobilization costs will provide for the return of the equipment to the location from which it was obtained. In the event that the move-out is to a different location, payment will not exceed the amount of the move-in.

If approved by the Engineer, payment will be allowed for moving equipment from work site to work site within the project after the equipment is on the job.

Charges for mechanic's time utilized in servicing equipment to ready it for use prior to moving to the project and similar charges will not be allowed.

6. Blue Book Omissions

In the event a rate has not been established for a particular piece of equipment in the Rental Rate Blue Book, a rate will be established, utilizing one or more of the following methods:

- a. Use a rate for the most similar model found in the applicable Blue Book. Such characteristics as manufacturer, capacity, horsepower, and fuel type will be used as the basis for selecting a similar model.
- b. Contact Primedia Information, Inc, (through the WSDOT OSC Construction Office) for the rate not included in the Book.
- c. Utilize a rate agreed upon by the parties.
- d. For equipment that is older than 20 years the oldest adjustment rate available in the book shall be used.

7. Breakdown

The Contractor shall provide reasonable maintenance efforts for equipment utilized in force account. When a breakdown occurs for any piece of equipment being used on force account work, the Contractor shall divert idled equipment. Payment shall cease for the equipment that is broken down. Payment shall also cease for any other equipment that is idled as a result of the breakdown (there will be no standby payment.) Payment for any labor that is idled as a result of the breakdown will be made in accordance with provisions of section 1 of the force account specifications, particularly as related to contractual obligations and normal practices of the Contractor.

8. Shutdown

If the Engineer orders a shutdown of any or all of the force account, the equipment idled as a result of the shutdown shall be diverted to other work. When diversion of equipment is not practical, standby time may be paid during non-operating hours as provided in Item 3 of this agreement.

The Engineer reserves the right to cease standby payment for equipment that is idled as a result of a shutdown when the shutdown is anticipated to be for an extended period of time. No further payment shall be allowed after the date the Engineer makes this determination except as provided in Item 5 of this agreement, "Mobilization."

Standby time shall not be paid when shutdown is the result of the fault or negligence of the Contractor.

9. Small Tools

Any contractor-owned equipment listed in the Blue Book with a monthly rate of less than \$100 and any other equipment with a purchase price of less than \$500 shall be considered Small Tools and shall be paid by negotiation rather than using an hourly rate (except for rentals.) Any such small tool that is rented shall be paid according to the rental provisions in the Equipment section of this agreement. All other Small Tools shall be paid by agreement of the parties. After the force account work has been completed, (or more often, by agreement of the parties,) the Contractor shall promptly supply a list of small tools and equipment that have been utilized in the work. The list shall be supported by invoices or, in the event the item came from stock, by a Contractor affidavit of purchase cost. The negotiation of the Small Tools payment may include discussions of shared use with other work and of residual value, if appropriate. Once agreed upon, the small tools amount will be added to the payment amount in the Equipment section (Section 3 of the force account specification.)

10. Aeration Equipment

The rental rate for plows and discs shall be as listed below:

Plows and discs meeting the requirements of Section 2-03.3(15) of the Standard Specifications shall be paid at the rate of \$9.60 per hour.

Add \$0.70 per hour per foot of width for additional width of disc more than 10 ft.

Motive power for discs and plows shall be capable of pulling discs and plows at the speeds specified in Section 2-03.3(15) of the Standard Specifications. Payment for motive power shall be 100 percent of the rates in this agreement except that equipment having motive power in excess of 340 horsepower shall be paid at 100 percent of the highest equipment rate for a comparable unit of the same manufacturer having less than 340 horsepower.

Payment for all other equipment approved for Aeration shall be at the rates established in accordance with this agreement when used for aeration work.

10. Concurrence, Review Time

This agreement is issued after conference among representatives of the Associated General Contractors of Washington and the Washington State Department of Transportation and has the approval of both. Either party may request a review after a one-year period.

Associated General Contractors of Washington

Washington State Department of Transportation

day (dl)

Van Collins Southern District Manager

Linea Laird State Construction Engineer

APPENDIX G – MONITORING AND INADVERTENT DISCOVERY PLAN (This Page Intentionally Left Blank)

PLAN AND PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES AND HUMAN SKELETAL REMAINS

THORNTON ROAD SANITARY SEWER PROJECT, WHATCOM COUNTY WASHINGTON

1. INTRODUCTION

The City of Ferndale proposes to construct 18-inch diameter sanitary sewer main from approximately the Thornton Street and Malloy Avenue intersection, then easterly and southerly to the existing sanitary sewer stub located on the north leg of the Second Avenue/Portal Way roundabout. The purpose of this project is to install new sewer services. The following Unanticipated Discovery Plan (UDP) outlines procedures to follow, in accordance with state and federal laws, if archaeological materials or human remains are discovered.

2. RECOGNIZING CULTURAL RESOURCES

A cultural resource discovery could be precontact or historic. Examples include:

- An accumulation of shell, burned rocks, or other food related materials
- Bones or small pieces of bone,
- An area of charcoal or very dark stained soil with artifacts,
- Stone tools or waste flakes (i.e. an arrowhead, or stone chips),
- Clusters of tin cans or bottles, logging or agricultural equipment that appears to be older than 50 years,
- Buried railroad tracks, decking, or other industrial materials.

When in doubt, assume the material is a cultural resource.

3. ON-SITE RESPONSIBILITIES

STEP 1: STOP WORK. If any employee, contractor or subcontractor believes that he or she has uncovered a cultural resource at any point in the project, all work in the immediate area of the discovery must stop (typically a 10 foot radius, but depends on site conditions). The discovery location should be secured at all times.

STEP 2: NOTIFY MONITOR. If there is an archaeological monitor for the project, notify that person. If there is a monitoring plan in place, the monitor will follow its provisions.

STEP 3: NOTIFY PROJECT MANAGEMENT. Contact the Project Manager:

<u>Project Manager:</u> <u>Name:</u> Wendy LaRocque <u>Number:</u> 360-685-2378 <u>Email:</u> WendyLaRocque@cityofferndale.org If human remains are encountered, treat them with dignity and respect at all times. Cover the remains with a tarp or other materials (not soil or rocks) for temporary protection in place and to shield them from being photographed. Do not call or speak with the media about the remains specifically.

4. FURTHER CONTACTS AND CONSULTATION

A. Project Manager's Responsibilities:

- <u>Protect Find</u>: The Project Manager is responsible for taking appropriate steps to protect the discovery site. All work will stop in an area adequate to provide for the total security, protection, and integrity of the resource. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed following provisions for treating archaeological/cultural material as set forth in this document.
- <u>Direct Construction Elsewhere On-site</u>: The Project Manager may direct construction away from cultural resources to work in other areas prior to contacting the concerned parties.
- <u>Contact the Department of Archaeology and Historic Preservation (DAHP)</u>: If the DAHP has not yet been contacted, the Project Manager will do so.
- <u>Identify Find</u>: The Project Manager will ensure that a qualified professional archaeologist examines the find to determine if it is archaeological. This will either be an archaeological consultant hired by the Project or staff from DAHP.
 - If the discovery is determined not archaeological, work may proceed with no further delay.
 - If the discovery is determined to be archaeological, the Project Manager will continue with notification.
 - If the discovery is human remains or funerary objects, the Project Manager will ensure that the DAHP State Physical Anthropologist examines the find. If the discovery is determined to be human remains, the procedure described in Section 5 will be followed.
- <u>Notify DAHP</u>: The Project Manager will contact the involved federal or permitting agencies (if any) and the Department of Archaeology and Historic Preservation (DAHP).

Department of Archaeology and Historic Preservation:Dr. Allyson BrooksDr. Rob WhitlamState Historic Preservation OfficerState Archaeologist360-586-3066 or 360-586-3064360-586-3080

The Project Manager will contact the interested and affected Tribes.

Tribes consulted on this project are:

<u>Tribe:</u> Nooksack	Tribe: Lummi Nation
Name: George Swanaset Jr.	<u>Name</u> : Lena Tso
<u>Title</u> : Director/THPO	<u>Title</u> : THPO
<u>Number</u> : 360-306-5759	Number: 360-312-2257
Email: gswanasetjr@nooksack-	Email: lenat@lummi-nsn.gov
nsn.gov	

B. Further Activities

- Archaeological discoveries will be documented as described in Section 6.
- Construction in the discovery area may resume as described in Section 7.

5. SPECIAL PROCEDURES FOR THE DISCOVERY OF HUMAN SKELETAL MATERIAL

Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect.

If the project occurs on federal lands (e.g., national forest or park, military reservation) or Indian lands (e.g., reservations, allotments, communities) the provisions of the Native American Graves Protection and Repatriation Act of 1990 apply, and the responsible federal agency will follow its provisions. Note that state highways that cross federal and Indian lands are on easements and are not owned by the state.

If the project occurs on non-federal lands, it will comply with applicable state laws, and the following procedure:

A. Notify Law Enforcement Agency or Coroner's Office:

In addition to the actions described in Sections 3 and 4, the Project Manager will immediately notify the local law enforcement agency or coroner's office.

The coroner (with assistance of law enforcement personnel) will determine if the remains are human, whether the discovery site constitutes a crime scene, and will notify DAHP.

Agency: <u>City of Ferndale Police Department</u> Number: <u>360-384-3390</u>

B. Participate in Consultation:

Per RCW 27.44.055, RCW 68.50, and RCW 68.60, DAHP will have jurisdiction over non-forensic human remains.

<u>Guy Tasa</u>, State Physical Anthropologist, (360) 586-3535, Cell: (360) 790-1633

- C. Further Activities:
 - Documentation of human skeletal remains and funerary objects will be agreed upon through the consultation process described in RCW 27.44.055, RCW 68.50, and RCW 68.60.
 - When consultation and documentation activities are complete, construction in the discovery area may resume as described in Section 7.

6. DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological deposits discovered during construction will be assumed eligible for inclusion in the National Register of Historic Places under Criterion D per 36CFR800.13(c) until a formal Determination of Eligibility is made. If the project does not have a federal nexus/compliance requirement, contact the Project Manager or DAHP regarding the possible need for an Emergency Excavation Permit per RCW27.53. In general, expect that:

- All precontact and historic cultural material discovered during project construction will be recorded by a professional archaeologist on State of Washington cultural resource site or isolate form using standard techniques. Site overviews, features, and artifacts will be photographed; stratigraphic profiles and soil/sediment descriptions will be prepared for subsurface exposures. Discovery locations will be documented on scaled site plans and site location maps.
- Cultural features, horizons and artifacts detected in buried sediments may require further evaluation using hand-dug test units. Units may be dug in controlled fashion to expose features, collect samples from undisturbed contexts, or interpret complex stratigraphy. A test excavation unit or small trench might also be used to determine if an intact occupation surface is present. Test units will be used only when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. Excavations will be conducted using state-of-the- art techniques for controlling provenience.
- Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock will be recorded for each probe on a standard form. Test excavation units will be recorded on unit-level forms, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all artifacts recovered from the level. A stratigraphic profile will be drawn for at least one wall of each test excavation unit.

- Sediments excavated for purposes of cultural resources investigation will be screened through 1/8-inch mesh, unless soil conditions warrant ¹/₄-inch mesh.
- All precontact and historic artifacts collected from the surface and from probes and excavation units will be analyzed, catalogued, and temporarily curated. Ultimate disposition of cultural materials will be determined in consultation with the federal agencies (if any), DAHP, and the affected tribes.

If assessment activity exposes human remains (burials, isolated teeth, or bones), the process described in Section 5 above will be followed.

7. PROCEEDING WITH CONSTRUCTION

Project construction outside the discovery location may continue while documentation and assessment of the cultural resources proceed. A Cultural Resources Specialist (either from DAHP, a consulting Tribe, or a professional consultant) must determine the boundaries of the discovery location. In consultation with DAHP and affected tribes, the Project Manager will determine the appropriate level of documentation and treatment of the resource. If federal agencies are involved, the agencies will make the final determinations about treatment and documentation.

Construction may continue at the discovery location only after the process outlined in this plan is followed and DAHP (and the federal agencies, if any) determine that compliance with state and federal laws is complete.